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**Adaptive growth following terrorism:
Vigilance and anger as facilitators of posttraumatic growth over in the
aftermath of the Bali bombings**

Abstract

Although exposure to the heinous nature of terrorism can result in psychological distress, fear and horror, it may also bring positive change and psychological growth in individuals, communities and society as a whole. A qualitative longitudinal case study at two and seven years post exposure to the Bali Bombing of 2005 used Interpretative Phenomenological Analysis to explore an individual's subjective 'lived' experiences. The overarching theme, *Vigilance and anger: growthful adaptation to terrorism* reflected the positive use of vigilance and anger for redefining 'self' following a terrorist-related traumatic event inclusive of an ongoing personal risk assessment that recognised the possibility of future terrorist attacks. Four subordinate themes: violent interruption, grief and disconnection, struggling for meaning, and growth through anger and vigilance, encapsulated a momentary and life changing violent personal catastrophe, and the relational and existential challenges that followed. Vigilance and anger, responses normally recognised as aspects of distress following trauma, appeared to be adaptive over time for the integration of distress and growth in a world where the threat of terrorism remains constant. The role of justifiable anger and ongoing vigilance in a new world order inclusive of terrorism and in the absence of other psychopathology, has implications for therapy.

Key words: Posttraumatic growth, terrorism, Bali bombings, complex trauma, Interpretative Phenomenological Analysis.

Introduction

Terrorism is intent on creating fear in many in pursuit of a religious, political or ideological goal (Putra & Zora, 2013). Following terrorist attacks, victims have been shown to experience significant psychological distress including high rates of post-traumatic stress and depression (Galea et al., 2002). Conversely, individuals exposed to the complex social, psychological and physical threat of terrorism violence also report positive changes in their lives, and possible growth (Butler et al., 2005). There is a paucity of research concerning the 'lived' experience from exposure to terrorism and the resulting changes, both positive and negative, to an individual's life over time. Therefore, this longitudinal, qualitative case study sought the subjective interpretation of one individual at two and seven years post 2005 Bali Bombing. It sought to understand an individual's meaning making of their exposure to terrorism over time and its influence on psychological wellbeing.

Terrorist attacks are a particular type of disaster, in that they are intentionally caused acts of interpersonal violence, aimed at destroying the existing sense of safety and evoking fear in individuals, communities and nations (Levant, Barbanel, & Deleon, 2005). As terrorism has become a global phenomenon, there has been a growing body of research devoted to investigating the negative psychological consequences of exposure to terrorist attacks (Galea et al., 2002; Schuster et al., 2001). Eight years on from the 2002 Bali Bombing, Stevens et al. (2013) reported that Australian victims reported high to very high rates of psychological distress and functional impairment when compared with population estimates. Such distress and impairment were associated with complicated grief and physical injury (Stevens et al., 2013).

Following the New York September 11, 2001 attacks, 15% of individuals directly affected, met diagnostic criteria for PTSD at six months (WTC Medical Working Group, 2008). Such rates remained relatively stable at two and three years post attack, and were

reported to be three times higher than the national estimates of PTSD in the adult population (WTC Medical Working Group, 2008).

Following the 2005 London bombings, in a random sample of Londoners indirectly exposed to the attacks, more than a quarter of those interviewed experienced significant distress at one to two weeks post attack (Rubin, Brewin, Greenberg, Simpson, & Wessely, 2005). Seven to eight months on, half of these participants reported experiencing persistent distress (Rubin et al., 2005).

Similar rates were reported following the March 11 Madrid 2004 attacks, over a third of those physically injured in the attacks had symptoms of posttrauma stress at one month, and 28% met diagnostic criteria for PTSD at twelve months (Conejo-Galindo et al., 2008). Similar PTSD rates were reported at six months for survivors of the Oklahoma City bombing (34%; North et al., 1999), and victims of the France terrorist bombings (31%; Jehel, Paterniti, Brunet, Duchet, & Guelfi, 2003).

For those diagnosed with PTSD, debilitating psychological effects may persist for years after exposure (Breslau, Chase & Anthony, 2002). Symptoms are complex and often interfere with social, family and workplace functioning. The four symptoms clusters include the following: intrusion (e.g. trauma associated memories, dreams and flashbacks), avoidance (e.g. effort to avoid memories, thoughts or external reminders of the trauma), negative alterations in cognitions and mood (e.g. inability to recall aspects of the traumatic experience, detachment from others, persistent cognitions or negative emotional states), and alternations in arousal and reactivity (e.g. irritability, reckless behaviour, hypervigilance, and sleep disturbance; American Psychiatric Association, 2013).

In the context of terrorism, survivors have been shown to have a reduced quality of life. A large proportion of survivors of multiple terrorist incidents in Israel had restrictions in employment, home duties and leisure activities two years post event (Tuchner, Meiner,

Parush, & Hartman-Maeir, 2010). Following exposure, greater distress and longer-term psychopathology has been shown to occur more frequently following direct exposure as opposed to indirect exposure to terrorist events (Galea et al., 2002; Laufer & Soloman, 2006; WTC Medical Working Group, 2008). Particularly, the nature of terrorism has been shown to be predictive of high rates of PTSD, in that acts of terrorism cause extensive loss of life, widespread damage and are intentionally caused (Galea et al., 2002). Similarly, physical injuries, either personal injuries or injuries to a close family member, have also been significantly associated with PTSD and greater psychological distress (Chipman et al., 2010; North et al., 1999; Stevens, et al., 2013; WTC Medical Working Group, 2008). From a sociological perspective terrorist/societal attacks need collective stories to inform sense making and the collective memory (Halwachs, 1992). Importantly, individuals need the opportunity to be heard, valued and offered the ability to mourn collectively with fellow citizens following violent acts against society, or negative and debilitating psychopathology may persist intermittently or chronically over a lifetime for some (Nelson, 2003).

Fortunately, there is a growing body of evidence suggesting that trauma may facilitate personal growth and development (Calhoun & Tedeschi, 1999; Joseph, Williams, & Yule, 1995). However, *posttraumatic growth* can be defined as the subjective experience of positive psychological change reported by an individual as a result of their struggle with trauma (Zoellner & Maercker, 2006). In other words, the term growth in relation to trauma implies development beyond a previous level of adaption, psychological functioning or life awareness and is considered a multidimensional construct, in that it can include changes in one's goals, beliefs, behaviours and identity (Zoellner & Maercker, 2006). It is both a process and an outcome (Joseph et al., 1993). It is not the aftermath of psychopathology but an active attempt to successfully integrate trauma related information at a personal level (Joseph & Linley, 2008)

It has been suggested that the process of posttraumatic growth occurs as a result of a seismic event that has challenged or disrupted an individual's basic assumptions about the world, the self and others, as has been reported in the context of terrorism (Calhoun & Tedeschi, 2006; Difede, Apfeldorf, Cloitre, Spielman, & Perry, 1997; Fischer & Ai, 2008). Specifically, people realise that life is inherently uncertain, unpredictable and outside of their control, and that human beings are vulnerable and fragile (see Joseph, 2012). Psychological growth can then occur, not as a direct result of the traumatic incident, but rather the ensuing cognitive efforts to redefine personal beliefs and rebuild their worldview, thereby accommodating the new trauma related information (Zoellner & Maercker, 2006).

