UNDERSTANDING THE EXPERIENCE OF POSTTRAUMATIC GROWTH FOLLOWING LIFE THREATENING PHYSICAL ILLNESS

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AUTHOR'S DECLARATION

This thesis is the result of the author's original research. It has been composed by the author and has not been previously submitted for examination which has lead to the award of a degree.

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ABSTRACT

Diverging from the pathological focus of 1950's psychology, positive psychologists have concentrated on the potential for people to grow and enhance their quality of life following adversity, a phenomenon coined as "posttraumatic growth" (PTG) (Tedeschi & Calhoun, 1996). Although there has been significant advancement in PTG research, there are limitations in the current models, theories and methods of assessment. Therefore, the aim of this thesis was to attain an in-depth insight into the nature of PTG following breast cancer diagnosis using interpretative phenomenological analysis. The participants were ten female breast cancer survivors who were self selected as having experienced posttraumatic growth, as well as participated in an exercise programme during their cancer treatment (Mutrie et al., 2007). They participated in one open-ended interview at their one year follow-up, the primary focus being to understand their experience of PTG. The analyses yielded seven main themes: the body, exercise class, existential re-evaluation, self-identity, philosophy change, society and narrative from growth-to-growth. Four of these have been extensively reported within the literature, thereby justifying the decision to further analyse the themes of 'narrative from growth-to-growth', 'exercise class' and 'the body' as they contributed the most to the expansion of PTG theory.

The results suggest a reconfiguration of the Transformational Model of growth (Tedeschi & Calhoun, 2006) in terms of its proposed temporal sequences of initiation of growth and exclusivity upon rumination. Additionally, two other themes suggest that the facilitation of growth, and certain PTG outcomes, were the result of both the women's participation in an exercise class and a reconnection to their own body; previously these two elements have not been linked. Overall, the thesis provides in-depth and novel additions to the PTG research within illness related trauma. Future research could extend the findings to develop more definitive links between thought processes, physical activity interventions and the body in the experience of PTG.

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

LIST OF FIGURES

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CHAPTER ONE

INTRODUCTION

1.1 Positive psychology

The shift in research towards systematically studying the positive outcomes of trauma stems from the development and increased popularity of positive psychology. Diverging from the traditionally led pathological focus of 1950s psychology, positive psychologists believe that society can benefit as much, if not more, from studying the good in the general population as was done by studying the bad (Seligman, Parks, & Steen, 2004). In order to do so, researchers have focused on identifying and fostering people's strengths and encouraging positive functioning (Snyder & Lopez, 2007).

The areas with sufficient amounts of research and interest to the well-being of the self and society are: happiness, positive affect, hope, optimism, resilience and posttraumatic growth (Snyder & Lopez, 2007). The practical applications of positive psychology are infinite and have been used within corporate organisations, schools, health centres and therapeutic surroundings, all intent on fostering the occurrence of positive well-being and building strengths. The coupling of positive psychology and physical activity has begun to take speed due to the multiple ways in which physical activity can increase well-being, self-efficacy, self-confidence and positive emotions and in turn enhance macro societal levels of functioning (Mutrie & Faulkner, 2004). Thus, the philosophical underpinning of positive psychology has sparked a 'referendum' against the negative side of human behaviour and is therefore ever present throughout the question, method selection, analysis and discussion within this thesis. Specifically, this thesis will focus upon the ironic phenomenon of finding positive benefits, or posttraumatic growth (PTG), in the aftermath of breast cancer diagnosis.

Growing from adversity is not a new concept; however it is a relatively new area of scientific research. Early examples of growth come from the sociological and anthropological disciplines, which focused on narratives[1] documenting illness as 'an opportunity, though a dangerous one' (Frank, 2002, p.1). In the 1990's, American illness narrative literature began to focus on the idea of illness as a chance for self-development and transformation, "out of the badness of illness comes something good, as people attempt to rescue valued life, against the onslaught of symptoms and their effects on the self and others' (Bury, 2001, p. 277). This shift of illness narratives brought heavy religious connotations with it as people begin to speak of themselves in romanticised versions of strength through suffering.

Since then, the experience of chronic illness has become rhetoric of self-change; an epiphany like experience allowing the person to reflect upon 'who they have always been' and 'who they might become' (Frank, 1993, p. 42). Bury (1982) proposed that chronic illness was indeed a disruptive event in which 'the relations between body, mind and everyday life is threatened' (Bury, 2001, p. 264). Specifically, Bury argued that the 'biographical disruption' could lead to a re-examination of both personal and social worlds. Thus, following illness, a person's strengths and capabilities are brought to the forefront, highlighting their potential to become something greater or further develop something they already had within them (Frank, 1993; 1995).

Both Frank (1993; 1995) and Bury (1982; 2001) purported three types of narratives used to describe a person's experience with illness. Bury's proposed narratives are: contingent, moral and core (epic and heroic) narratives, the latter of which focuses on the concept of growth from adversity. The epic and heroic core narratives generally proclaim 'heroism in illness' (p. 279), thus perpetuating the label of the chronically ill as a fighter against the disease. Frank's (1993; 1995) narratives, restitution, chaos and quest, appear to be more detailed and relevant than Bury's definitions. First of all, the 'restitution narrative' involves the person narrating their experience from being healthy, to sick and back to healthy again; there is always a

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[1] Narratives are defined as "the most general storyline that can be recognised underlying the plot and tensions within a particular story" (Frank, 1995, p. 75).

fixation on returning to the way they were before the illness appeared. The 'chaos narrative' is what Frank would describe as the opposite of his restitution narrative as there is a clear sense of 'life never getting any better' (p. 97). This narrative has no clarity, sequence or structure and this reflects the chaos of constructing life around an illness. Finally, Frank proposed a final narrative, the quest narrative, which parallels the concept of growth from adversity, 'quest stories meet suffering head on; they accept illness and seek to use it' (p.115). Basically, the quest narrative follows the belief that illness is the commencement of a journey, giving a sense of purpose to the patient.

There are three facets to the quest narrative: memoir, manifesto and automythology. The memoir is simply the author's reflection and narration of their illness in conjunction with other areas of the author's life. Quest narratives that are manifestos provide much more impact for social change. Manifestos are focused upon mass communication of suffering and illness experiences and the authors tend to feel responsibility for facilitating social change. An example of this comes from Thomas-MacLean (2004) in which one of her participants published pamphlets on 'how to speak to the ill' and started a support group in her area for people with breast cancer. Finally, the third type of quest narrative, automythology, represents the story of reinvention and rebirth following trauma and illness, 'the phoenix, reinventing itself from the ashes of the fire of its own body' (Frank, 1995, p. 122). Similar to the manifesto, the authomythology is preoccupied with strong stories of change and rebirth via suffering, however the latter is more 'personal than political' (p. 123).

Despite the incredibly compelling narrative work completed within the humanities on the potential for growth from adversity, this thesis will attempt to delve deeper into the possible psychological, physical and emotional experiences and processes that can occur as a result of trauma and misfortune. This following chapter will briefly review the relevant concepts, facilitators, and considerations of PTG as well as identify the gaps within the current literature, thereby justifying the rationale for the present study. The following section, 1.2, commences with a reflection of the proposed physiological and psychological responses to trauma.

1.2 Stress and trauma

First of all, it must be acknowledged that there is a large discrepancy between stress and trauma, and this thesis is focused on the positive psychological phenomenon following the latter. Exposure to acute and intermittent episodes of stress can actually be beneficial in the creation of stronger, more resilient individuals (Epel, McEwen, & Ickovics, 1998). However, when events are perceived as chronic or traumatic, the stress put upon the person can have varying potential outcomes. A traumatic event can be: "when challenges occur suddenly and unexpectedly (thus making them more likely to threaten our psychological well being); events that are out of the ordinary and the degree to which it creates long lasting problems" (Tedeschi & Calhoun, 1995, pp. 16-17). Thus, a person's narrative has to be substantially interrupted (Tedeschi & Calhoun, 2006) creating a sense of life 'before and after' the event occurred. Psychologists believe that there is a threshold of cognitive disruption in each individual which will determine whether or not the event is seismic enough to be considered traumatic. The potential outcomes are also dependent on when the traumatic events occur along the life spectrum (Tedeschi & Calhoun, 1995). Therefore, this thesis is focused on the experience of trauma, not stress, upon the body and mind.

1.2.1 Physical responses to trauma

In order to comprehend the potential psychological responses to trauma, it is important to first deliberate upon the physical reactions to trauma as this thesis will continually demonstrate and reflect upon the body's inevitable connection with, and influence upon, the mind. When faced with a traumatic situation, the human and animal body will respond in one of two ways; fight or flight. This simplistic view of physiological responses to trauma highlights what has been long forgotten within trauma therapy and recovery, that the body is affected as well as the mind. The following is a review of the physiological responses to trauma and how these relate to this thesis.

Epel et al. (1998) propose that it is the balance between anabolic and catabolic hormones that will determine whether the body will thrive or succumb following trauma. Rothschild (2000) uses the term 'survival centre' when regarding the limbic system as it is responsible for the release of hormones via the hypothalamic-pituitary-adrenal axis when confronted with extreme stress, threats, danger or trauma. The sympathetic branch of the nervous system activates via the hypothalamus and readies the body for 'fight or flight'. During this stage the body is prepared to act when challenged and a surge of cortisol, norepinephrine and epinephrine are released to increase catabolic processes.

Relaxation and cessation of the autonomic nervous system is manipulated via anabolic hormones (growth hormone, insulin, etc.) released by the parasympathetic nervous system. The body needs to secrete a substantial amount of cortisol to signal to the body it is no longer under threat. Post-traumatic stress disorder tends to occur when there is an insufficient amount of anabolic hormones re-released and the body continues to believe that it is under attack (Rothschild, 2000). Thus the cycles mentioned previously are still in continuance well after the trauma has occurred.

Ideally, the body should be able to respond and adapt to stress within different environments with little to no problems, leaving the body healthy and without damage. This is called allostasis. However, following trauma, the overload of catabolic hormones can cause damage to the physical self and health of the body, creating what is known as 'allostatic load' (Charney, 2004; Epel et al., 1998). Separate occasions of acute stress can build up 'resilience' and create 'tight allostasis' however chronic stress and trauma can have a detrimental affect on the body.

1.2.2 Psychological responses to trauma

As the body is reacting to and recovering from the traumatic event, the mind is also in a state of flux and can respond in multiple manners. The following is a review of three main psychological responses to trauma: posttraumatic stress disorder/succumbing, resilience/recovery and how they are similar to and different from the third psychological response on which this thesis is based, posttraumatic growth.

1.2.2.1 Posttraumatic stress disorder

War, accidents and illness create an anxiety-inducing environment in which the person is faced with stressors that are outside of their control. For some, this anxiety can produce long lasting psychological disorders and inhibit the return of normal functioning. Until recently, the common belief in psychological practices was that following these traumatic events, people were at risk of mild to severe episodes of negative adjustment, including depression, general anxiety disorders, excessive ruminative thoughts or what is commonly known as post-traumatic stress disorder (PTSD) (Rothschild, 2000). Following the diagnosis of cancer, PTSD has been found to occur within 5%-35% of the population as a result of the imbalance between threat and resources to cope with the disease (Cordova, 2008; Kangas, Henry, & Bryant, 2002). Typical symptoms of the disorder result from hyper-arousal of the autonomic nervous system (as discussed previously), constant re-experiencing of the trauma, and the need to avoid all things associated with trauma (Rothschild, 2000). Most of the earlier models of responses to trauma (discussed in section 1.3.4) had distinct levels of 'recovery' which included what could be constituted as PTSD. O'Leary & Ickovics (1995), Carver (1998), Miller and C'deBaca (1994) and Aldwin (1994) proposed multiple levels of responses to trauma (which will be subsequently discussed) within their models of change following adversity. At the bottom was survival, downward slide, new lower level of functioning and negative transformational coping. Within this response, it is assumed that the person would either submit to the adversity and give up or never reach the same level of functioning as was present before the trauma occurred. The next level of potential psychological responses to trauma is resilience/recovery.

1.2.2.2 Resilience/recovery

Resilience is a closely related concept to posttraumatic growth (PTG), defined as "the flexibility in response to changing situational demands, and the ability to bounce back from negative emotional experiences" (Tugade, Fredrickson, & Barrett, 2004b, p. 1169). Resilience has been further subdivided into three separate terms: recovery, resistance and reconfiguration (Lepore & Revenson, 2006). Recovery is simply the return to pre-stressor levels of functioning. Within the models Quantum Change (Miller & C'deBaca, 1994), Resilience and Thriving (O'Leary, Alday, & Ickovics, 1998) as well as Transformational Coping (Aldwin, 1994) there is the belief that people can in fact return to baseline or homeostasis following trauma, and regain their previous levels of functioning. Recovery is separate from resilience based on the timeline from trauma to homeostasis, therefore those who recover immediately, or are not as affected by the trauma, would have been assumed to exhibit resilience (Bonanno, 2004). However, Lepore and Revenson (2006) argue that it is not the timeline that defines resilience, but the simple fact that they return to homeostasis. Resistance is when a person shows no signs of disturbance (low distress) following a traumatic event. Reconfiguration is the phenomenon of returning to homeostasis in a different formation than that previously existed. This changed shape implies that the person has adapted themselves from the trauma to become more resilient in the face of future stressors (preparedness). Lepore and Revenson (2006) state that this type of resilience is similar to PTG as both theories imply that some positive change, transformation or reconfiguration has resulted from the trauma.