Growth following trauma has been shown to occur despite persisting psychological distress (McCormack, Hagger, & Joseph, 2011; McCormack & Joseph, 2013). During the process of posttraumatic growth, individuals often re-examine aspects of their lives and typically report personal growth across domains such as relationships with others, enhanced personal resources, perceptions of the self, spirituality and the meaning of life (Linley & Joseph, 2004; McCormack & Joseph, 2013; Tedeschi & Kilmer, 2005). Although social support is considered essential to posttrauma growth, an absence of validating and authentic interpersonal support, may restrict but not inhibit growth (McCormack & Joseph, 2013).

Numerous studies have investigated posttraumatic growth in the context of terrorism. In a prospective, longitudinal study, Fredrickson, Tugade, Waugh, and Larkin (2003) reported that while individuals experienced both distress and sympathy in the wake of the September 11, 2001 attacks, they also reported experiences of gratitude, interest, and love, among other positive emotions. At a general population level, elevated levels of prosocial behaviours were recorded following the New York attacks, including the finding that more than half of the USA citizens surveyed reported donating blood, money or time (Smith, Rasinski, & Toce, 2001). Additionally, national polls documented a variety of positive changes for citizens

following the attacks, including feeling closer to their family and re-examining their life priorities (Park, Aldwin, Fenster, & Snyder, 2008).

Positive changes were shown to be maintained in the aftermath of September 9/11. Three years after the attacks, Poulin, Cohen Silver, Gil- Rivas, Holman, and McIntosh (2009) found that specifically, growth was reported to have occurred across the following domains: perceived prosocial benefits and awareness of others, increased religious engagement, increased patriotism and political engagement, and philosophical changes. Taken together, research following New York attacks indicates the pervasive impact of this event and the national grief experienced. It is also suggestive that return to psychological wellbeing following the events of 9/11, whether direct or indirect exposure was experienced, occurred within the context of support at both a community and national level.

Psychological growth in the context of terrorism has been shown to occur beyond the September 11 attacks. Following the Madrid 2004 attacks, the most consistent areas of growth reported were increased interpersonal connectedness and higher levels of social cohesion (Vázquez, Hervás, & Pérez- Sales, 2006). Greater altruistic behaviour was also observed in the general population following the Madrid attacks (Conejero, de Rivera, Páez, & Jiménez, 2004). Thus, increased social cohesion and feeling a part of a collective nation are outcomes of exposure to terrorism when experienced in a country of origin.

Considerable research suggests that anger or hatred following exposure to terrorism is predictive of posttraumatic growth. In a recent study, Park et al. (2008) found that feelings of anger or hatred towards the perpetrator of the terrorist event were associated with perceptions of psychological growth in a sample of USA citizens assessed in the first few weeks after September 11 (Park et al., 2008). Similarly, Hobfoll, Cannetti-Nisim, and Johnson (2006) found a strong association between views of support for political violence and reports of

psychosocial gains, in a sample of Israeli citizens. It is possible that anger may act as a motivational system and assist the individual with problem solving coping (Carver, 2004).

Extensive research has investigated the phenomenon of growth following adversity at different points in time, and has shown that growth can occur weeks to decades post catastrophic event (Affect, Tennen, Croog, & Levine, 1987; McCormack, et al., 2011; McCormack & Joseph, 2013; Park et al., 2008) giving hope to many. Currently, limited research exists investigating how 'time' impacts on aspects of growth. Whether growth declines with time (Butler et al., 2005; Dekel, Ein-Dor, & Solomon, 2012) or increases with time (Cordova, Cunningham, Carlson, & Andrykowski, 2001; Evers et al., 2001; Park, Cohen, & Murch, 1996; Polatinsky & Esprey, 2000) may be impacted upon by the type and intensity of the traumatic event and whether the trauma emanates from intrinsic or extrinsic factors.

Similarly, those studies that indicate a relative stability in growth over time may be influenced by the type of growth domain that is motivated by traumatic distress (Frazier, Conlon, Glaser, 2001) such as increased empathy, spirituality or humility (Frazier et al., 2001; McCormack & Joseph, 2013). Due to the limited research and inconsistency amongst findings, it may be concluded that the relationship between time and growth remains unclear and considerable theoretical gaps remain in our understanding of the temporal course of growth following adversity (Frazier, et al., 2001).

This study is a qualitative longitudinal case study exploring the phenomenon of terrorism and its impact on the psychological wellbeing of an individual at two and seven years post event. The research question was particularly related to exploring changes at different points of time in a life and how an individual's sense making changes, as they come to redefine their lives post catastrophic event. As such, this longitudinal study is well suited to both the phenomenological and interpretative aspects of Interpretative Phenomenological

Analysis (IPA). Qualitative research has been shown to be especially valuable in revealing how an individual makes sense of life changing experiences (Calhoun & Tedeschi, 1998; Massey, Cameron, Ouellette, & Fine, 1998) and for noting a change in one's philosophy of life and insight following catastrophe (Guba & Lincoln, 1989).

Method

Participant

The participant, Edward (pseudonym), was approached given his unique experience of terrorism. He was provided with details of the research and his consent was obtained on both occasions. At the first interview, two years post the Bali bombing Edward was aged 60 years old, married, and retired, having previously worked in an executive, professional role. At the time of the bombing, Edward was in Bali on a holiday with his family. Edward was positioned in close proximity to the suicide bomber during the attack and thus sustained extensive physical injuries. Both he and another family member required lengthy medical intervention post Bali. Prior to Bali, Edward reported no major traumatic life event.

Procedure

Following Human Ethics approval (see Appendix A), the participant was interviewed on the first occasion with the understanding that he would be contacted in the future for further interviewing. Both interviews were conducted by the primary researcher at a place of the participant's choosing, and were digitally recorded. The first interview was 1 hour and 50 minutes in duration, and the second interview was 2 hours and 18 minutes. To promote validity, the same semi-structured format was implemented for both interviews to encourage the participant to provide a rich narrative with regard to his involvement in the Bali bombing and the resulting changes in his life (see Appendix B). The semi-structured interview schedule was constructed according to the 'funneling' technique of IPA (Smith & Osborn, 2008), and was used simply as a prompt with the participant encouraged to explore meaning

in each time frame. The participant responded willingly on both occasions, and needed little encouragement or prompting.

Philosophical underpinnings

This study takes a critical realist perspective seeking to describe the way in which the participants's world is socially constructed, interpreted and understood. Within a critical realist paradigm access to the world is always mediated by: (a) the way people act towards things according to their meaning for them; (b) meaning stemming from social interaction; and (c) the variable and uncertain nature of meaning that is modifiable by interpretation. It therefore recognises that symbolic interaction and hermeneutic enquire allows people to continuously try and interpret their world and determine how to act (Gadamer, 1983). This hermeneutic stance spans varying perspectives allowing multiple ways of interpreting experience (Bernstein, 1983).

Thus, IPA as an idiographic qualitative research methodology underpinned by phenomenology, hermeneutics and symbolic interactionism (Smith & Eatough, 2007) is well suited to this investigation. Interpretative reiteration between the participant and researcher provided a window of insight for exploring the unique and complex phenomenon of the participant's real world where unobservable realities exist (Blaikie, 1991). As such, IPA is concerned with the subjective interpretation of experience, and thereby an individual's personal account in relation to particular phenomena at a particular time (Smith, 1996). IPA is primarily concerned with the meanings, individuals bring to unique experiential phenomena and is therefore a valuable method for exploring significant and previously unexplored events in people's lives (Smith & Eatough, 2007).

Credibility

Of note, IPA recognises that there are many possible interpretations from the data collected but strives through independent auditing to produce a credible account of the data.

In doing so it neither claims generalisability or ‘the truth’, but is concerned with systematic and transparent processes for arriving at this account (Smith et al, 2010). The second author conducted the interviews and transcribed the data set. Unlike other qualitative methods which adopt coding systems, IPA is concerned with independent thematic audit of the data (see Table 1) that leads to robust debate before arriving at agreed rich thematic evidence supported by vivid extracts (Smith, 1996; Smith, Michie, Stephenson, & Quarrell et al., 2002). Unlike nomothetic research, causal evidence or a satisfactory inter-rater reliability score is not sought. Rather, the audit provides one possible account of the data, systematically achieving internal coherence and presentation of evidence.

Given IPA’s reliance on double hermeneutics and the researcher’s interpretation of the narrative, the audit trail employed several methods to ensure trustworthiness of the findings (Smith, Joseph, & Das Bair, 2011). To verify credibility, themes were audited independently by the two authors. As such, both researchers independently reviewed transcripts and recordings, followed by robust discussion to identify superordinate and subordinate themes. In line with IPA protocols, biases and presuppositions were guarded against by discussion between researchers, and thematic clarity testing with other researchers, in order to avoid biases influencing the direction of the analysis. Alertness to possible biases and presuppositions continued throughout the writing up of the analysis and results between the authors.

Author’s perspective

Although every attempt was made to ensure the authors’ neutrality in the analysis of the data, it is recognised due to the double hermeneutics focus of IPA, that the interpretation of the narrative will be influenced by the author’s experiences and perspective. The first author has worked extensively for the past two decades in the field of complex trauma, as a researcher and clinical psychologist. The second author has predominantly worked with

young people experiencing severe psychopathology, many of whom had experienced complex trauma.

Methodological strategy

This longitudinal qualitative case study explored an individual's subjective experience of the 2005 Bali bombing. Methodologically, IPA is particularly useful in exploring phenomena where little research has been forthcoming. The double hermeneutic focus of IPA emphasises the role of the researcher in the interpretative process (Smith & Eatough, 2007). That is, the researcher aims to 'make sense of the participant making sense' of their experiences (Smith, 1996). Remaining reflexive and aware of personal biases and pre-suppositions that may interfere in this double hermeneutic process is a challenge for researchers as they engage in second order sense making of someone else's experience (see Table 1). It is not concerned with generalisation or cause and effect but may add to extant quantitative research and generate specific theory (Smith, Flowers, & Larkin, 2009).

Analysis and Results

The analytic process followed the four stage sequence devised by Smith (1996), see Table 1.

Insert Table 1 here

Results

The results are an interpretative double hermeneutic interplay between the researcher and the participant's reflection on their exposure to the Bali terrorist attack, and their perception of positive and negative impacts over time: first, at two years post event; second, at seven years post event. One superordinate theme was identified: *Vigilance and anger: growthful adaptation to terrorism*. This theme overarched four subordinate themes: violent

interruption, grief and disconnection, struggling for meaning, and growth through anger and vigilance. These themes encapsulate an individual's redefining of self, through personal, relational, and existential challenges in the aftermath of a momentary and life-changing event. Anger and vigilance appeared to be adaptive over time for the integration of distress and growth in a world where the threat of terrorism remains constant for this participant. The four subordinate themes and their sub-themes are presented below in Table 2. Quotations from the interviews are used to describe and illustrate the themes.

Insert Table 2 here.

Violent interruption.

This theme reflects the impact of violence on a life narrative of success and invulnerability to disaster. Edward provided an insight into his changing sense making of a terrorist driven visitation of death at both 2 and 5 years post event. At each interview, he reflected on a past narrative of 'self' as different to his current 'self'.

Who lives and who dies?

At two years post event, Edward was still caught in a ruminative state. He struggled with disbelief and spoke of a previous invincibility. He was confronted by the fragility of his own life and his vulnerability to the actions of others. He struggled to make sense of his involvement in this catastrophe.

"No, it can't be a bomb. It happens to poor buggers but not me. But the thing kept going and it was a bomb."

Striving to make sense of his experience, Edward questioned the determinants of why he survived:

"I took the view of myself, that I had no claim to be saved for anything good I had done, but by the same token I didn't know of anything bad the people that were killed had done either. So it umm it is a mystery as to how that selection is made or not made."

Prior to the attack, Edward remembered a confidence that took for granted his right to live. 'Why me' was a ruminating internal dialogue that brought no sense of his role in these events. At the two year interview, these circular ruminations maintained his sense of confusion.

Finding a new narrative.

Over time, change including a previously unfelt sense of gratitude for life began to emerge. Sense making, so evasive two years after the Bali bombings, now gave way to a perception of fatalism, caught in time and place. It encouraged a consideration that life may be predetermined and beyond his control:

"I have come to grips that I have in the great scheme of things, it has been designed for me to be in the event I was."

The second interview, seven years after Bali, revealed consolidation of a new life narrative.

Grief and disconnection.

Terror-related trauma complicated grief disconnecting a prior and future sense of 'self'. Role, identity and purpose in the world were so indelibly intertwined with Edward's sense of his professional and community standing that he continued to grieve these separated selves well beyond the two-year interview.

Grief, prior self, and forced change.

Seven years after the bombings, it was as if a third Edward emerged that questioned the naivety of the two year post event Edward:

"I was totally and permanently unfit for work despite that, I decided I was going to try and prove my worth."

Professional workload inevitably deteriorated; grief was reignited as independence and purposeful decisions were subjugated to the intrusion of terror-related traumatic responses.

These continued to eck away at his former vision of self. A void in self-identity followed:

“So that’s another bit of a loss that Bali’s cost me.”

Disconnection with prior self.

At the two-year interview Edward presented his prior self as someone caught up in his career and lifestyle. He recognised his current disregard had replaced a once valued materialism: excessive eating, obtainment of meaningless objects and building of wealth. Steeped in momentary, subjective wellbeing without meaning, Bali had propelled him into a new and uncertain purpose for being. Edward described his reappraisal for redirection:

“I think I am very lucky to have what I call a stock take on life. Just like good wines turns- you go through your cellar and sort out what you do want and what you don’t want.”

Paradoxically, a new narrative of gratitude emerged where his future appeared longer and with the prospect of greater quality of life:

“He’s taken a year out of my life. And I thought to myself; no he hasn’t. He’s probably given me another five or ten.”

Struggling for meaning.

Finding meaning out of terrorism for Edward was a process of oscillating positive and negative possibilities. Forced retirement became the conduit for unfamiliar reflections, particularly his style of interpersonally relating. Yet, the possibility that life could be felt and interpreted differently left him feeling vulnerable and in unfamiliar territory. Moments of compassion were interrupted with angry blame towards the bombers. Over time, these shifting emotions allowed a consideration of a new purpose, a more humanitarian self that might abandon his familiar patterns of relating to others with seniority.

Vulnerability and new connecting.