Resilience research has not only reviewed the ability to bounce back following trauma, but the potential for the experience to make a person more resilient in the face of future traumas. These theories include elements of psychological preparedness, hardiness, desensitization and stress inoculation. Psychological preparedness posits that a person can become better prepared for future traumatic events by experiencing stress and adversity (Janoff-Bulman, 2004). The Theory of Hardiness (Kobasa, Maddi, Puccetti, & Zola, 1985) proposes that personality traits (commitment, control and challenge) can act as buffers for stressful events and aid in the perception of events as less threatening. Commitment refers to a person's ability to interact and submerge (as opposed to alienate) themselves in society and social situations. They also must feel as if they have control (as opposed to powerlessness) over their situation and life circumstances as well as relish in the challenge of life (as opposed to the threat of life) and the developmental lessons it will teach along the spectrum (Kobasa et al., 1985).

Desensitization and enhanced recovery potential theory (Carver, 1998) posits that after multiple stressors, a person becomes desensitized to the stressor/adverse event over time. Similar to O'Leary and Ickovics' (1995) model, (discussed in detail in section 1.3.4) the dip in level of functioning lessens each time and recovery occurs faster than originally experienced. The person then builds up resilience to the stressful occurrence. Finally, stress inoculation takes on a biological viewpoint which states that, like vaccinations, intermittent and easy to handle stressful situations, which are successfully dealt with, can increase tolerance levels for stress, thus leaving the person better equipped for future traumas (Tedeschi, Park, & Calhoun, 1998).

Finally, the next section will focus upon the third, and most important to this thesis, psychological response to trauma, PTG.

1.3 Posttraumatic growth

PTG is the phenomenon of surpassing previous level of functioning which would not have been possible if the traumatic event had not occurred (Carver, 1998). Although research has now agreed upon the term PTG, earlier research completed under the same theory used differing terms, including: benefit finding, positive changes, growth from adversity, thriving, and psychological growth (Tennen & Affleck, 2004).

Positive psychologists and philosophers have been arguing for decades that although trauma does induce stress and negative emotions, the person is not doomed to inevitably suffer for the rest of their lives and can find benefits and growth from their traumatic experience (Carver, 1998; Frankl, 1963; Nolen-Hoeksema & Davis, 2004b; Widows, Jacobsen, Booth-Jones, & Fields, 2005). Therefore, people who undergo significant trauma and suffering can not only recover from their episode but thrive in the face of tragedy, "It is through this process of struggling with adversity that changes may arise that propel the individual to a higher level of functioning than which existed prior to the event" (Linley & Joseph, 2004b, p. 11).

Events that have been found to trigger PTG are "bereavement, breast cancer, mastectomy, bone marrow disease, heart attack, rheumatoid arthritis, spinal chord injury, MS, shipping disaster, tornado, plane crash, rape, childhood sexual assault, incest, shooting, HIV, infertility, chemical dependency, military combat and bombing" (Joseph, Linley, & Harris, 2005, pp. 263-264). The five main elements of growth recorded are "perceived changes in self (becoming stronger, more confident); developing closer relationships with family, friends, neighbours, fellow trauma survivors and even strangers; changing life philosophy/increased existential awareness; changed priorities and enhanced spiritual beliefs" (Tedeschi & Calhoun, 1995, p. 456).

It must be noted that the aim of this thesis is not to advocate suffering as a situation worth striving for, but rather to examine the phenomenon in which suffering and grief can co-exist with enlightenment and growth. Linley and Joseph (2004a) suggest that these two entities, suffering and growth, are independent of each other and that society must not assume that highly traumatized people are not capable of growing at the same time.

1.3.1 Considerations of PTG

Issues surrounding the theory of PTG stem from the argument that in order for people to function in the aftermath of crises they must deny or 'trick' themselves into finding some benefit from their trauma in order to make sense of it. These critiques have come in the form of cognitive dissonance, positive illusions and a contrarian view of PTG.

Festinger's Cognitive Dissonance Theory states that fake positive outlooks or the rejection of negative thinking could be detrimental avoidance oriented coping tactics used following traumatic events (Fromm, Andrykowski, & Hunt, 1996). Therefore, any PTG expressed could simply be an attempt to reduce any dissonance of the negative experiences of the trauma. Psychologists have also questioned whether or not this phenomenon is in fact a self-protective illusion. Taylor and Brown (1988) posited that the phenomenon of growth is indeed a positive illusion in which a person attempts to gain a sense of control over their circumstances by altering their perceptions (Ford, Tennen, & Albert, 2008, p. 306). Ford et al. (2008) argue that evidence of PTG, from quantitatively based research, has been confounded by its lack of methodological rigour, discrepancy of operationally defined constructs and solid theoretical models. Ford et al. (2008) offer a contrarian view of growth and suggest that what is typically regarded as growth is nothing more than the fabricated by-product of survivor's attribution processes, another form of coping strategy, and perhaps a trait and not a state of existence. These in turn make the person 'believe' that they have experienced PTG.

However, PTG researchers argue that it may not be the objective and quantifiable evidence of growth that is the priority in research, but the "subjective sense that one has been bettered by their experience in some fundamental way" (Thornton, 2002, p. 162). Calhoun and Tedeschi (2008) argue that despite research contesting the existence of growth, there are no measurement tools or agreed upon definitions for identifying illusions or distortions. They also argue that illusions of self-enhancement have been found to be evident in very small numbers of participants and that the current quantitative measurements of growth do not correspond with social desirability measures. Furthermore, Giorgi and Giorgi (2003) argue that error (memory or perception) in recounting phenomena, such as growth, is not as big an issue as critics believe due to the fact that what phenomenologists are trying to understand is a subjective, not objective, account of the individual's experience. Therefore, how the person remembers the phenomena, correctly or incorrectly, to the objective researcher is not of importance. What is important is how the individual remembers and experienced that phenomenon.

1.3.3 Facilitators and determinants of PTG

It is still not clear as to what internal and extraneous factors contribute to the facilitation of growth. Within cancer related PTG, factors that have been found to assist are: higher socio-economic status (Bower et al., 2005; Carpenter, 1999; Cordova, Chang et al., 2001); higher education (Sears, Stanton, & Danoff-Burg, 2003); ethnicity (Bower, Kemeny, Taylor, & Fahey, 1998); age (Carpenter, 1999; Kurtz, Wyatt, & Kurtz, 1995); trauma severity (Lechner et al., 2003); more/less time since diagnosis (Cordova, Cunningham, Carlson, & Andrykowski, 2001; Weiss, 2004b); personality traits (Antoni et al., 2001); positive emotions (Linley & Joseph, 2004a); social support (Cadell, Regehr, & Hemsworth, 2003); coping process styles (Urcuyo, Boyers, Carver, & Antoni, 2005) and group based therapies (Cordova, 2008; Lechner, Stoelb, & Antoni, 2008b). Although each factor has been recognised, the results are quite inconsistent with the majority of these factors having a large amount of data presenting no significant association with PTG (Stanton, Bower, & Low, 2006). The next section will review each proposed factor in greater detail.

Women from higher socio-economic status (SES) backgrounds have been found to exhibit greater levels of growth than with lower SES. This could be due to the fact that they have greater economic resources with which to fight the disease (Stanton et al., 2006). Minority race populations (e.g. Hispanic and black) have been associated with higher levels of PTG and benefit finding which has been reasoned to be the result of cultural, spiritual and socioeconomic factors associated with non-white populations (Lechner et al., 2008b).

There are conflicting results surrounding the effects of age in relation to PTG, with research reporting higher levels of PTG in younger (Bower et al., 1998; Carpenter, 1999; Lechner et al., 2003; Manne et al., 2004; Widows et al., 2005) and the middle aged (Kurtz et al., 1995). Reasons for this could be that older populations may have developed resistance to stressful situations or have already come across trauma and achieved elements of growth already (Lechner, Stoelb, & Antoni, 2008a).

The impact of the severity of the trauma on the attainment of growth has been proposed to exist in a linear fashion. The majority of studies in the literature have reported that increased severity of disease is associated with increased PTG, however, research also recognises that if the disease is perceived as too stressful, then anxiety will overwhelm the patient, inhibiting the growth process (Lechner et al., 2008a). In short, the diagnosis and severity of the trauma must be significant enough to affect the person and facilitate PTG.

Time since diagnosis has produced similar conflicting reports as there must be enough time to process and reflect upon the trauma and the results of that trauma in order to gain authentic benefits from the experience. Cordova, Cunningham, Carlson and Andrykowski (2001) found an association between more time since diagnosis and PTG whereas Weiss (2004b) found the opposite was true. The majority of studies have, however, reported non-significant results.

Personality traits, such as optimism, have been found to be beneficial in the facilitation of PTG. Tennen and Affleck (2004) found that the majority of their optimistic participants in 20 studies found some benefit to their suffering and this benefit finding was subsequently associated with better adjustment (emotionally and physically) in follow-up sessions months and years later. Overall, those who underwent traumatic experiences tended to emerge with a greater sense of knowledge, closer familial and social relationships, and increased spirituality than they felt they possessed before the incident. These people tended to use their optimism to positively reappraise their situation and turn bad situations into good ones.

PTG is not merely the abundance of positive emotions following trauma and, interestingly, the existence of these feeling has recently been linked to facilitating PTG (Joseph & Linley, 2008b; Linley & Joseph, 2004a). Evidence to support this stems from the extensive amount of data generated from resilience research, specifically the theory that positive emotions may be key predictors of a person's ability to cope and become resilient to stressors (Fredrickson, Tugade, Waugh, & Larkin, 2003; Zautra, Johnson, & Davis, 2005). Tugade, Frederickson and Barrett (2004a) found that people who experienced positive emotions rebounded faster from cardiovascular acceleration after encountering negative emotions and that these positive emotions can contribute to psychological well-being via more effective coping. The Broaden and Build Theory of positive emotions "attempts to understand the functional significance of positive emotions in health...positive emotions have the potential to quell autonomic arousal generated by negative emotions and broaden ones attention thinking and behavioural repertoires" (Tugade et al., 2004a, p. 1166). Thus, there is a broadening of a person's cognitive functioning associated with positive emotions. With regards to PTG, the broadening of cognitive thinking patterns may enable survivors to see and think of alternative viewpoints regarding their traumatic experience, thus creating an avenue for thinking of the potential benefits, and eventual growth (Joseph & Linley, 2008b). This theory is discussed in further detail within Chapters Five, Six and Eight.

Social support has been one of the main predictors and outcomes of PTG since its conception. Increased social support (friends, medical staff, groups) marital support and support of other patients can have a significant impact of the facilitation of growth (Cadell et al., 2003). Particularly, Weiss (2004) reported that increased contact with another person who had experienced PTG increased probability of them experiencing it as well. The mechanisms by which social support is said to help facilitate PTG is that it enables the patient to disclose fears and worries and work through problems while receiving an outside perspective (Lechner et al., 2008a; Mayers, Naples, & Nilsen, 2005).

Originally, PTG was viewed as a method of coping during traumatic times and not as an outcome of trauma in itself (Tedeschi et al., 1998). Today however, researchers have declared that it may well be the coping mechanisms used during and after the trauma that can lead to achieving PTG. The two main types of coping styles used in the facilitation of growth are approach and avoidance (Linley & Joseph, 2004a; Stanton et al., 2006). Examples of approach oriented coping styles that have been found to be beneficial are: active coping (Bellizzi & Blank, 2006; Urcuyo et al., 2005), problem focused (Collins, Taylor, & Skokan, 1990; Sears et al., 2003; Widows et al., 2005), positive reappraisal (Collins et al., 1990; Linley & Joseph, 2004a; Sears et al., 2003; Widows et al., 2005), acceptance, seeking social support, contemplating reason and emotional approach coping styles (see Stanton et al., 2006). Greater emotional expression in the immediate aftermath of trauma has also been found to predict enhanced benefit finding (Manne et al., 2004).

Surprisingly, avoidance coping styles, during certain periods of the trauma recovery spectrum, have also been found to enhance the occurrence of PTG. Specifically, Collins et al. (1990) found that the use of escape and avoidance coping was beneficial in the attainment of growth, however only during the immediate aftermath of diagnosis. In addition, Thornton and Perez (2006), Urcuyo et al. (2005) and Lechner, Antoni and Zakowski (in press) found that more distraction type coping, in the immediate aftermath, was positively influential on their participants attainment of growth. In summary, coping mechanisms (approach and avoidance) are most beneficial when used in a dynamic fashion over the course of illness to growth (Lechner et al., in press; Stanton et al., 2006).

Finally, a very recently proposed facilitator in the attainment of growth is the participation within group based therapies. Psychologists have reasoned this connection to be the result of the group environments' ability to foster the previously discussed facilitators, such as social support, disclosure, etc. (Lechner et al., 2008a). The possibilities of group based therapies for facilitating growth and the use of a physical activity programme in this facilitation is discussed thoroughly within Chapters Six and Eight.

In conclusion, despite interesting preliminary results and support for additional investigation into these proposed facilitators, there are similar numbers of contrasting studies that have found non-significant associations between these factors and the occurrence of growth. This ultimately highlights the need for further research into the determinants of PTG and a focus on the development, and not simply the outcomes, of growth from adversity.

1.3.4 Models of PTG

Predicting human behaviour following change, whether intentional or unintentional, has been of interest to psychologists for decades (O'Leary et al., 1998). However, it is only recently that the models of change following trauma have included the outcome of 'growth'. The following is a review and critique of the most prominent theories and models of PTG, commencing with the earlier, less detailed models to the current, more comprehensive models of growth. From this, it will be easier to ascertain limitations within the theories and how this thesis provides evidence to add to the present understandings of PTG.

1.3.4.1 Earlier models of PTG

The Life Crisis and Personal Growth Model proposed by Schaefer and Moos (1992) consists of feedback loops and predicts that following a traumatic event, it is the person's own resources prior to the crisis (personal, environmental and coping) that will ultimately determine their psychological outcome. Although Schaefer and Moos have provided evidence to support their model (O'Leary et al., 1998) there are limitations in terms of their neglect of post-trauma influences, suggesting that the ability to achieve growth is pre-determined, like fate, and could therefore also lead a person to resign or learn helplessness in their pursuit of recovery following trauma.

In contrast, the Model of Quantum Change, as proposed by Miller and C'deBaca (1994), focuses more on the process than the outcome of PTG. Unexpected change (trauma) catapults the person into one of two new levels of functioning, either lower or higher than prior to the trauma. They liken this rapid jump or change from one state to another to conversion and learning experiences (as cited in O'Leary et al., 1998) and that these sudden changes are controlled and facilitated by "decision making, moral imperatives and changes in attitudes" (p.136). Miller and C'deBaca (1994) propose that there are four potential components to facilitating this rapid change following adversity: self-regulation, perceptual shift, value conflict and transcendence. First of all, they suggest that a person may be consciously able to regulate their behaviour following a significant event. Secondly, quantum change can result from a clash of previous world views to current world views which force the person to re-prioritise and re-evaluate their lives. Thirdly, rapid change can result from the realisation of value conflict, which forces the person to change their behaviour more accordingly. Finally, quantum change can be the result of a belief in encountering a supernatural force or experience. Criticisms of this model stem from difficulties in testability, predictability and its reliance on retrospective reporting. In addition, the four proposed mechanisms of quantum change have not been properly deconstructed in order to validate this model of change (O'Leary et al., 1998).

The natural progression of these theories is the Resilience and Thriving Model (O'Leary & Ickovics, 1995) which is similar to the previous two models, except for the fact that it includes an additional potential level of functioning following trauma: survival, recovery and thriving (O'Leary et al., 1998). Survival simply infers that the person is no longer functioning at their previous levels of performance. Recovery implies that the person has returned to their pre-trauma levels and obtained homeostasis. Thriving, however, implies that some element of the person (emotional, psychological, spiritual, etc.) has become enhanced, or surpassed the level of functioning than which existed before the trauma occurred. Although this model has had a huge impact on thriving and PTG research, criticisms of this model stem from the fact that the population used to construct the model was solely female. The researchers acknowledge that trauma and challenges will be perceived differently for each gender, creating potentially differential roads to thriving (O'Leary, 1998). Finally, due to its simplicity, the model simply outlines the potential outcomes of trauma and not the intricate processes of how thriving occurs.

Nerken's (1993) dyadic Model of Resolution and Growth describes changes to the core-self and reflective-self following bereavement. The core-self consists of the resources of identity and is not affected by the loss of a loved one. The reflective side however is the more pensive and interpretive part of the self (Nerken, 1993) and responsible for meaning making and is on the objective side of the core. By working on and nurturing this reflective side, the individual is able to overcome their loss and become an enhanced and secure person (Nerken, 1993). Nerken proposed that the strength of her model was situated in its clarity in explaining the process of growth which could therefore be studied and manipulated in order to enhance the likelihood of growth in patients (Nerken, 1993). However, the model's uni-focus and intense reliance on the reflective-self and no other influential components to the process of growth is inconsistent with the more developed theories of PTG which posit that social and cultural factors have a large influence on the attainment of growth (see above Cadell et al., 2003; Tedeschi & Calhoun, 2006; Weiss, 2004b).

The Transformational Coping Theory by Aldwin (1994) states that trauma can lead to minor or major transformation of the self. Aldwin recognised the dual existence of growth and distress and believed that following trauma there are three levels of functioning: negative transformational coping, homeostasis and positive transformational coping. Problems with Aldwin's model stem from the fact that it was created through literature reviews of other researchers work and not on first-hand empirical evidence (O'Leary et al., 1998).

A Cusp Catastrophe Model of Aldwin's (1994) bifurcation process was proposed by Carver and Scheier (1998) which explained thriving as a result of confidence (high/low) and importance (high/low) on engagement (effort/giving up). Thus, when importance increases, effort and confidence to engage also increase and likewise, if importance is high and confidence is low, the person will engage in giving up. Cusp catastrophe models have been used throughout psychology and have been lauded as the answer to linear models and analyses which can not fully explain discontinuous change (Clair, 1998). However, Carver and Scheier's (1998) Cusp Catastrophe Model seems to be an over simplification of the components of personality and detailed processes in which a person must endure in order to achieve growth.

Hager's (1992) Model of Chaos and Growth posits that chaos can create a pathway for enlightenment and development and is not to be ignored within psychotherapeutic environments. Hager proposed that these chaotic states (episodes of conscious awareness of repressed thoughts, realisations) are not a signal of psychosis but rather "indicative of progress" (p.383) and are gestation states in which the person is using their chaos and disorganisation to lead to self-development. Ultimately, Hager proposed that it was the therapist that had the most control over whether the person found meaning and growth from their gestation state or reverted back to previous, under-developed selves. Drawbacks of Hager's theory are that it places an enormous amount of expectation upon the therapist and meaning making in the process of growth, thus neglecting important social/cultural components of the process.

Dynamic Systems Theory posits that "the behaviour of a system over time can be characterised in terms of a landscape of 'attractors', configural regions in which the system spends most of it time" (Carver, 1998, p. 254). The whole point of therapy is to move the person or system from one attractor to preferably, though not always, a more optimal attractor, closer to optimal functioning. This is done in therapy by inducing a re-organisation of the person current levels of functioning and must be severe enough to shake up the system in order to move it from one attractor to another. Again the difficulty in subscribing to this type of model is that it does not explain the intricate nature of the moving from attractor to attractor, the reason why some people get 'stuck' and how to transition successfully.

1.3.4.2 Comprehensive models of PTG

Following from the earlier models, the next three models of growth include a more intricate concept of trauma as a seismic event, which prompts the shattering of former selves, and the reconnection and growth of another. The following section will review Shattered Assumptions Theory (Janoff-Bulman, 1992), Organismic Valuing Theory (Joseph & Linley, 2005) and the Transformational Model (Tedeschi & Calhoun, 2006) and how they perceive the process of growth from adversity.

Janoff-Bulman's (1992) Shattered Assumptions Theory claims that at the core of our inner world or personal narrative there are fundamental assumptions of a sense of safety and security. Trauma occurs when these assumptions are tested and our sense of security is 'shattered'. PTG is therefore defined as the process of rebuilding around the traumatic experience and thus acknowledging the trauma in a non-anxious way. Janoff-Bulman (2004) further posits that there are three explanatory models of PTG (following shattering of assumptions): Strength through suffering, psychological preparedness and existential re-evaluation. The first of these, strength through suffering, is based on the belief that 'whatever does not kill us only makes us stronger' and supports Tedeschi and Calhoun's (2006) five domains of personal strength and new possibilities. The second model, psychological preparedness, states that by suffering, people can create a tolerance for future adversity, whilst the third model, existential re-evaluation, states that trauma kicks starts existential re-evaluation and a quest for understanding why it happened to them:

> "At the most fundamental level of our inner world, we believe that who we are and how we act determine what happens to us: if we are good people (justice) and we engage in appropriately precautionary behaviours (control) bad things will not happen to us." (Janoff-Bulman, 2004, p. 33).

Therefore people need to make sense and find value within their own lives and the occurrence of trauma and tragedy creates an environment in which to do so. There has been a lot of support for the theory of Shattered Assumptions with many of the subsequent theories and models stemming from this belief in trauma as a 'shattering' of the former-self. However, some researchers have criticised the model for over exaggerating the deleterious impact of trauma upon the self (Campbell, Brunell, & Foster, 2004; McMillen, 2004). This is discussed further within this section and in Chapter Five.

The Organismic Valuing Theory stems from a person-centred approach and states that all humans are oriented towards growth "there is an innate, biological need to reproduce, self-regulate and grow from trauma" (Joseph & Linley, 2005, p. 269). People who regulate themselves to achieve well-being are more likely to achieve self-actualisation and become fulfilled. Joseph and Linley posit that those who have undergone growth from adversity are identical to Rogers (1959) definition of fully function people:

> "accepting of themselves; value all aspects of themselves; including their strengths and their weaknesses; are able to live fully in the present; experience life as a process; find purpose and meaning in their life; desire authenticity in themselves, others and societal organisations; value deep, trusting relationships; are compassionate towards others and able to receive compassion from another; and accept that change is necessary and inevitable." (Rogers, 1959 as cited in Linley & Joseph, 2005, p. 270).

Joseph and Linley propose that there are three steps in the transition of becoming a fully functioning or self-actualised person and that obstacles to attaining growth include the person's social environment and not necessarily their pre or post-trauma personality. The completion tendency states that the person is required to incorporate the trauma into their world view via accommodation or assimilation. Examples of assimilation are when a person keeps their 'old world view' and initiates self-blame (Joseph & Linley, 2008a). This way the person does not need to reorder their previous schemas. Accommodation, on the other hand, modifies these pre-existing schemas in order to accommodate the new information. Accommodation can exist in two ways; positive or negative. Negative accommodation leaves a person susceptible to depression and helplessness, whereas positive accommodation leads to growth (Joseph & Linley, 2008a).

Furthermore, this model goes beyond discussing outcomes and attempts to clarify the cognitive processes following trauma (assimilation, positive accommodation and negative accommodation). By separating them into three possible directions, the researchers have attempted to explain the reasoning for why people can become more vulnerable and not resilient in the aftermath of crisis (Joseph & Linley, 2008a). They argue that by assimilating the trauma into their cognitive functioning, the person returns to baseline with feelings of being more vulnerable to future traumas. The model also accepts that a person can experience accommodation and assimilation within differing components of the self-structure; a person is not limited to either or.

The interesting aspect of this model centres on its incorporation of person-centred philosophies and belief that all people are motivated towards growth. Overall, the entire model is based around the fact that trauma shatters previous assumptions and it is the process of rebuilding these assumptions (either through assimilation of accommodation) which will dictate a person ability to grow from trauma. Chapter Five will discuss the discrepancy between shattered assumptions and cognitive processing further.

Finally, although there is mention of some genetic or physiological reasoning for growth, Joseph and Linley omit the inclusion of the body as part of the process of growth which is not a criticism exclusive to their model, but to all models within the current literature (Sabiston, McDonough, & Crocker, 2007). Chapters Six, Seven and Eight will discuss this lack of body specific elements within the models further.

The Transformational Model (Tedeschi & Calhoun, 1995) is the most complete and widely used model of growth and proposes PTG results from excessive rumination (or cognitive processing) following a seismic event. Following the seismic event, the person is presented with challenges (management of emotional distress, beliefs and goals and narrative). The next stage is the management of excessive rumination in three stages: 1) automatic and intrusive thoughts; 2) management of automatic and intrusive thoughts and 3) deliberate rumination. Throughout this temporal period, the person is also: engaged in self-disclosure; attempting to reduce emotional distress; disengaging from previous goals and changing schemas and narrative development. Once these processes have been completed, the person is able to achieve PTG. In addition, the person achieves wisdom or 'preparedness'. Throughout the process the model acknowledges that distress can co-exist alongside PTG (Tedeschi & Calhoun, 2006).