At the first interview, Edward spoke of longing for connectedness. He reflected a view that lack of previous effort in relationships had been excused by time constraints, careers pressure and different priorities:

“Working, working, working – um my family at home and I’m at work till 8 o’clock at night.”

He spoke of a strange and possible connectedness previously unexplored. He began to take chances at increased intimacy:

“Mate of mine, ... with whom I’ve never felt the ability to have what one might call more intimate conversation. But – um in recent months that has been happening. “

It became a time for honesty and an opportunity for becoming a different person to the pre-Bali Edward:

“He has said things to me that he must have thought about me for 20 or 30 years ... Perhaps people see me differently – a more receptive person.”

Superior / humble.

This near death experience gave Edward the opportunity to muse on different possibilities in life and he considered making “practical contribution(s) to society.” Though still unable to make sense of why he, Edward, was involved in the Bali bombing 2 years post event, his reflections of surviving and rehabilitation appeared to trigger an empathic and humble drive to make a difference in the lives of others:

“Really now more interested in being of use to people, helping people that haven’t had the opportunities that I have.”

Edward perceived that his metamorphic personal shift was not necessarily shared by others who had experienced the attack. In fact a quizzical and confused musing left him unable to identify with a more cognitive and practice trajectory taken by other survivors:

“She does it to the extent that it’s um – to distract her from what she – I think – from what she’s otherwise experiencing”

Prior self received greater criticism at the seven year interview. Regret was expressed as he reflected on his former role, and his isolation from others:

“Because if I needed something I had the privileged position of being able to ask so many people ... and it was brought to me.”

Pity was also expressed as he perceived those who lacked his insight as remaining trapped in this ‘rat race’.

“They’re just running up and down on the same spot, the same spot as I used to, ... and I’m enjoying myself.”

Growth through vigilance and anger.

Edward’s ongoing attempts to reconstruct his world, a world where threats of terrorism are ever present, brought a certainty and passion in Edward’s perspective of the unrepentant perpetrators. Time allowed him to embrace what he saw as reasonable anger at unrepentance. Ongoing vigilance was described as realistic and adaptive allowing him to engage with life preparedly for unpredictability of future attacks. Despite this uncertainty in everyday life, seven years on Edward was able to redefine himself moving from fateful contemplation to embrace growth in the form of action towards humanitarian causes.

Assigning responsibility.

Edward’s response towards the bombers two years after Bali was more lenient. He could not “recall ever having viciousness towards them.” He instead allowed them diminished responsibility based on their poverty and youth, and acknowledged their vulnerability to the influence of others. Forgiveness was something he considered:

“Is the word forgive too much - possibly it is. There can’t be any forgiveness for walking up and bombing people like they did but there’s reasoning I really mean as to why they would do it.”

He recalled a momentary flash of insight into the perpetrator's impoverishment when given shrapnel from his wounds post surgery:

"In my right hand I've got a um- I've got a lump which is a piece of shrapnel, which I've had cut out, all it was was a little cheap looking rusting piece of metal which was no means BHP grade steel. ... it was no more than a cheap ball bearing off a bicycle chain partly rusted. So that's the poverty in which these kids were living on the island of Sumatra and the time they were indoctrinated to go and do what they did."

Early sense making allowed Edward to excuse the horror of his experience and depersonalise the attack. Instead he rationalised their actions as indoctrinal rather than a political agenda that encompassed a world stage:

"Those poor young kids- I presume they were- in their twenties- these um- unreal rewards for doing what they did. They were promised those things by people like that Osama and so on whom you don't see walking around with a bag on his back."

Furthermore, depersonalising his role in the events, "we are at war" became a mantra for accepting the perpetrators as pawns of a larger and more powerful force. This interpretation allowed Edward to consider the possibility of forgiveness as a way of reconnecting with his own life.

Anger in the absence of penitence.

Seven years after Bali, forgiveness had given way to anger and due outcome:

"Perpetrators ... they're dead. Serves them right."

Anger and blame had replaced forgiveness and become personalised. He was no longer able to identify with the motivation and rationale for actions particularly without lack of repentance:

"I say the 'Our Father' when I go to church and I think of that, you know 'Forgive us our trespasses as we forgive them' - I don't think to do that with these people."

Initially, Edward's transformation over time appeared to be damaging to his sense making of a personal confrontation with terrorism. However, as he explains, it may be that vigilance and blame can be seen as positive adaptations to a previously unknown threat on a larger world scale:

"I can't cross a road like you can ... I've survived something as dramatic as I have, I'm not going to end my life now on the bonnet of a car, something as minor as that!"

Realistic Vigilance.

Similarly, at the later interview, vigilance and anxiety are never far from the surface in a world that no longer feels safe to Edward post-Bali. He acknowledges that anxiety is now part of his family's everyday life and acceptable:

"... an overlay of anxiety and so on, I don't know if it comes into every house hold, but it is in ours."

However, despite an acceptance of the permanency of these responses, Edward's state of anxiety does not, as previously thought, appear to reflect psychological distress, but rather a rational response to a changed world view.

His reflections indicate clear thinking about travel risks: "this is not the time you should be in Bali", and a recognition that the threat of terrorism is present, not past.

Active avoidance serves to reduce his anxiety, and the risks associated with everyday life in a world where terrorism has infiltrated previously safe havens. Edward's post-Bali recovery has brought a preciousness to life where unnecessary risks are not acceptable, and are avoided. Unlike the pre-Bali Edward, he no longer sees himself as invincible, and is now aware of his fragility.

"I've stopped skiing ... because I've decided that ... I don't want to finish my long skiing career on the end of a run-away snow board, ... so that's an anxiety too."

His anxiety regarding a pending attack and the possible devastation to his own country, largely untouched by terrorism, is a reality based on experience for Edward. To him, unpredictability and basic assumptions around where and when terrorism may strike have taken away naivety and a right to be complacent. Being on guard and enjoying every moment with care makes sense to Edward's post-Bali relationship with the world.

Contemplation / humanitarian action.

Two years after Bali, pathways to a new and positive life remained unclear to Edward. He continued to ruminate and seek meaning for the enforced change at a practical level. Seven years on, his rumination became purposeful resulting in behavioural change and action. He actively sought out opportunities to help others experiencing adversity. It was as if Edward's confrontation with unexpected violence brought a new understanding and compassion, previously unexperienced by him in his pre-Bali world:

"I'd like to do something (to help) with people who have their own bomb"

Ultimately, Edward embraced a new found sense of humanity over time through his altruistic efforts with others and expressed a warmth and deep satisfaction from giving:

"I got this feeling in my heart, as I walk out of that gym ... I thought I've never felt that walking out of (his previous organisation), it was a feeling of such pleasure ... and I knew, that I'd done something for those kids"

Recognising post attack change in himself was a slow process of battling a 'previous' self with a 'new' self. His belief in fate was a stepping stone to acceptance:

"I've had the strength to accept that in the scheme of things designed for me, it must have always been going to be that I would finish my working life in the way I have been forced to do"

Over time, he was able to redefine his place in the world. He expressed a freedom from his collision with catastrophic events as a release from rigidity:

“After a while I thought to myself, who’s the lucky one?”

A greater empathic awareness is brought on by insight into the world of others and their ways of coping.

“I listen, I’ve got time to listen, I think I’ve got ... the sensitivity to listen.”