At the core of this model is the detailed focus on rumination as a deciding factor of PTG. This intense focus on rumination as the pathway to enlightenment (PTG) directly contradicts the extensive amount of research completed on rumination and its ability to maintain negative affect and depression (Papageorgiou & Wells, 2003). Tedeschi and Calhoun (2006) address this and have implored readers to think of rumination as cognitive processing, or the recently hypothesized adaptive form of repetitive thought. Repetitive thought is defined as "the process of thinking attentively, repetitively or frequently about oneself and one's world" (Segerstrom, Stanton, Alden, & Shortridge, 2003, p. 909) and has been deconstructed further into maladaptive and adaptive repetitive thought.

The majority of psychology's knowledge of rumination stems from depression research as rumination is a characteristic of major depression, predicting its onset and duration (Watkins, Moulds, & Mackintosh, 2005). Following a negative or traumatic event, there can be a huge chasm between the ideal and real-self spurring the development of negative repetitive thought. Negative and uncontrollable thoughts are centred around a certain theme, which is usually past oriented and focused on failure. They are not goal oriented and the presence of this rumination maintains negative affect (Papageorgiou & Wells, 1999, 2003; Segerstrom et al., 2003). Rumination has been broken down into further subtypes. Depressive rumination is featured in the Response Style Theory of depression which dictates that "rumination is repetitive and passive thinking about the symptoms of the depression and the causes and consequences of these symptoms" (Papageorgiou & Wells, 2003, p. 4). This therefore initiates a cycle of maintained depressive thoughts that ultimately results in a failure to progress towards a goal. Stress reactive rumination is similar to depressive rumination in that "it maintains negative repetitive thought cycles surrounding stress and reasons for that stress thus restricting the persons ability to problem solve" (Conway, Csank, Holm, & Blake, 2000, p. 404).

Worry and rumination have historically been harder to define from each other. Borkovec et al. (as cited in Papageorgiou & Wells, 2003) define worry as:

> "a chain of thoughts and images, negatively affect-laden and relatively uncontrollable; it represents an attempt to engage in mental problem solving on an issue whose outcome is uncertain but contains the possibility of one or more negative outcomes" (2003, p. 6).

Therefore the main differences in these maladaptive repetitive thoughts are that worry is generally future focused and there is the confidence to attempt to problem solve (goal oriented) (Papageorgiou & Wells, 2003). However, these findings have been contested in larger follow-up studies with direct comparison of the two variables (Watkins 1999). The debate continues between the nature of the two repetitive thought processes as well as their role in the facilitation of growth (Papageorgiou & Wells, 2003).

Research on adaptive repetitive thought shows support for Tedeschi and Calhoun's theory of cognitive processing as vital for adjustment following traumatic events (Segerstrom et al., 2003). Positive consequences of repetitive thought include "cognitive and emotional processing, planning and reappraisal and reflection" (Segerstrom et al., 2003, p. 910). Cognitive processing has the potential to contribute to recovery as it forces the person to face the negative automatic thoughts and then overcome them (Janoff-Bulman, 1992). This is the type of repetitive thought that Tedeschi and Calhoun claim is at work during their stages of PTG in their model.

Emotional processing is another form of adaptive repetitive thought that has been found to aid in the facilitation of growth by enabling the person to reconnect with their emotions (Stanton et al., 2006). In addition, by mentally processing the event, a person is able to focus on and visualise the necessary steps to follow and achieve that said goal. Reflection is defined as the cognitive processing of the self, their past and existential issues (Segerstrom et al., 2003). This type of repetitive thought has been posited as beneficial as the 'self-examination' can lead to philosophical and existential reflection upon the self and lead to positive development. Chapter Five will go into greater detail surrounding criticisms of this latter model as well as compare and contrast the thesis results to cognitive processing theories.

In summary, these PTG models have been criticised for their lack of solid theoretical foundations (Ford et al., 2008); their exclusivity on cognitive processing (Hobfoll et al., 2008; McMillen, 2004) and lack of acknowledgement for the physical side to the growth process (Cozzolino, Staples, Meyers, & Samboceti, 2004; Lykins, Segerstrom, Averill, Evans, & Kemeny, 2007; Sabiston et al., 2007). Considerations for expanding these models will be discussed throughout the thesis and in more detail in Chapter Eight.

1.4 Gaps within the literature

Despite interesting findings, there are limitations within PTG research. In order to understand the rationale for this thesis, the following section will review the major gaps within the PTG literature to date, commencing with methods of assessment and then narrowing down to specific areas that have not yet been explored.

1.4.1 Methods of assessment

Park and Lechner's (2006) evaluation of the existing questionnaires revealed a significant problem in the current PTG research: to date, there are only three psychometrically validated measures: the Stress Related Growth Scale (SRGS) (Park, Cohen, & Murch, 1996); The Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996) and the Benefit Finding Scale (BFS) (Antoni et al., 2001). Although these measurements are quite high in internal consistency (Cronbachs's alpha=.94, .90 and .95 respectively), there are potential problems with them. First of all, they are numerically restrictive (items ranging from 15-21); not validated on more than one population (college students and/or breast cancer patients); do not address negative changes leading to the potential for positive response bias and they have been found to use confusing language (Park & Lechner, 2006).

Stanton, Bower and Low (2006) reviewed the current quantitative assessment tools for measuring PTG among cancer patients specifically. These consisted of the Cancer Patient Behaviour Scale (Andrykowski, Brady, & Hunt, 1993; Andrykowski et al., 1996; Riecker, Edbril, & Garnick, 1985); PTGI (Cordova, Cunningham et al., 2001; Manne et al., 2004; Oh et al., 2004; Weiss, 2002; Widows et al., 2005), Personal Changes Scale (Curbow, Somerfield, Baker, Wingard, & Legro, 1993), Meaning Questionnaire (Giedzinska, Meyerowitz, Ganz, & Rowland, 2004), Benefit Finding Scale (Antoni et al., 2001; Carver & Antoni, 2004; Cruess et al., 2000; Katz, Flasher, Cacciapaglia, & Nelson, 2001; McGregor et al., 2004; Schulz & Mohamed, 2004; Tomich & Helgeson, 2002; Urcuyo et al., 2005) and the Life Evaluation Questionnaire (Salmon, Manzi, & Valori, 1996). However, these questionnaires have the same limitations mentioned previously, as well .as the lack of illness specific symptom questions, health related benefits, depression and anxiety items, and cultural or religious differences.

Qualitative approaches provide alternative methods to studying the phenomenon of PTG. Overall, these approaches can be advantageous in the sense that unlike deductive quantitative methodologies, limited in their scope to report upon pre-specified domains of growth (McMillen, 2004), inductive qualitative methodology allows the participant to speak freely about the phenomenon in their own words; "because participants provide their information without being prompted by specific items, the researcher can be relatively certain that the growth responses that are given are meaningful and relevant to the participant" (Park & Lechner, 2006, p. 50). Qualitative methods used in cancer specific PTG research are: semi-structured interviews (Cella & Tross, 1986; Collins et al., 1990; Daiter, Larson, Weddington, & Ultmann, 1988); narrative analysis (Carpenter, 1999); phone interview and thematic analysis (Fromm et al., 1996); and written response (Petrie, Buick, Weinman, & Booth, 1999).

Nevertheless, there are concerns regarding the 'qualitative purity' of these studies. To begin, all of the studies were heavily dependant of the adjunct use of multiple psychometric and projective testing, with some requiring written assessments lasting 2-3 hours in length (Cella & Tross, 1986). Daiter (1988) and Fromm et al. (1996) reported using a semi-structured interview format despite subsequently reporting the use of a structured question schedule while the latter collected data via the telephone. Petrie et al. (1999) provided a blank space at the end of their questionnaire assessment for participants to write their answer to open ended question 'What positive effects do you feel may have occurred in your life due to your heart attack/cancer?' The difficulty with this form of data collection lies within the limited amount of answer space, the preceding amount of quantitative questioning and the positive response bias found in the wording of the question. The focus on 'positive effects' leaves no room for negative or unpleasant recall of the trauma. In addition, Petrie et al. (1999) do not disclose the type of analysis they used to identify their themes. Carpenter et al. (1999) employed narrative analysis to review four open-ended questions regarding change and the self. Despite the open-ended nature of the interview, which allowed for negative and positive elements of change to emerge, the problems with this type of analysis lie in the epistemological structure, leading to many different ideological approaches to this type of qualitative research (Priest, Roberts, & Woods, 2002). Therefore, due to the dearth of rigorous qualitative study within the area of PTG and cancer research, the aim of this thesis was to broaden the understanding of PTG and acknowledge positive changes that are not addressed by the current scales of assessment.

1.4.2 Health

The presence of PTG has been reported to have a positive influence on health and physical functioning. Affleck, Tennen, Croog and Levine (1987) reported that heart attack patients who found benefits immediately after their first attack had reduced re-occurrence and morbidity statistics eight years after the attack. Epel, McEwen and Ickovics (1998) found that high levels of PTG were related to lowered cortisol levels in women exposed to laboratory stress, as did Cruess et al. (2000) who reported lower cortisol levels through the enhancement of benefit finding among women with breast cancer. More recently, Dunigan, Carr, and Steel (2007) reported a significant positive influence of PTG and survival within patients with hepatoma, with high PTG scorers surviving 186 days longer than their lower scoring peers, due to higher peripheral blood leukocytes.

To explicitly observe the positive effects of PTG on physiological functioning, researchers have turned to patients with HIV due to the fact that "HIV... provides a superior model for studying the influence of positive beliefs of health" (Milam, 2006, p. 220). Bower et al. (1998) reported less AIDS related mortality with self-reported benefit finding among HIV positive men who had recently had someone close to them die of AIDS. Milam (2004) also reported greater immune system functioning among HIV patients with higher levels of PTG. This positive influence of PTG on the body is a neglected area of research and yet an important influence on patients in traumatic situations.

An unaddressed positive change that has been frequently reported is the adaptation of positive health behaviours or lifestyle changes in the wake of diagnosis of an illness or disease (Demark-Wahnefried, Peterson, McBride, Lipkus, & Clipp, 2000;

Milam, Ritt-Olson, & Unger, 2004). Petrie et al. (1999) reported the most salient theme of change after trauma to be the adoption of a healthy lifestyle. Researchers have suggested that the diagnosis of an illness has the potential to become 'a teachable moment' defined as "naturally occurring health events thought to motivate individuals to spontaneously adopt risk-reducing health behaviours" (McBride, Emmons, & Lipkus, 2003, p. 156). Reported health behaviours following the diagnosis of HIV have included: positive adaptation of diet, stress reduction and better sleeping habits (Siegel & Schrimshaw, 2000), increased exercise (Collins et al., 1990) and cessation of smoking, risky sexual activity and substance abuse (Milam et al., 2004). Cancer studies have also produced similar evidence with positive diet changes with increased intake of fruit and vegetables and lowered fat, salt and meat intake (Brown et al., 2003); increased physical activity among breast and prostate cancer survivors (Demark-Wahnefried et al., 2000); and the possibility of cessation of tobacco and alcohol use among survivors with related cancers (head, neck, lung) (Demark-Wahnefried, Aziz, Rowland, & Pinto, 2005; Gritz, Carr, & Rapkin, 1991).

Yet, despite these findings, there is a severe neglect of the role of health benefits and new adopted health behaviours in the PTG literature with "none of the current scales of growth assess the dimension of positive health habits and lifestyle change" (Park & Lechner, 2006, p. 53). This is quite surprising considering the increasing amount of literature reporting positive health behaviour changes as well as the potential for PTG to have a positive effect on health. The topic of health and new health behaviours following trauma will be discussed in detail within Chapters Six and Eight.

1.4.3 Activity

Continuing from the previous section, one of the most beneficial positive health behaviour changes reported to emerge from the experience of trauma is increased levels of physical activity. The physical and psychological benefits of exercise will be reviewed in detail in Chapter Six as well as the potential links between exercise, group based interventions and posttraumatic growth.

1.4.4 The body

At present, research on the physiological contributing factors of PTG has been undervalued. In particular, the current theories have not considered the body's role as a determinant of PTG, with only one study, to date, recognising this potential link (Sabiston et al., 2007). Tedeschi and Calhoun (2006) posit that PTG research needs a closer focus upon growth in mortality salient environments. Mortality salience is a component of the widely accepted Terror Management Theory (TMT). TMT is embedded in the suggestion that there is an innate, biological need to survive and deals with the management of the evolutionary cognitive realisation of inevitable death (Pyszczynski, Greenberg, & Goldenberg, 2002). TMT posits that the way in which humans deal with this realisation is through the use of:

> "a dual-component cultural anxiety buffer consisting of a) a cultural worldview - a humanly constructed symbolic conception of reality that imbues life with order, permanence and stability; a set of standards through which individuals can attain a sense of personal value; and some hope of either literally or symbolically transcending death for those who live up to those standards of value; and b) self-esteem, which is acquired by believing that one is living up to these standards of value inherent in ones own cultural worldview..." (Pyszczynski, Solomon, & Greenberg, 1999, p. 836)

The Mortality Salience hypothesis suggests that when a person is reminded of the inevitability of death, their world view defence strengthens and the individual seeks to conform to the accepted beliefs and behaviours of their culture (Harmon-Jones et al., 1997). Thus, a traumatic and life threatening event, paired with the lifelong reminder of a person's close encounter with death (physical scars, deformity) creates a mortality salient environment. The person will have a conscious reminder of the inevitability of their own death and, according to Pyszczynski et al. (1999), utilize proximal defences and distraction to defend themselves from death related reminders.