He was able to move beyond a criticalness of other’s reactions, to a sense of community with those involved in this event.

“(Others) ... choose to ignore, or to prefer not to recall (they were) in it. I wouldn’t put that as a denial though”

Discussion

This study offers insight into the subjective interpretations of the experience of terrorism over time and produced several findings of note. Specifically, vigilance and anger, previously thought detrimental to recovery, appeared to facilitate a return to psychological wellbeing and posttraumatic growth. Independent to anger, vigilance and anxiety allowed the participant to continue to function and redefine his life in a world where the threat of terrorism remains constant. Increased empathy and interpersonal connectedness with others, now recognised domains of growth, were expressed as positive outcomes of exposure to the Bali bombing. Lastly, trying to find meaning at the two year point, empathy and a tendency to forgive the perpetrators was evident; however, purposeful rumination and sense making did not occur. By seven years post Bali, the participant defined his relationship with his perpetrators through justifiable anger without evidence of psychopathology. This anger gave rise to redefining positively his place in the world with the reality of terrorism providing a platform for adaptive vigilance and psychological wellbeing.

Symptoms of hypervigilance and avoidance are now well accepted responses in the initial aftermath of exposure to traumatic incidents (American Psychiatric Association, 2013).

These responses are thought to be protective immediately post trauma, allowing the individual to continue to function despite a heightened sense of emotional arousal and distress (Creamer, Burgess, & Pattison, 1992). In the longer term, however, a reliance on avoidance or vigilance to reduce distress or anxiety is regarded as maladaptive, as it prevents the activation of the fear network, inhibiting network resolution processing (Creamer et al., 1992). Conversely, the results of the current study suggests that avoidance and vigilance may actually facilitate a return to psychological wellbeing in the longer term, rather than inhibit this individual's ability to move forward following trauma responses evoked by terrorism. In this case, avoidance and vigilance were regarded as adaptive in the management of ongoing anxiety, allowing this individual to continue to function despite an ever present threat of terrorism. This has implications for considering the trajectory of responses following different types of traumatic experiences.

While the current research did not attempt to quantify symptomology, but rather understand an individual's interpretation of their distress over time, ongoing vigilance, anxiety and avoidance were reported by the participant as the processes used to make meaning of this catastrophic event. The participant appeared to manage his anxiety levels by oscillating between avoidance and vigilance, including an increased cautiousness in his behaviour, travel restrictions, excessive care when crossing the road and avoidance of leisure activities such as skiing. Such behaviours were based on assessment of the risk of both future occurrences of terrorism and subsequent harm to self. A dichotomy was noted in the participant's interpretation however, in that, at seven years post event when reported anxiety and avoidance increased, the reported levels of positive coping and growth also increased. This may be unique phenomenon following the experience of terrorism relative to other traumatic events, as terrorism in the modern world poses ongoing threat to the individual, and by its nature future occurrences are likely, unpredictable and without warning.

Previously, anxiety and vigilance in the aftermath of trauma have been thought of as psychopathological, detrimental to psychological wellbeing, maintaining fear and preoccupation with the perpetrator. The results of the current study suggest that vigilance in the context of terrorism may be adaptive, reflecting a learnt ability to cope with a new world order, one that incorporates the ever present threat of terrorism. Just as we recognise a shift from intrusive rumination to purposeful rumination (Cann, Calhoun, Tedeschi, & Solomon, 2010), possibly the notion of adaptive vigilance requires further research.

Consistent with earlier findings of increased empathy following complex trauma (McCormack et al., 2011), a greater empathic awareness was reported in this study. Edward reflected on a deep need for interpersonal connection and greater empathy for others as time progressed: “I’ve got time to listen, I think I’ve got ... the sensitivity to listen.” He regretfully reflects on his former self as someone who did not prioritise interpersonal relationships, but rather his career direction and success. Seven years on from Bali, Edward was motivated to seek out opportunities to help others “who have their own bomb”. He was able to redefine his view of life more empathically, a growth domain that has been highlighted consistently amongst the growth literature as an outcome particularly following interpersonal violence, such as terrorism (Affleck & Tennen, 1996; Ai, Cascio, Santangelo, & Evans-Campbell, 2005; Torabi & Seo, 2004; Vázquez, et al., 2006).

As an outcome from the events of September 11, increased political engagement, patriotism and collectivism in a national identity has been reported for individuals both directly and indirectly exposed to the terrorist attack (Peterson & Seligman, 2003; Thomas, 2003; Torabi & Seo, 2004). This event brought about social cohesion and a sense of national belonging (Torabi & Seo, 2004). Similar cohesive outcomes were also reported following the Madrid March 11, 2004 terrorist attacks (Vázquez, et al., 2006). Conversely, the current study adds to the existing literature by investigating the subjective experience of terrorism

outside of one's country of origin. It is an assumption of this research that the experience of terrorism and the subsequent period of recovery and readjustment are substantially different for an individual when exposure occurs in another country, an area of research requiring further investigation. Specifically, the geographical distance may have in fact allowed the participant a reduced sense of vulnerability from fear of future attacks. Despite this geographical distance, it is essential to note the participant's retained level of vigilance in the subsequent years since returning to his country of origin, and his suggestion that the threat of terrorism remains current, warranting continued caution. Similarly, further research is needed to explore different responses depending on place of event.

As these events occurred in Bali, an international holiday destination, the participant's period of recovery when returning to his home country did not have the support and awareness from a collective identity or a nation in recovery, but rather a small group of individuals who shared this experience. This study supports the notion that in the absence of authentic social networks, return to psychological wellbeing and personal growth following adversity may be facilitated through intrinsic motivation to seek out others who have shared or have had similar experiences, and by way of altruistic efforts towards those less fortunate.

Importantly, this study followed the progression of change for an individual over time in the face of terrorism. Coupled with a qualitative framework, this longitudinal study permitted a deeper exploration of an individual's reflections and meaning making of their exposure to a terrorist attack. Seven years after the Bali bombings previous contemplation and cognition became action. Edward actively sought to help others and embraced a new found self through self-protective behaviours, and altruism. Earlier, at the two year interview, Edward reported contemplating such changes, although was overcome with uncertainty, confusion and a desire to regain his prior life. Although it took time, moving forward had begun to occur. This phenomenon is suggestive of true posttraumatic growth, as growth is

only of benefit to an individual when meaning-making is translated into action, thereby restoring an individual's sense of control and self-competency (Hobfoll, Canetti-Nisim, Galea, Johnson, and Palmieri, 2007). This process is reflective of Edward's journey over seven years after Bali.

However, as greater positive change was reported, significant anger was also reported. Seven years on from Bali, Edward reflected that with the progression of time he had developed a growing sense of anger and hatred towards the bombers and their actions. Edward had initially attempted to understand their actions, and identified their impoverished backgrounds and youth for their escapism and indoctrination into terrorism. He allowed them diminished responsibility due to their vulnerability to the influence of others, recognising "they were conned". Subsequently, with the passage of time, Edward reported increased anger and hatred toward them for the heinous nature of their actions. As heightened anger was experienced, Edward also reported significant positive growth in relationships, empathy for others, and purpose and meaning. Such results are consistent with findings from Park et al. (2008), who reported that feelings of hatred or anger towards the perpetrators of the 9/11 terrorist attack was predictive of posttraumatic growth.