Humans are believed to be wired to strive to achieve and maintain adequate levels of self- esteem (Goldenberg & Shackelford, 2005). TMT suggests that self-esteem "functions to provide protection from existential concerns associated with the awareness of mortality" (p.228). People with high levels of self-esteem are believed to be able to trick themselves into believing they have "symbolic immortality" while individuals with low self-esteem do not possess this mind set and exist in a mortality salient environment (Harmon-Jones et al., 1997). The anxiety buffer hypothesis suggests that if self-esteem protects an individual against death related thoughts and anxiety, then strengthening this characteristic should improve the individual's response to death related threats. Therefore, self-esteem is a critical human characteristic that can create a more hospitable environment to exist in (Harmon-Jones et al., 1997). The role of the body and TMT within the PTG process will be thoroughly discussed within Chapters Seven and Eight.

1.5 Rationale for this study

There is universal recognition that the current methods of assessment are limited in their scope of questions, outcomes and trauma specificity (Cohen, Hettler, & Pane, 1998). In addition, there are certain areas and potential contributors of the growth process that have yet to be demystified such as health, physical activity and the body. It is important to continue and endorse research on this phenomenon for the positive psychological, physical and emotional benefits found in survivors exhibiting PTG (Ho, Chan, & Ho, 2004; Katz et al., 2001; Stanton et al., 2006; Taylor, Lichtman, & Wood, 1984; Urcuyo et al., 2005). Therefore, this thesis is an attempt to highlight the missing elements of growth within illness specific growth processes in order to close the gaps within the theories, models and assessment tools utilised within current research. This was done by using an in-depth method of analysis in order to access the survivor's account of their experience. The need for high-quality qualitative research and a rationale for the method chosen are discussed in detail within Chapter Three.

This thesis commences with a meta-synthesis of the qualitative literature within PTG and physical illness. This is a novel methodology using the same principles of the quantitative meta-analysis, however using solely qualitative research. The purpose of the analysis was to condense and synthesise the literature to date in order to get a coherent summary of the discipline area. From this, the thesis will present the results of an in-depth interpretive phenomenological analysis study of ten women with breast cancer and their experience of PTG; concluding with a reflection upon the results and their contributions to the development of PTG models and theory.

CHAPTER TWO[2]

POSTTRAUMATIC GROWTH AND LIFE THREATENING PHYSICAL ILLNESS: A SYSTEMATIC REVIEW OF THE QUALITATIVE LITERATURE

2.1 Abstract

Post-traumatic growth (PTG) is the phenomenon of positive change through the experience of trauma and adversity (O'Leary & Ickovics, 1995). Research suggests that the type of trauma sustained could have differing PTG processes and outcomes from each other (Demark-Wahnefried et al., 2000; Sabiston et al., 2007). The aim of this study was to synthesise qualitative data on posttraumatic growth and illness related trauma. Fifty-seven published journal articles dating from before November 1st, 2007 in PsychINFO, MEDLINE, EMBASE, Web of Knowledge and from the author's own knowledge of the area were reviewed. Key words included posttraumatic growth; benefit finding; thriving and positive changes. Key themes included: 'Reappraisal of life and priorities', 'trauma equals development of self', 'existential re-evaluation' and 'a new awareness of the body'. Findings suggest that there are unique elements to illness related PTG and a need for additional research into the processes and outcomes of physical illness related trauma.

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2.2 Introduction

Although traumatic events (e.g. natural disaster, bereavement, war, etc.) can create stress-inducing environments, positive psychologists and philosophers propose that some people who undergo significant trauma and suffering can not only recover from their episode but surpass the level of functioning they had before the traumatic event occurred (Carver, 1998; Frankl, 1963; Linley & Joseph, 2004a, p. 11; Nolen-Hoeksema & Davis, 2004a; Widows et al., 2005).

As discussed in Chapter One, section 1.3, previous quantitative and qualitative research in PTG following multiple traumatic situations has recorded only five main areas of growth (Tedeschi & Calhoun, 1995, 2006, pp. 456-457). However, the unique positive benefits reported from survivors of physical life threatening illnesses have been neglected among posttraumatic growth (PTG) researchers and are absent from the current quantitative measurement tools (Park & Lechner, 2006). In theory, the process of growth resulting from the trauma of a natural disaster would not necessarily mimic the same process of growth as a cancer survivor due to the corporeal nature of the illness related trauma and the process of physical reconnection with the body. Therefore, qualitative research is beneficial for exploring under developed areas of research due to the fact that its "less structured research methods are better suited to eliciting patients detailed understandings and their perceptions of illness than quantitative studies" (Emslie, 2005, p. 384).

Systematic reviews have traditionally been products of the quantitative and statistically based positivist research paradigm. Within health research, the Cochrane review has become a beacon for quality, evidence based research (mainly randomised controlled trials) that set out to determine the health interventions that work and those that do not (Dixon-Woods et al., 2006). Qualitative research has the potential to extract in-depth data, therefore, the practice of omitting evidence based qualitative research is dangerous and has been criticised for not giving policy makers and health organisations the 'whole picture' (Dixon-Woods, Argarwal, Jones, Young, & Sutton, 2005). As a consequence, the systematic review has been very recently adapted for qualitative research, and attempts to follow the same rigorous structure as the traditional randomised controlled trial (RCT) based synthesis. The systematic review differs from traditional literature reviews as well as secondary analysis and reanalysis in that:

> "The purpose of the qualitative synthesis would be to achieve greater understanding and attain a level of conceptual or theoretical development beyond that achieved in any individual study. This implies that the qualitative synthesis would go beyond the description and summarising associated with a narrative literature review and be quite distinct from a quantitative meta-analysis in that it would not entail the simple aggregation of findings." (Campbell et al. 2003, p. 672)

However there are two main difficulties in adhering to the quantitative systematic review procedure. First of all, there is the restrictiveness of question formulation followed by the near impossibility in replication of the search process and synthesising (Dixon-Woods et al., 2006). Instead researchers have proposed that the qualitative synthesis is more suited towards using "organic, creative and interpretive approaches to conducting reviews of complex literature" (p.39). This of course contradicts the very understanding of systematic reviews and thus researchers who adopt this type of methodology must be transparent and critical in their work in order to legitimise the use of systematic reviews within qualitative research (Dixon-Woods et al., 2006).

Secondly, there is a huge debate among researchers as to what constitutes good qualitative research. Therefore, the inclusion of all studies deemed 'qualitative' is necessary to enhance the research (Emslie, 2005). Justification of this stems from Thomas and Harden's (2007) work on exclusion procedures which reported that papers deemed as 'poor quality' did not add to the synthesis and as a consequence were not a large component of the synthesis. Therefore, it is safer to include all papers that deem themselves qualitative due to the fact that poor quality papers will not affect the results substantially, however, omitting these papers on poor exclusion criteria, might seriously affect the credibility of the synthesis.

At present, no qualitative reviews of the PTG process arising from physical or life threatening illness could be found in the literature. Thus, the aim of this study was to synthesise qualitative data on posttraumatic growth and life threatening illness related trauma. The paper assesses the current PTG research on physical related growth outcomes/processes of trauma and describes the key themes reported in the literature.

2.3 Methods

Rationale for using Noblit and Hare's (1988) meta-ethnographic synthesis was based upon the fact that although, within most qualitative research, a check list or step-by-step replication plan is not ideal, nor applicable (Dixon-Woods et al., 2005), their methodology is "perhaps the best developed method for synthesising qualitative data" (Campbell et al., 2003, p. 673). Due to the fact that meta-ethnography does not have set sampling guidelines, the use of other published and systemic sampling methods can be employed (Barroso et al., 2003). Therefore, with the area being so new and the limited amount of published research in systematic reviews, the use of an established method seemed well suited. In addition, the interpretative epistemological paradigm on which this method is based was suitable for the question and existential phenomenon being assessed (PTG and illness).

2.3.1 Inclusion criteria

Due to the ongoing debate of 'what constitutes qualitative research' it was decided that during the searching process all papers that were qualitative in nature were to be included but then reassessed at the appraisal stage of the review, a technique followed by other qualitative researchers (Dixon-Woods, Booth, & Sutton, 2007; Emslie & Hunt, in press). The following specific inclusion criteria were then applied: journal articles reporting primary research in English before November 1st, 2007 (excluding theses, reviews, commentaries, books and book chapters), studies which focused on posttraumatic growth (benefit finding, positive changes, thriving) following the diagnosis of a life threatening illness (excluding studies which sampled respondents with PTG from a variety of other traumas[3] and second-hand growth); unstructured or semi-structured interviews (excluding structured interviews); studies with men or women; any age.

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[3] We argue that the nature of growth following physical illness (internal trauma) will be different to the process of growth following a trauma that is caused by an external force (e.g. road traffic accident).

2.3.2 Search strategy

To ensure that as many papers as possible were included search terms were widened to include specific words, a method which other researchers found to be necessary for certain databases (Dixon-Woods et al., 2007; Emslie & Hunt, in press). Thus, the literature search strategy included the following: key words related to PTG (posttraumatic growth, benefit finding, thriving, positive changes); key words related to qualitative methods (content analysis or discourse* or ethnography or grounded theory or narrative* or phenomenology or qualitative* or interview* and (depth* or open-ended or semi-structured or unstructured) or focus group*.

In addition to the search strategies mentioned above, Bates' (1989) search strategy of 'berry picking' (as cited in Barroso et al., 2003) was also employed and this involved citation searches, area scanning (electronically), author searching and abstracting and indexing services. Eleven additional papers were added to the search from the Researcher's own knowledge of the area and discussion of the topic with a group of experts who meet regularly to discuss qualitative research.

2.3.3 Screening

Searches in PsychINFO, MEDLINE, EMBASE and Web of Knowledge using key words relate to PTG and the relevant research methods yielded eighty-three references. Following the screening of titles and reading electronic abstracts, papers were retrieved and reassessed in-depth to determine whether or not they fit the inclusion criteria. Those that did not fit were excluded and can be seen in Table 1. This has been commonly cited as a difficult component to the qualitative search strategies (Barroso et al., 2003; Emslie, 2005) due to the fact that many of the originally chosen papers had misleading abstracts and titles. Specifically, upon closer review it was found that eleven papers were actually quantitative in nature (1-11); seven focused on the evaluation of interventions or techniques on PTG (12-18); seven were reviews/editorials and abstracts (19-25); five were focused on vicarious PTG (26-30); five were structured interviews following questionnaires (31-35) and two focused on different types of trauma (road traffic accidents and Lazarus syndrome) (36,37). In total, thirty-seven were removed from the study at this stage leaving fifty-seven papers (including the 11 from the Researcher's own knowledge) which form the basis of this review.

Table 1. Omitted papers

#	**Author, year and country**	**Reason for omission**
1	Low et al. (2006)	Quantitative focus
2	Klaur & Fillip (1997)	Quantitative focus
3	Courtens et al. (1996)	Quantitative focus
4	Cheng et al. (2006)	Quantitative focus
5	Laerum et al. (1991)	Quantitative focus
6	Greenwald & McCorkle (2007)	Quantitative focus
7	Pinquart et al. (2007)	Quantitative focus
8	Schwarzer et al. (2006)	Quantitative focus
9	Thornton & Perez (2006)	Quantitative focus
10	Chan et al. (2006)	Quantitative focus
11	Creswell et al. (2007)	Quantitative focus
12	Dannoff-burg et al (2006)	Assessing intervention
13	Rivkin et al (2006)	Assessing intervention
14	Hartke et al. (2007)	Assessing intervention
15	Reynolds & Lim (2007)	Assessing intervention
16	Wheelock (1998)	Practical benefits of surgery
17	Mohr et al. (1999)	Assessing instruments- quantitative focus
18	Zebrack et al. (2006)	Assessing instruments- quantitative focus
19	Affleck & Tennen (1996)	Review
20	Arman & Rehnsfeldt (2003)	Review
21	Massey et al. (1998)	Review
22	Bloom (2002)	Editorial
23	Jonas- Simpson (2005)	Review
24	Taylor (1983)	Review
25	Mols et al (2007)	Poster presentation abstract
26	Bower et al. (2003)	2nd Hand
27	Helgeson et al. (2004)	Quantitative focus and 2nd hand
28	Cadell & Sullivan (2006)	2nd Hand
29	Cadell (2007)	2nd Hand
30	Knafl et al. (1996)	Mixed data (2nd hand)
31	Tallman et al. (2007)	Quantitative interview
32	Sears et al. (2003)	Structured interview and quantitative focus
33	Brar et al. (2005)	Questionnaire interview
34	Cheng et al. (2006)	Structured and 2nd hand included
35	Updegraff et al. (2002)	Structured and quantitative focus
36	Turner & Cox (2004)	Motor accidents
37	Brashers et al. (1999)	Lazarus syndrome

2.3.4 Literature reviewing process

Stemming from the qualitative nature of these studies, the analysis follows Noblit and Hare's (1988) interpretive, seven step process of a meta-ethnography. Once the main question was determined and the relevant papers identified, the authors, aims, data collection/analysis and sample/inclusion criteria were extracted and placed into Table 2. for 'clarity upon analysis' as suggested by Britten et al. (2002).