These findings are at odds with the current clinical notion advocating for forgiveness as a therapeutic goal to address psychological distress following exposure to trauma (Enright, & Fitzgibbons, 2000). Particularly, as forgiveness is thought to occur as a result of reduced negative rumination and feelings of anger towards the offending person (Wade, Bailey, & Shaffer, 2005). Whilst research shows that forgiveness is an important positive response to negative interpersonal events, limited studies have considered how forgiveness relates to psychological adjustment when the victim has no ongoing interpersonal relationship to the perpetrator, such as in the case of terrorism (Kline Rhoades, et al., 2007) and when the perpetrator is unrepentant. Therefore, the results of the current research may encourage a

change in the therapeutic mindset to allow for differing paths when working with individuals exposed to complex trauma and to encourage complexity of meaning during their return to psychological wellbeing rather than simply a focus on the psychopathology of anger.

Alternatively, it may be that perceived justifiable anger acts as a facilitator of positive action and change.

Together the simultaneous occurrence of increased vigilance, anger and posttraumatic growth, may possibly result from the externalisation of emotion toward the bombers, assisting Edward to embrace greater personal meaning making and growth. Similar conclusions were drawn by Lev- Wiesel and Amir (2003), who found that arousal, a subcategory of PTSD, can coexist with posttraumatic growth in survivors of the holocaust. Unlike other symptoms of PTSD, such as intrusive thoughts, Lev- Wiesel and Amir (2003) suggest that arousal, including hypervigilance and anger outbursts are externalised into activity. This “doing” is linked with an increased sense of self efficacy and enhanced mastery and is therefore linked with growth.

Limitations

As an interpretative endeavour, this study is open to the subjective interpretation and biases of the researcher’s own experiences and understandings. Unlike nomothetic research, qualitative studies do not aim to generalize nor offer cause and effect, but rather strive for an indepth exploration of the individual’s subjective interpretation of their experience of previously unexplored phenomena. This study offers the extant quantitative literature future direction and contributes to the literature on terrorism and posttraumatic growth.

Conclusion

In conclusion, phenomenological studies offer rich and unique data for exploring an individual’s subjective distress and offers new hypotheses for positivist approaches. With the burgeoning literature into posttrauma growth, this longitudinal study provides insight into

positive gains such as redefined values, beliefs, sense of self-identity, and worldview, gained over time in the aftermath of horrific events (see Joseph, 2012). This is important in light of current theories posited about the relationship between trauma and growth. Several studies indicate that there is a critical point for cognitive processing, indicating a curvilinear relationship between posttraumatic stress and growth following trauma (Butler et al., 2005). That is, when significant distress and intrusive posttrauma symptoms are experienced, the capacity for cognitive processing is diminished, thereby limiting the potential for posttraumatic growth (Wiechman, Askay & Magyar –Russell, 2009). However, as distress levels decrease, it is proposed that purposeful rumination is said to be the central tenet to the curvilinear relationship and is therefore regarded as key to growth following trauma (Calhoun & Tedesch, 1999; Nolen- Hoeksema & Davis, 2004). Currently, that critical point in the aftermath of trauma remains elusive and further longitudinal studies are needed.

Despite these findings, research investigating the curvilinear relationship between distress and growth following adversity has produced mixed results. Several studies, all employing quantitative designs, found higher levels of growth to be associated with lower levels of distress in a variety of trauma survivors: female sexual assault survivors (Frazier, Conlon, & Glaser, 2001), parents of children receiving paediatric intensive care (McCaslin et al., 2009), victims of violence (Kunst, 2010) and assault survivors (Kleim, 2009). Conversely, others found no reliable association between posttraumatic growth and distress (Cordova, Cunningham, Carlson, & Andrykowski, 2001; Powell, Rosner, Butolo, Tedeschi, & Calhoun, 2003; Stump & Smith, 2008). However, inclusive in this growing literature there remains a viable link between posttraumatic distress and positive outcomes from primary exposure (Butler et al., 2005; Cadell Regehr, & Hemsworth, 2003; Dekel et al, 2012; Helgeson, Reynolds, & Tomich, 2006; Hobfoll et al., 2007; Park et al., 1996), and vicarious

exposure to trauma (McCormack et al., 2011; McCormack & Joseph, 2013; McCormack & Sly, 2013).

This study has provided a comprehensive insight into an individual's exposure to a terrorist incident and the resulting positive and negative impact on their life over a seven year period. It found that: (1) vigilance and anxiety in the context of terrorism may facilitate positive growth and psychological wellbeing; (2) increased empathy and interpersonal connectedness with others was an outcome of exposure to terrorism; and (3) anger towards the perpetrator in the absence of an ongoing interpersonal relationship and penitence, may not be detrimental to positive outcomes and psychological wellbeing. Consequently, as incidents of international terrorism appear to be on the increase, understanding the factors that assist individuals' return to psychological wellbeing and promote positive growth following exposure is an essential future priority. In particular, further research regarding the role of anger and ongoing vigilance in the absence of psychopathology is warranted.

References

- Affect, G. & Tennen, H. (1996). Construing benefits from adversity: Adaptational significance and dispositional underpinnings. *Journal of Personality, 64*, 899- 922.
- Affect, G., Tennen, H., Croog, S., & Levine, S. (1987). Causal attribution perceived benefits, and morbidity after a heart attack: A 8 year study. *Journal of Consulting and Clinical Psychology, 55*, 29-35.
- Ai, A. L., Cascio, T., Santangelo, L. K., & Evans-Campbell, T. (2005). Hope, Meaning, and Growth Following the September 11, 2001, Terrorist Attacks. *Journal of Interpersonal Violence, 20*(5), 523-548.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*. (5th ed.). Washington, DC: Author.
- Butler, L. D., Blasey, C. M., Garlan, R. W., McCaslin, S. E., Azarow, J., Chen, X., Desjardins, J. C., DiMiceli, S., Seagraves, D.A., Hastings, A. T., Kraemer, H. C., & Spiegel, D. (2005). Posttraumatic Growth Following the Terrorist Attacks of September 11, 2001: Cognitive, Coping, and Trauma Symptom Predictors in an Internet Convenience Sample. *Traumatology 11*(4), 247- 267.
- Cadell, S., Regehr, C., & Hemsworth, D. (2003). Factors Contributing to Posttraumatic Growth. A Proposed Structural Equation Model. *American Journal of Orthopsychiatry, 73*(3), 279- 287.
- Calhoun, L. G., & Tedeschi, R. G. (1998). Posttraumatic growth: Future directions. In R. G. Tedeschi, C. L. Park & L. G. Calhoun (Eds.), *Posttraumatic growth: Positive changes in the aftermath of crisis*. Mahwah, NJ: Erlbaum.
- Calhoun, L. G., & Tedeschi, R. G. (1999). *Facilitating post-traumatic growth: A clinician's guide*. Mahwah, NJ: Lawrence Erlbaum.

- Calhoun, L. G., & Tedeschi, R. G. (Eds.). (2006). *Handbook of posttraumatic growth: Research and practice*. Mahwah, NJ Erlbaum.
- Cann, A., Calhoun, L. G., Tedeschi, R. G., & Solomon, D. T. (2010). Posttraumatic Growth and Depreciation as Independent Experiences and Predictors of Well-Being. *Journal of Loss and Trauma, 15*(3), 151-166.
- Carver, C. S. (2004). Negative affects arising from the behavioural approach system. *Emotion, 4*, 13- 22.
- Conejero, S., de Rivera, J., Páez, D., & Jiménez, A. (2004). Alteración afectiva personal, atmósfera emocional y clima emocional tras los atentados del 11 de marzo. *Ansiedad y Estrés, 102*, 299-312.
- Conejo-Galindo, J., Medina, O., Fraguas, D., Teraín, S., Sainz-Cortón, E., & Arango, C. (2008). Psychopathological sequelae of the 11 March terrorist attacks in Madrid, An epidemiological study of victims treated in a hospital. *European Archives of Psychiatry & Clinical Neuroscience, 258*, 29-34.
- Cordova, M. J., Cunningham, L. C., Carlson, C. R., & Andrykowski, M. A. (2001). Posttraumatic Growth Following Breast Cancer: A Controlled Comparison Study. *Health Psychology, 20* (3), 176-185.
- Creamer, M., Burgess, P., & Pattison, P. (1992). Reaction to trauma: A cognitive processing model. *Journal of Abnormal Psychology, 101*, 452–459.
- Dekel, S., Ein-Dor, T., & Solomon, Z. (2012). Posttraumatic Growth and Posttraumatic Distress: A Longitudinal Study. *Psychological Trauma-Theory Research Practice and Policy, 4*(1), 94-101.
- Difede, J., Apfeldorf, W. J., Cloitre, M., Spielman, L., & Perry, S. W. (1997). Acute psychiatric responses to the explosion at the World Trade Centre: A case series. *Journal of Nervous and Mental Disease, 185*, 519-522.

- Enright, R. D., & Fitzgibbons, R. P. (2000). *Helping clients forgive: An empirical guide for resolving anger and restoring hope*. Washington, DC: American Psychological Association.
- Evers, A. W. M., Kraaimaat, F. W., van Lankveld, W., Jongen, P. J. H., Jacobs, J. W. G., & Bijlsma, J. W. J. (2001). Beyond Unfavorable Thinking: The Illness Cognition Questionnaire for Chronic Diseases. *Journal of Consulting & Clinical Psychology, 69*(6), 1026-1036.
- Fischer, P., & Ai, A. L. (2008). International Terrorism and Mental Health, Recent Research and Future Directions. *Journal of Interpersonal Violence, 23*, 339- 361.
- Frazier, P., Conlon, A., & Glaser, T. (2001). Positive and negative life changes following sexual assault. *Journal of Consulting and Clinical Psychology, 69*(6), 1048-1055.
- Fredrickson, B., Tugade, M., Waugh, C., & Larkin, G. R. (2003). What Good Are Positive Emotions in Crises? A Prospective Study of Resilience and Emotions Following the Terrorist Attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology, 84*, 365- 376.
- Gadamer, H. (1983). Hermeneutics as practical philosophy. In F. G. Lawrence (Trans.), *Reason in the age of science*. (pp. 88–138). Cambridge: The MIT Press.
- Galea, S., Resnick, H., Ahern, J., Gold, J., Bucuvalas, M., Kilpatrick, D., Bucuvalas, M., Gold, J., & Vlahov, D. (2002). Posttraumatic Stress Disorder in Manhattan, New York City, After the September 11th Terrorist Attacks. *Journal of Urban Health: Bulletin of the New York Academy of Medicine, 79* 340- 353.
- Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury, CA: Sage.
- Helgeson, V. S., Reynolds, K. A., & Tomich, P. L. (2006). A Meta-Analytic Review of Benefit Finding and Growth. *Journal of Consulting & Clinical Psychology, 74*(5), 797-816.

Hobfoll, S. E., Cannetti-Nisim, D., & Johnson, R. J. (2006). Exposure to terrorism, stress-related mental health symptoms, and defensive coping among Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology, 74*, 207-218.

Hobfoll, S. E., Hall, B. J., Cannetti-Nisim, D., Galea, S., Johnson, R. J., & Palmieri, P. A. (2007). Refining our Understanding of Traumatic Growth in the Face of Terrorism: Moving from Meaning Cognitions to Doing what is Meaningful. *Applied Psychology: An International Review, 56*(3), 345-366.

Joseph, S. (2012). *What doesn't kill us. The new psychology of posttraumatic growth*. London: Piatkus.

Joseph, S., Williams, R., & Yule, W. (1995). Psychosocial perspectives on post-traumatic stress. *Clinical Psychology Review, 15*, 515- 544.

Kleim, B. A. (2009). Evidence for a curvilinear relationship between posttraumatic growth and posttrauma depression and PTSD in assault survivors. *Journal of Traumatic Stress, 22*(1), 45-52.

Kline Rhoades, G., McIntosh, D. N., Wadsworth, M. E., Ahlqvist, J. A., Burwell, R. A., Gudmundsen, G. R., Raviv, T., & Rea, J. G. (2007). Forgiving the September 11th terrorists: Associations with coping, psychological distress, and religiosity. *Anxiety, Stress & Coping: An International Journal, 20*, 109-128.

Kunst, M. J. (2010). Peritraumatic distress, posttraumatic stress disorder symptoms, and posttraumatic growth in victims of violence. *Journal of Traumatic Stress, 23*(4), 514-518.

Lev- Wiesel, R. & Amir, M. (2003). Posttraumatic Growth among Holocaust Child Survivors. *Journal of Loss and Trauma: International Perspectives on Stress & Coping, 8*, 229-237.

- Levant, R. F., Barbanel, L., & Deleon, P. (2005). Psychology's response to terrorism. In F. M. Moghaddam & A. J. Marsella (Eds.), *Understanding Terrorism: Psychological Roots, Consequences and Interventions*. Washington, DC: APA.
- Linley, P. A., & Joseph, S. (2004). Positive Change Following Trauma and Adversity: A Review. *Journal of Traumatic Stress, 17*(1), 11-21
- Massey, S., Cameron, A., Ouellette, S., & Fine, M. (1998). Qualitative approaches to the study of thriving: What can be learned? *Journal of Social Issues, 54*, 337- 355.
- McCormack, L., & Joseph, S. (2013). Psychological growth in humanitarian aid personnel: reintegrating with family and community following exposure to war and genocide, *Community, Work & Family, 16*, 147-163.
- McCormack, L., Hagger, M., & Joseph, S. (2011). Vicarious Growth in Wives of Vietnam Veterans: A Phenomenological Investigation into Decades of "Lived" Experience. *Journal of Humanistic Psychology, 51*, 273- 290.
- McCormack, L. & Sly, R. (2013). Distress and Growth: The subjective 'lived' experiences of being the child of a Vietnam veteran. *Traumatology, 19* (4), 303-312
<http://dx.doi.org/10.1177/1534765613481855>
- McCaslin, S. E., de Zoysa, P., Bulter, L. D., Hart, S., Marmar, C. R., Metzler, T. J. & Koopmanm C. (2009). The relationship of posttraumatic growth to peritraumatic reactions and posttraumatic stress symptoms among Sri Lankan university students. *Journal of Traumatic Stress, 22*, 334- 339.
- Nolen-Hoeksema, S., & Davis, C. G. (2004). Theoretical and Methodological Issues in the Assessment and Interpretation of Posttraumatic Growth. *Psychological Inquiry, 15*(1), 60- 64.
- Park, C. L., Aldwin, C. M., Fenster, J. R., & Snyder, L. B. (2008). Pathways to posttraumatic growth versus posttraumatic stress: Coping and emotional reacton following the