The next component of the analysis was to determine how the studies were related (Britten et al., 2002). This entailed the literal identification of key concepts or 'first order constructs' from the original text, followed by a more interpretive 'second order interpretation' (Britten et al., 2002).

'able 2. Summary of qualitative synthesis papers on PTG and illness

#	Author, year and country	Main Aim of Study	Focus on PTG	Data collection	Illness	Sample and Sampling criteria
1	Lam & Fielding (2003) (China)	Understand illness experience and meaning making in Chinese women	No	-One semi-structured interview -Phenomenology	Breast cancer	N=17 Female >21
2	Parry & Chesler (2005) (USA)	Examine childhood cancer: spiritual change & meaning making and provide explanation for thriving	Yes	-One open ended, semi-structured interview using questions derived from old studies and QOL-C instrument.	Childhood cancer	N=50 >3 years post diagnosis <18 years at time of diagnosis 17-29 years
3	Parry (2003) (USA)	Examine uncertainty in the lives of childhood cancer survivors	No	-One semi-structured interview focused on 4 domains	Childhood Cancer	N=23 >3 years post diagnosis <18 years at time of diagnosis 17-29 years
4	Luoma & Hakamies-Blomqvist (2004) (Finland)	Examine the meaning of advanced breast cancer on QOL	No	-One semi-structured interview based on QOL questionnaire -Phenomenology	Breast cancer	N=25 >18 <70
5	Winterling et al. (2004) (Sweden)	Examine perceptions of newly diagnosed advanced cancer patients situations after diagnosis (and their spouses)	No	-One semi-structured interview with a broad guideline -Phenomenology	Advanced cancer	N=14 -Advanced cancer diagnosis - diagnosis of cancer >1<4 months
6	Fredette (1995)	Examine cancer surviving	No	-One interview and follow-	Breast cancer	N=14

	(USA)	and coping concerns		up phone call 1 week later. -1st question was open-ended and then followed questionnaire (14 open ended questions) -Content analysis		-Convenience sample
7	Hassin (1994) (USA)	Focus on one woman's ability to redefine her life and social identity via HIV diagnosis (negative to positive)	Yes	-Case study from an already existing study -Multiple unstructured and informal interviews -Narrative discourse	HIV	One Female Hispanic 30 years old
8	Fatone et al. (2007) (USA)	Understand the QOL experience after cancer of African American and Hispanic women	No	-One semi-structured telephone interview -Open ended with probes (from experience and literature) -Content analysis	Breast cancer	N=20 >18 years African American and Hispanic
9	Curtin et al. (2002) (USA)	Understand the process involved in kidney patients long term life experience on dialysis.	No	-One semi-structured interview -Broad question to begin -Probes (from panel of experts)and open ended questions -Content analysis	Kidney Dialysis	N=18 38-63 Dialysis for >15 months (m= 21)
10	Towsley et al. (2007) (USA)	Examine coping experiences of elderly cancer patients	No	-2 semi-structured interviews at 1 and 3 months - Telephone Interviews -Approximately 50 open-ended questions	Cancer	N=55 >65 65-81 (m=71.56) Just completed chemotherapy, radio therapy or

				(guideline) -Open-ended coding approach		other
11	Salick & Auerbach (2006) (USA)	Understand the process of recovery and posttraumatic growth	Yes	-One semi-structured interview designed on the research from trauma process model and trauma literature -Grounded theory	Multiple Sclerosis (MS), below the knee amputations, visual impairment, spinal chord injuries	N=10 >18 27-68 (m=45.2)
12	Edvardsson et al. (2006) Sweden)	Describe adult's experience of being diagnosed with low grade glioma	No	-One interview conversational format -Interview guide 7 topics -Inductive content analysis	Low grade glioma	N=27 >18
13	Arman et al. (2001) (Finland)	Understand women's perceived consequences and causes of breast cancer and areas of importance to these women	No	-Semi-structured interview -Open-ended questions from a guideline of themes -Content analysis	Breast cancer	N=59 Breast cancer (any stage) <75 28-75 (m=49)
14	Arman & Backman (2007) (Finland)	Examine experiences of life among women with breast cancer and look for diversity of profiles among women in anthroposophical /conventional care.	No	-3 Semi-structured interviews: admission, 6 months and 1 year (telephone). -3 open-ended questions -Content analysis.	Breast cancer	N=74 Breast cancer (any stage) <75 28-75 (m=48)
15	Arman & Rehnsfeldt (2002) (Finland)	Understand the life perspective of women with breast cancer	No	-4 Semi-structured interviews at admission, 3, 6 & 12 months) -Open-ended questions from a guideline of themes (telephone)	Breast cancer	N=4 Specifically chosen for contrasting data

				-Multiple case method -Phenomenology		
16	Kyngas et al. (2001) (Finland)	To describe the coping strategies/ resources of adolescents and young adults with cancer	No	-Semi-structured interview with guide topics based on Lazarus & Folkman's coping strategies and resources. -Content analysis	Cancer	N=14 16-22 Diagnosis for >2months
17	Danoff-Burg & Revenson (2005) (USA)	To identify and describe the positive effects of illness on relationship	Yes	-Mixed methods -Questionnaire with one open ended question about the positive effects of RA on their relationship.	Rheumatoid arthritis	N=136 m=58
18	Pakenham (2007) (Australia)	Examine adequacy of BFS for MS and explore nature of benefit finding in MS	Yes	-Mixed methods -Questionnaire with one open ended question asking to describe other benefits experienced as a result of having MS not mentioned in the BFS -Content analysis	Multiple Sclerosis	N= 130 (out of 404 at Time 2)
19	Carpenter (1999) (USA)	To describe individual differences in self transformation among breast cancer survivors	No	-Mixed methods -One semi-structured interview with 4 open-ended questions. -narrative analysis	Breast cancer	N=60 >35 35-77 (m=53.7) First time diagnosis >2 months post completion of treatment and <55 months

20	Manuel et al. (2007) (USA)	To examine younger women's coping strategies following breast cancer and to determine if coping strategies are represented in current coping scales	No	-Mixed methods - Postal survey with 7 open ended questions based in WOC-CA scale -Based on coping -Not mentioned	Breast cancer	N=529 responses 50< at time of diagnosis Stage I and II only Within 3 years of diagnosis
21	Milne et al. (2007) (Australia)	Examine breast cancer survivors perceptions exercise and their QOL	No	-Mixed methods -Survey on exercise attitudes, behaviour and QOL -2 open ended questions on perceptions of exercise and QOL throughout cancer experience -Inductive/deductive content analysis	Breast cancer	N=289 33-94 (m=59.5) months since diagnosis 20-31 (m=24.4)
22	Russell et al. (2006) (USA)	Summarize the beliefs of MS patients regarding the cause and timing of MS as well as understand patients attempts to make meaning of the experience of living with MS.	No	-Mixed methods -Postal/telephone/ internet MS QOL questionnaire -Open ended questions asking to reflect upon how they have attempted to make meaning of life with MS. -Content analysis	Multiple Sclerosis	N=146
23	Petrie et al. (1999) (New Zealand)	To examine the positive effects/changes in life following breast cancer	Yes	-Mixed methods -Multiple questionnaire assessments -Written response: what positive effects do you feel	Myocardial infarction (MI) and Breast cancer	N=143 -<65 (m=54) First diagnosis

				may have occurred in your life due to your heart attack/cancer		
24	Taleghani et al. (2006) (Iran)	Explore how Iranian women coped with newly diagnosed breast cancer	No	-One or two interviews depending on patients tolerance -Interview type not stated -Guideline used (topics not stated) -Content analysis	Breast cancer	N=19 Newly diagnosed
25	Johansson et al. (2003) (Sweden)	To explore employed women's experience of light-moderate arm lymphoedema following breast cancer	No	-Semi-structured with interview guide (8 topics) derived from practice and literature -Phenomenology	Arm lymphoedema	N=12 Arm lymphoedema following Breast cancer treatment lasting >1 year Employed
26	Paterson et al. (1999) (Canada)	Understand the processes of transformation from an inquiry into the experience of Type 1 diabetes	No	-Mixed methods: think aloud, formal interviews and focus groups. -Comparative data analysis	Type I diabetes	N=22 >18 Diagnosed with Type I diabetes >15 years
27	Sodergren & Hyland (2000) (UK)	To report the positive consequences of illness	Yes	-Interview and questionnaire with same open ended questions in interview guide. -Stress related growth scale and literature used to create 9 item open ended	Cancer, depression, heart disease, Chronic fatigue and arthritis	N=55 20-81 years (m=53)

				interview schedule. - Thematic analysis		
28	Dildy (1996) (USA)	To identify and describe the nature, meaning and impact of suffering from the perspective of persons with rheumatoid arthritis	No	-One semi-structured interview with 2 broad questions -Used planned probes/questions from an interview guide. -Grounded theory	Rheumatoid arthritis (RA)	N=14 39-76 (m=59.5) Time since diagnosis 6 months-35 years
29	Laerum et al. (1987) (Norway)	To investigate the nature and frequency of possible positive effects after myocardial infarction	Yes	-Mixed methods -One semi-structured interview asking about patients experiences if changes in life in any direction	MI	N=81 (males only) 34-65 (m=56.4) 12-21 weeks after MI
30	Dunn et al. (2006) (Australia)	To add to the body of qualitative knowledge about colorectal cancer, eg. QOL and psychosocial variables most salient to colorectal patients	No	-Mixed methods (one unstructured interview and focus group) -Opened ended questions about Colorectal cancer and QOL -Then 2 focus groups on themes identified in interviews -Thematic analysis	Colorectal cancer	N=11 (interview) N=4 (focus group) diagnosed within past 18 months <80 years
31	Barakat et al. (2006) (USA)	To describe PTG following childhood cancer	Yes	-Mixed methods -One semi-structured interview with 45 items	Adolescent cancer	N=150 <18 years 1 year after

				included open-ended questions, dichotomous card sorts and Likert scales		treatment (m=.14.7)
32	Abraido-Lanza et al. (1998) (USA)	Explore the factors that promote thriving among Latinas facing multiple adversity	Yes	-Mixed methods -Open-ended interview focusing on the positive aspects gained from illness -Insight note, memo writing then content analysis	RA; arteritis; osteoporosis fibromyalgia	N=106 Latina females 19-86 (m=50.6)
33	Fromm et al. (1996) (USA)	Examine the relationship between positive effects and QOL	Yes	-Mixed method -One semi-structured telephone interview (4 open ended questions -Postal questionnaire packet -Thematic analysis	Bone marrow transplantation (BMT)	N=90 >18 1-10 years post BMT
34	Daiter et al. (1988) (USA)	Examine the psychosocial and developmental impact of leukaemia and lymphoma on young adults	No	-Mixed method -One semi-structured interview (of planned longitudinal study) on developmental tasks, growth and social roles	Hodgkin's disease	N=32 >18 (18-36) Divided into favourable and less favourable prognosis groups (5 year survival rate)
35	Cella & Tross (1986) (USA)	Examine the psychological sequelae of successful cancer treatment	No	-Mixed methods (self report, projective testing, observer rating) -One semi-structured interview focused on	Hodgkin's disease	N=60 (males) Off treatment for >6 months Mean age (31.1)

				adjustment to illness (problems during treatment and present problems)		
36	Tompkins et al. (1999) (USA)	Examine family structuring and parenting challenges among ethnic minority mothers with HIV	No	-Mixed methods (Likert scale, depression scales, etc) - 3 semi-structured interviews (open ended questions) -Collection of excerpts from baseline, 6 and 12months	HIV	N=199 19-62
37	Eide (2006) (USA)	Explore native Hawaiian women's experience of surviving breast cancer	No	-One semi-structured interview with 2 main questions eg. 'tell me about your breast cancer' -Interpretive phenomenological analysis	Breast cancer	N=11 Native Hawaiian Diagnosis of breast cancer (no reoccurrence)
38	Gotay et al. (2002) (USA)	Examine the positive aspects of QOL and psychosocial well being in multi-ethnic prostate survivors.	No	-Open ended question at end of questionnaires (Likert scale) -Question based on perceived impact of prostate cancer on respondents' life.	Prostate cancer	N=99 M=69.3 Diagnosis >18<30 months Hawaiian residency >18 at time of diagnosis
39	Tandon & Mehrotra (2007) (India)	To articulate the process of psychological adaptation to cancer using case studies.	No	-3 semi-structured interviews over 3 months period. -Content analysis	Breast, Hodgkin's and oesophageal	N=3 m=36.6 years All undergoing chemotherapy at

						interview one
40	Heiland et al. (2002) (USA)	To describe the psychological impact that combination therapies have on HIV positive individuals.	No	-Mixed methods -Semi-structured interview with open ended questions pertaining to meaning -Content analysis	HIV	N=58 m=39.4 Aids diagnosis of >5 years Homosexual male Having been treated with combination therapies for >2 months
41	Laerum et al. (1988) (Norway)	To examine the kind and frequency of positive effects after MI	Yes	-Mixed methods -Heavily quantitative -Semi-structured interviews that were standardised after 10. -Questions related to changes in any direction, QOL, etc…following MI	MI	N= 84 34-65, m=56.4
42	Tartaro et al. (2005) (UK)	Explore distress and adjustment and women's ability to find benefit after cancer	Yes	-Mixed methods -Multiple assessments at 4 separate times (baseline, 9 weeks post diagnosis, 9 months & 2/12 years). -Semi-structured interview (16 questions) on adjustment to cancer and meaning attributed to the experience	Breast cancer	N=39

				-Coding		
43	Gillen (2005) (USA)	Gain insight into psychological experiences of stroke survivors	Yes	-One semi-structured interview focusing on ability to identify positive consequences related to stroke -Any positive personal changes; positive thoughts; positive ideas? -4 Responses (yes, no, not sure, no response) with Yes being followed up -NUD*IST	Stroke	N= 16 m=61 Had not received rehabilitation in past Must not have presence of language disturbances 5-7 days after admission
44	Taylor et al. (1984) (USA)	Examine the effects of each type of control on coping with cancer	No	-Mixed methods -One semi-structured interview with specific focus on control and attributions of cancer.	Breast cancer	N=78 females 29-78, m=58
45	Seigel & Schrimshaw (2000) (USA)	Describe positive changes/stress related growth in African American, Puerto Rican and white women with HIV/AIDS	Yes	-Mixed methods (questionnaires) -2 semi-structured interviews with interview guide/‘conceptual road map’ based on literature on aids/chronic illness -Thematic analysis	HIV/AIDS	N=54 HIV >20, 45< Latina, African American, white Not injected drugs for 6 months
46	Kennedy et al. (1976) (USA)	Examine psychological responses of survivors from	No	-Mixed methods (psychological testing)	Advanced Cancer	N= 22 22-69

		advanced cancer		-Interview with 20 questions		Survivors of advanced cancer
47	O'Connor et al. (1990) (USA)	Explore how recently diagnosis cancer patients describe their search for meaning	No	-One semi-structured interview with interview guide on 11areas of possible concern	Breast, lung or colorectal cancer	N=30 <6 months since diagnosis 36-67, m=55
48	Schwartzberg (1993) (USA)	Examine if and how gay men with HIV ascribe meaning to their illness	No	-One 'intensive' semi-structured interview with general guideline for all -Phenomenological analysis	HIV	N=19 HIV (not aids) >18 months<106 months 27-50, m=39
49	Schwartzberg (1994) (USA)	Examine vitality and growth in gay men with HIV	Yes	-One 'intensive' semi-structured interview with general guideline for all -Phenomenological analysis	HIV	N=7 (from a larger study of 19) 27-48 HIV >18 <106 months
50	Affleck et al. (1987) (USA)	Examine benefit finding/attributions with reoccurrence/ morbidity rates	Yes	-Mixed methods -2 Semi-structured interviews at T1 (7 weeks after hearts attack) -T2 8 years post attack -Specific question on benefits and explain.	MI	T1 N=287 T2 N=176 New admission with MI 30-60
51	Coward & Kahn (2005) (USA)	To describe the experience of self transcendence in women newly diagnosed with breast cancer	No	-3 semi-structured interviews during 8 month period -generally to describe cancer experience. -phenomenological	Breast cancer	N=14 31-63, m=49 Diagnosis of breast cancer 6< months

				analysis.		
52	Collins et al. (1990) (USA)	To examine changes in perspectives following cancer diagnosis	No	-One semi-structured interview -In what ways, if any has having cancer changed your priorities/ daily activities -Content analysis	Cancer	N=55 < 5 years since diagnosis >30, 70< 30-66 m=54
53	Sabiston et al. (2007) (Canada)	Explore the psychosocial experiences of breast cancer survivors involved in dragon boat racing	No	-One semi-structured interview on experiences of dragon boat racing -Minimal probes -Grounded theory	Breast cancer	N=20 m=58.69 Involved in dragon boat program
54	Power et al. (2003) (UK)	Psychosocial impact of lipodystrophy on lifestyle of HIV on HARRT	No	-One in-depth interview -Grounded theory	HIV	N=14 HIV patients with lipodystrophy
55	Coward & Lewis (1993) (USA)	Examine structure of self-transcendence in gay men	No	-One semi-structured interview or written descriptions or own audio taping with focus on 'describing a situation in which you experienced transcendence' -phenomenology	HIV/Aids	N=8 Homosexual males Aids diagnosis
56	Belec (1992) (USA)	Examine QOL among BMT survivors	No	-Mixed method -One semi-structured interview with 11 questions based on	BMT	N=18 20-50 (M=32.7) >1 year post BMT

				literature and clinical work		
57	Dahan & Auerbach (2006) (USA)	To understand the emotional impact of Multiple Myeloma.	No	-One semi-structured interview with probes about research concerns -Grounded theory	Multiple Myeloma	N=6 50-66 Undergone stem cell transplantation >3 months

An example of the process is outlined in Table 3., taken from an extract in Parry and Chesler (2005). The original theme was *psychological maturity*, which was literally identified as first order theme *cancer creates maturity.* From this, the author created an interpretive continuation (second order) grounded in the original data.

Table 3. Qualitative synthesis process

Concepts	**First order**	**Second order**
Psychological Maturity 'Cancer did make me more mature...it just made me grow up. I had to deal with things that other people didn't.'	Cancer creates maturity	Patients believe that the trauma of cancer experience has potential to accelerate psychological and self development

This process was completed for each study and then recorded in a chart/map to follow key concepts across the papers. Reciprocal translational analysis (RTA), which has been likened to content analysis (Dixon-Woods et al., 2005) was then undertaken. This involves a thorough review and identification of the primary researchers' results and interpretations of each study and 'translating' the studies into one another (Britten et al., 2002). The concepts were systematically compared across the group of studies to highlight relatedness, recurring themes and also novel themes.

The next stage of analysis was 'synthesising translations' which enabled the Researcher to identify key relationships or 'third order interpretations' (from second order interpretations) which then became 'key themes'. Table 4 demonstrates the entire synthesising of translations for this study. For further detail on the process of synthesising qualitative research please see Britten et al. (2002).

Once this process was completed for each individual paper, a line of argument (LOA) was created from both the original concepts of the original papers and the second order interpretations as well as in comparison to the existing PTG literature (Britten et al., 2002). Thus the line of argument for this synthesis is that there is a unique PTG process within life threatening physical illness related trauma.

Table 4. Summary of Findings

Key

X Not Applicable
* Dualistic growth and distress

#	Author, year and country	Reappraisal of life and priorities	Trauma= development of self	Existential re-evaluation'	A new awareness of the body	Dualistic growth and distress
1	Lam and Fielding (2003) (China)	-Reappraisal of priorities: happiness, relationships, relinquish control -New appreciation of life (here and now)	x	X	X	
2	Parry and Chesler (2005) (USA)	-New priorities, new values, improved quality & prioritising of relationships, -relinquishing control -New appreciation for life (carpe diem)	-Maturity -Humanitarian work -Increased empathy :need to give back -Stronger self (preparedness, Id=fighter)	-Vulnerability -Mortality salience -Existential change: awareness, clarity -Meaning from illness-why?	New Health Behaviours (NHB)	
3	Parry (2003) (USA)	-New appreciation for life (carpe diem)	-Stronger self (preparedness) -sense of identity -Humanitarianism -Proud (achievement in	-Purpose in life -Meaning of life -New existential awareness	x	

			surviving)			
4	Luoma, & Hakamies-Blomqvist (2004) (Finland)	-New appreciation for life (here and now) - Reappraisal of priorities: important things in life	-Increased empathy -Stronger self	-Mortality: awareness/facing death	X	
5	Winterling et al. (2004) (Sweden)	-New appreciation for life (bonus) -Improved relationships	x	-Meaning from illness –why?	X	
6	Fredette (1995) (USA)	-Reappraisal of priorities: not taking things for granted, religion -More in control -Improved relationships New appreciation for life, relationships, nature	-Stronger self -Increased empathy -Unique identity -Humanitarians	-Increased spirituality	X	
7	Hassin (1994) (USA)	-Reappraisal of priorities (be a good mum) -New appreciation of life	-Increased empathy: give back, educate -Humanitarianism	-Purpose in life (educator) -Meaning from illness-why?	-NHB (Diet) -Vicarious NHB (daughters diet)	
8	Fatone et al. (2007) (USA)	-Reappraisal of priorities New appreciation for life	-Stronger self	-Increased spirituality -Mortality (not afraid of dying)	X	
9	Curtin et al. (1997) (USA)	-New appreciation for life (here and now) -Reappraisal of priorities	-Stronger self (preparedness)	-Mortality awareness	X	
10	Towsley et al. 2007 (USA)	-New appreciation for life -Improved relationships -Balanced life	x	-Purpose/Meaning in life	X	*

11	Salick& Auerbach (2006) (USA)	-New appreciation for life (here and now) - Reappraisal of priorities: support network, camaraderie, family, goals, take control	-Increased empathy: role modelling, give back, emotionally connected to humanity -Stronger self (inner strength) -Maturity	-Purpose/Meaning in life -Mortality-aware of death	-Awareness of the body -New connection with body: physical strength=PTG	*
12	Edvardsson et al. (2006) (Sweden)	-New appreciation of health care -Improved relationships among patients (camaraderie)	-Identify as unique or 'chosen'	-Purpose/ Meaning in life	X	
13	Arman et al. (2001) (Finland)	-Improved relationship with husband, family, friends (more open) -Reappraisal of life, new goals, priorities -New appreciation for life (small things, gift)	-Authentic self -Stronger self	-Increased spirituality -Meaning of life -Reason and meaning in illness	-NHB: Responsibility for own health/ body -Awareness of health -Increased importance of health	*
14	Arman et al. (2007) (Finland)	-Appreciation of life (thankful, here and now) -New priorities: Increased importance of relationships, nature, activities, me time, goal changes (new goals) -Ability to relax	-Trauma= Transformation -Increased insight -Stronger self	-Mortality -Purpose/meaning in life	X	*
15	Arman et al.	-Improved relationships:	-Self ID	-Meaning of life	-NHB: complementary	*

	(2002) (Finland)	medical, family -Gain control -New appreciation of life (thankfulness)	-Authentic self -Stronger self -Transformation	-Mortality-awakening	therapies	
16	Kyngas et al. (2001) (Finland)	-Improved relationships (openness, closeness) -New appreciation for life	-Stronger self	X	-Take responsibility of own health (research)	
17	Danoff-Burg & Revenson (2005) (USA)	-Improved relationships with: general population, family, strangers, medical staff, support groups (Surprise at devotion) -Reappraisal of self, priorities -New appreciation for life (gift), health	-Increased empathy: need to give back, educate people -Development of humility	X	X	
18	Pakenham (2007) (Australia)	-Improved relationships with: medical staff, camaraderie among patients, -Reappraisal of priorities: friends, ability to relax, material goods, new goals -New appreciation for life: here and now,	-Stronger self	-Increased spirituality (closer to god) -Meaning/purpose in life	-NHB: New awareness of health, diet, exercise, listen to body, monitor body	
19	Carpenter (1999) (USA)	-New appreciation for life -Reappraisal of life goals	-Stronger self (courageous) -Self awareness and self reflection -Authentic self	-Mortality= self awareness	X	

20	Manuel et al. (2007) (USA)	x	x	X	-NHB: take control of health (research), alternative therapies, increased exercise	
21	Milne et al. (2007) (Australia)	-New appreciation for life (thankful) -Reappraisal of priorities: health, family, ability to relax	-Stronger self: 'survivor' Identity	-Increased spirituality	-NHB: diet, exercise, reduce stress -Awareness of health	
22	Russell et al. (2006) (USA)	-New appreciation for life: (here and now) -Reappraisal of priorities: health, family, ability to relax -Improved relationships	-Maturity -Increased empathy	-Increased spirituality- (plan) -Aware of gods presence	-NHB (research)	
23	Petrie et al. (1999) (New Zealand)	-New appreciation for life (here and now), health -Reappraisal of priorities: health, family -Improved relationships	-Increased empathy	-Mortality (life is short)	-NHB: diet, exercise -Increased awareness and importance of health	
24	Taleghani et al. (2006) (Iran)	-Improved relationships	x	X	X	
25	Johansson et al. (2003) (Sweden)	-Reappraisal of priorities: health, appearance	x	X	-Increased awareness and importance of health	
26	Paterson et al. (1999) (Canada)	-Reappraisal of priorities	-Awareness of possible self -become alive	-Increased spirituality	-Awareness of body -Responsibility for own health	