- September 11, 2011 terrorist attacks. *American Journal of Orthopsychiatry*, 78(3), 300-312.
- Park, C. L., Cohen, L. H., & Murch, R. (1996). Assessment and prediction of stress-related growth. *Journal of Personality*, 64, 71-105.
- Peterson, C., & Seligman, M. E. (2003). Character strengths before and after September 11. *Psychological Science*, 14(4), 381-384.
- Polatinsky, S., & Esprey, Y. (2000). An Assessment of Gender Differences in the Perception of Benefit Resulting from the Loss of a Child. *Journal of Traumatic Stress*, 13(4), 709-718.
- Poulin, M. J., Cohen Silver, R., Gil-Rivas, V., Holman, E. A., & McIntosh, D. N. (2009). Finding Social Benefits after a Collective Trauma: Perceiving Societal Changes and Well-Being Following 9/11. *Journal of Traumatic Stress*, 22(2), 81-90.
- Powell, S., Rosner, R., Butolo, W., Tedeschi, R. G., & Calhoun, L. (2003). Posttraumatic growth after war; A study with former refugees and displaced people in Sarajevo. *Journal of Clinical Psychology*, 59(1), 71-83.
- Putra, I E., & Zora, S. A. (2013). Basic concepts and reasons behind the emergence of religious terror activities in Indonesia: An inside view. *Asian Journal of Social Psychology*, 16, 83-91.
- Rubin, G. J., Brewin, C. R., Greenberg, N., Simpson, J., & Wessely, S. (2005). Psychological and behavioural reactions to the bombings in London on 7 July, 2005: Cross sectional survey of a representative sample of Londoners. *British Medical Journal*, 17, 606-611.
- Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., Zhou, A.J., Kanouse, D.E., Morrison, J.L., & Berry, S.H. (2001). A national survey of

stress reactions after the September 11, 2001, terrorist attacks. *New England Journal of Medicine*, 345, 1507-1512.

Smith, A., Joseph, S., & Das Nair, R. (2011). An Interpretative Phenomenological Analysis of Posttraumatic Growth in Adults Bereaved by Suicide. *Journal of Loss and Trauma: International Perspectives on Stress & Coping*, 16(5), 413-430.

Smith, J. (1996). Beyond the divide between cognitive and discourse: Using interpretative phenomenological analysis in health psychology. *Psychology and Health*, 11, 261-271.

Smith, J. A., & Eatough, V. (2007). Interpretative phenomenological analysis. In E. Lyons & A. Coyle (Eds.), *Analysing Qualitative Data in Psychology*. London Sage.

Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative Phenomenological Analysis*. London: Sage.

Smith, J. A., Michie, S., Stephenson, M., & Quarrell, O. (2002). Risk perception and decision making in candidates for genetic testing in Huntington's disease: An interpretative phenomenological analysis. *Journal of Health Psychology*, 7, 131-144.

Smith, J. A., & Osborn, M. (2008). Interpretative phenomenological analysis. In J. Smith(Ed.), *Qualitative psychology. A practical guide to research methods* (pp. 53-80). London: Sage.

Smith, T. W., Rasinski, K. A., & Toce, M. (2001). *America rebounds: A national study of public responses to the September 11th terrorist attacks. Preliminary findings*. Chicago: NORC, University of Chicago.

Stevens, G. J., Dunsmore, J.C., Agho, K. E., Taylor, M. R., Jones, A. L., van Ritten, J. J., & Raphael, B.(2013). Long-term health and wellbeing of people affected by the 2002 Bali bombing. *Medical Journal of Australia*, 198(5), 273-277.

- Stump, M. J., & Smith, J. E. (2008). The Relationship between Posttraumatic Growth and Substance Use in Homeless Women with Histories of Traumatic Experience. *American Journal on Addictions, 17*(6), 478-487.
- Tedeschi, R. G., & Kilmer, R. P. (2005). Assessing Strengths, Resilience, and Growth to Guide Clinical Interventions. *Professional Psychology: Research and Practice, 36*(3), 230- 237.
- Thomas, S. (2003). "None of us will ever be the same again": reactions of American midlife women to 9/11. *Health Care for Women International, 24*, 853-867.
- Torabi, M. R., & Seo, D. C. (2004). National study of behavioural and life changes since September 11. *Health Education and Behavior, 31*, 179- 192.
- Vázquez, C., Hervás, G., & Pérez- Sales, P. (2006). 'The role of positive emotions on the psychological reactions following the Madrid March 11, 2004, terrorist attacks', paper presented at the Third European Conference on Positive Psychology, Braga, Portugal (July).
- Wade, N. G., Bailey, D. C., & Shaffer, P. (2005). Helping clients heal: Does forgiveness make a difference? *Professional Psychology: Research and Practice, 36*, 634- 641.
- Wiechman, I., Askay, S., & Magyar -Russell, G. (2009). Post-traumatic growth and spirituality in burn recovery. *International Review of Psychiatry, 21*(6), 570- 579.
- WTC Medical Working Group. (2008). *Annual Report on 9/11 Health New York: World Trade Centre Medical Working Group of New York City.*
- Zoellner, T., & Maercker, A. (2006). Posttraumatic growth in clinical psychology - A critical review and introduction of a two component model. *Clinical Psychology Review, 26*, 626- 653.

Transcript extract notation

[...]	indicates editorial elision where non-relevant material has been omitted
(text)	indicates explanatory text added by author
[-]	pause in speech

Table 1: Stages of the interpretative phenomenological analytic (IPA) process.

Stage	Process
1	Interviews were transcribed verbatim, and repeatedly read to identify statements which reflected the participant's experience and meaning of their exposure to this terrorism event.
2	Independent analysis begins. Bracking of the researchers' pre-existing assumptions. Line by line search for unique interpretations. Clusters and patterns identified amongst the statements and collated into emergent themes, resulting in a table of the superordinate and subordinate themes supported by excerpts from the transcripts. Robust discussion and debate between researchers followed to arrive at a plausible or credible account. Audit trail consisted of initial independent listening to audio tapes, followed by note taking, annotated transcripts, tables of possible themes, final themes following robust discussion, draft analysis and final report.
3	The themes derived from the second interview transcript were continuously compared and contrasted in turn against themes derived from the previous transcript to arrive at both convergent and divergent themes. Psychological knowledge and theoretical knowledge guided interpretation. The final narrative developed with vived extracts grounded in the data moving through the themes.
4	A list of themes was developed to reflect the participant's experiences and psychological processes over time following exposure to terrorism. Such themes were then considered in relation to existing psychological theory and literature.

Table 2: Subordinate and sub-themes of Overarching Theme: Vigilance and anger: growthful adaptation to terrorism.

Subordinate Themes	Sub themes
Violent interruption	Who lives and who dies? Finding a new narrative
Grief and disconnection	Grief, prior self, and forced change Disconnection with prior self
Struggling for meaning	Vulnerability and new connecting Superior/ humble
Growth through vigilance and anger	Assigning responsibility Anger in the absence of penitence Realistic vigilance Contemplation/ humanitarian action