			-Stronger self (preparedness) -Proud self (achievement) -Increased empathy –need to give back		-Ability to separate body and self -Control of body -Monitoring of body	
27	Sodergren &Hyland (2000) (UK)	-Reappraisal of priorities: improved relationships with old friends, husbands, true friends, new skills, goals -New appreciation for life: gift, simple things, here and now, nature	-Stronger self: preparedness -Proud of self (achievement) -Increased empathy -Maturity -Wisdom -Openness	-Meaning of life/death -Increased spirituality	-NHB: Less stress -New awareness of body	
28	Dildy (1996) (USA)	-Reappraisal of priorities: improved relationships with others, goals, self	-Increased empathy	-Purpose in life -Increased spirituality	X	
29	Laerum et al. (1987) (Norway)	-Reappraisal of priorities: increased importance and improved relationship with family	x	X	X	
30	Dunn et al. (2006) (Australia)	-New appreciation for life (thankful, small things) -Reappraisal of priorities: increased importance of relationships	-Stronger self (preparedness) - Increased openness	-Purpose of life -Mortality: wake up call -Meaning of life	-Vicarious health checks	
31	Barakat et al. (2006) (USA)	-Reappraisal of life and priorities: increased importance of	-Increased empathy -Maturity	-The greater the suffering=greater growth	-Awareness and responsibility for own health: careful	

		relationships, school, new goals				
32	Abraido-Lanza et al. (1998) (USA)	-New appreciation for life: here and now, improved relationships with family/friends -Priority changes: new activities	-Increased empathy -Stronger self	-Increased spirituality	X	
33	Fromm et al. (1996) (USA)	-New appreciation for life, improved relationships with family/friends -Priority changes	-Emotional self -Increased empathy	-Increased spirituality	-NHB and vicarious health behaviours	
34	Daiter et al. (1988) (USA)	- New appreciation of life: here and now, time -New goals, increased importance of family, improved relationships, intimacy	-Independence -Maturity, -Awareness of self -'Transformative powers of illness'	X	-New connection with body: physical strength=PTG -Physical illness= growth	
35	Cella & Tross (1986) (USA)	-New appreciation of life, health	x	-Faced mortality=growth	-New connection with body: physical strength=PTG -Freedom from illness=growth	
36	Tompkins et al. (1999) (USA)	-Reappraisals of relationships: Improved relationships with children, friends (closer) -New priorities: time with children,	-Stronger self	-Meaning of life -Create a legacy	-Vicarious NHB (safe sex practices)	

		-New appreciation of life (here and now, thankful)				
37	Eide (2006) (USA)	-Reappraisal of priorities-importance of helping others Improved relationships with others	-More empathetic: give back, educate, altruistic, make cancer not 'taboo'	-Increased spirituality -Purpose in life	NHB: Diet, Reduce stress levels -Responsibility for own health-research -Increased importance of health vs. appearance	
38	Gotay et al. (2002) (USA)	-New appreciation of life (here and now), past -Reappraisal priorities: increased importance of relationships	-More empathetic	-Increased spirituality -Mortality- life is fragile, awareness of time limits	-NHB: diet, exercise, reduce stress, reduce alcohol/tobacco consumption, monitoring of health- check ups	
39	Tandon & Mehrotra (2007) (India)	-New appreciation of life (here and now), health -Improved relationships with strangers	-Valuable self	-Increased spirituality -Mortality (no fear of death) -Purpose/meaning in life	-NHB: responsibility of own health (research) -New awareness/relationship with body	
40	Heiland et al. (2002) (USA)	x	-Empathy-increased altruism	X	-NHB: strong health focus -Reduced risk behaviours (substance abuse), increased safe sex	
41	Laerum et al. (1988) (Norway)	-New appreciation of life: being alive (grass is greener) -New priorities: friends	x	X	-NHB: diet, activity, reduced stress -Responsibility for own health	

42	Tartaro et al. (2005) (UK)	x	-Illness creates transformation	-Increased spirituality	X	*
43	Gillen (2005) (USA)	-New appreciation of life (here and now) -New priorities: Relinquish control	-Better self -Increased empathy: educate, patience -Humility	-Increased spirituality: closer to god, pray	-Responsibility for own health -NHB-diet -Awareness/monitoring of health	
44	Taylor et al. (1984) (USA)	-Reappraisal of priorities: relinquish/gain control and relax	x	X	-NHB: diet, exercise, reduce stress	
45	Seigel & Schrimshaw (2000) (USA)	-New appreciation of life: time (here and now), relationships, memories -Improved relationships: open, resolve rifts, camaraderie -Reappraisal: material goods, health, career	-Stronger self -Better self -Responsible -Independent -Increased empathy: patience, give back	Spirituality-redemption, increased prayer, questioning of god and faith	-Increased importance of health vs. appearance -NHB: reduced drug./alcohol, stress, better diet, increased exercise	*
46	Kennedy et al. (1976) (USA)	-New appreciation of time (here and now), life, people and relationships Reappraisal: new goals, relinquishing of control -New priorities: monetary	-Stronger self -Character -Increased empathy	-Mortality	X	
47	O'Connor et al. (1990) (USA)	-New appreciation of past, nature time (here and now), improved	-Identity of physical self	-Increased spirituality	-NHB: research	

		relationships: shock at support -Reappraisal: new goals, past (regrets), life, self (reflection) -New priorities: simplify				
48	Schwartzberg (1993) (USA)	-New appreciation of time (here and now) -Improved relationships: sense of belonging/camaraderie -Reappraisal: new goals, relinquishing control	-Specialness identity -Authentic self -Maturity -Increased empathy: increased connection to humanity	-Increased spirituality -Purpose/meaning in life -Create a legacy	-Responsibility of health -NHB: improved health behaviours	*
49	Schwartzberg (1994) (USA)	-New appreciation of time (here and now), nature, faith -Improved relationships: sense of belonging/camaraderie -Reappraisal: new goals, relinquishing control	-Specialness identity -Authentic self -Maturity -Increased empathy: increased connection to humanity, give back, work for organisations, altruism	-Purpose/meaning in life -Create a legacy	-Awareness of health	*
50	Affleck et al. (1987) (USA)	-Reappraisal priorities: life, time (here and now) -Improved relationships	x	X	-NHB: preventative health behaviours -Diet, exercise, reduced	

					stress, reduced substance use	
51	Coward & Kahn (2005) (USA)	-New appreciation of life: gift -Reappraisal priorities: relax, less work, time -Improved relationships, camaraderie	-Increased empathy: need to give back, educate, research, fundraising, volunteer, support groups -Humility -Stronger self (preparedness)	-Increased spirituality (god) -Purpose in life	-Responsibility for own health: research -NHB: diet, exercise, reduced stress	
52	Collins et al. (1990) (USA)	-Reappraisal of life, outlook, world view, priorities/ activities, time management, future. -Improved and increased importance of relationships (more sensitive, more effort) -New appreciation of life: here and now, carpe diem, each day counts	-Increased empathy -Stronger self (preparedness)	-Existential awareness of vulnerability		*
53	Sabiston et al. (2007) (Canada)	-New appreciation for life (one life) -Reappraisal of goals, achievements and priorities: importance of relationships, camaraderie (soldiers), gain control,	-Stronger self (preparedness) -Proud of self -Physical self -Increased empathy- need to give back	X	-NHB: Activity =growth	

		activity				
54	Power et al. (2003) (UK)	-New priorities- to stay alive -Appreciation of life (here and now) -Able to relax	-Stronger self	X	-NHB: Exercise, diet, proactive health care	
55	Coward & Lewis (1993) (USA)	-New appreciation of nature, time (here and now), god -Reappraisal of self and priorities: new goals, legacy -Improved relationships, camaraderie, belonging	-Stronger self -Transcendence -Humility -Self and body ID -Increased empathy: need to give back, research, altruism	-Legacy -Mortality: acceptance of death	-NHB: reduced stress, monitoring health/body -Responsibility for own health	*
56	Belec (1992) (USA)	-New appreciation of life and health -Reappraisal of priorities: new goals, health -Improved relationships (closer)	-Stronger self -Proud -New self	X	-Increased awareness/importance of health	
57	Dahan & Auerbach (2006) (USA)	-New appreciation life, past -Improved relationships: family, camaraderie, respect for wives	-Stronger self -Increased empathy: give back, educate, foundations, research humility	-Mortality: acceptance of death	-New connection with body: physical strength=PTG	

2.3.5 Validity/reliability

Though the systematic review attempts to follow the same rigorous structure as the traditional quantitative analysis, the difficulty in doing so arises from the near impossibility in replication of the search process and synthesising (Dixon-Woods et al., 2006). Therefore the traditional quantitative methods for ensuring reliability are not entirely applicable to the qualitative synthesis. Although the majority of the analysis was completed by the primary author, attempts to be transparent and critical were achieved by presenting Tables 1-4 as well as employing triangulation methods in order to legitimise the results (Dixon-Woods et al., 2006). The secondary author (1st supervisor) reviewed the proposed excluded (Table 1) and included (Table 2) papers according to the exclusion/inclusion criteria and concurred with the primary Researcher's inventory. In addition, the secondary author reviewed the first and second order interpretations in order to confirm that the themes were grounded in the original data.

2.4 Findings[4]

Fifty-seven studies used qualitative methods to elicit findings on posttraumatic growth in illness. Table 2 includes the main aim of the studies and whether it was focused on the area of PTG, the format of data collection and analysis (when mentioned), the type of illness and their sampling criteria.

Twenty-seven rendered their data collection as purely 'semi-structured interviews' (1-6,8-11,13-16,19,25,28,37,39,47,48,49,51-55,57) with no other type of methodology with the remaining twenty-five using semi-structured and mixed methods for data collection (17-23,26,29,31-36,40-46,50,56). Others fell into unstructured (7,30), conversational (12), open-ended question/written response (18,27,38) and unclear (24). Only seventeen of the fifty-seven studies were specifically designed to understand the experience of PTG, benefit finding and thriving (2,7,11,17,18,23,27,29,31-33,41-43,45,49,50) and of these seventeen, only four papers used purely qualitative methodologies (2,7,11,49).

The remaining forty studies reported the phenomenon as a serendipitous result. This highlights the difficulties in searching for PTG, benefit finding and

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[4] Due to the large volume of references, the numbers in brackets will indicate the corresponding references which can be found in Tables 2 & 4.

thriving within the literature due to the fact that more than two thirds of these researchers did not set out to study this phenomenon, therefore, their review of PTG might not have reported in the abstract or title and thus overlooked.

Cancer was the leading illness studied (35 studies), specifically breast cancer (16), adolescent/childhood cancer (3), bone marrow (2), Hodgkin's disease (2), prostate (1) multiple myeloma (1), low grade glioma (1), colorectal (1) and mixed cancer populations (8). Other illnesses included HIV (8), myocardial infarction (MI) (4), rheumatoid arthritis (3), multiple sclerosis (MS) (3), stroke (1), kidney dialysis (1) diabetes (1) and arm lymphoedema (1). There was a large discrepancy between sample sizes, ranging from one case study (7) to 529 (20) participants. The remainder included n= 2-10 (11,15,39,49,55,57); 11-19 (1,5,6,9,16,24,25,28,30,37,43,48,51,54,56); 20-30 (1,3,4,8,12,26,34,46,47,53); 31-40 (42); 41-50 (2); 51-60 (10,13,19,27,35,40,45,52); 71-80 (14,44); 80-100 (29,33,38,41); 101-150 (17,18,22,23,31,32); 151-200 (36,50); 201-300 (21). The majority of the studies used mixed gender populations (2,3,5,9,10,12,16,17,18,22,23,25,26-28,30-34,39,43,46,47,50,52,54,56,57) followed by female (1,4,6,7,8,13-15,19-21,24,36,37,42,44,45,51,53) and male (29,35,38,40,41,48,49,55) only sample populations.

2.4.1 Posttraumatic growth and illness

The majority of qualitative literature regarding PTG, following the diagnosis of a life threatening illness (35) was completed in the past 7 years (2000-2007) and published from researchers working in the United States (35). Eight of the studies reported PTG across minority populations (1,8,24,32,36-38,45). The earliest qualitative study retrieved was Kennedy et al.'s (1976) study on psychological responses of survivors of advanced cancer which was not intended to focus on PTG and illness. PTG research began to pick up interest in the mid eighties/early nineties, with the primary focus being on examining the psychosocial development of surviving cancer with the exception of Laerum, Johnsen, Smith, and Larsen (1987; Laerum, Johnsen, Smith, & Larsen, 1988) and Affleck, Tennen, Croog and Levine (1987) who specifically set out to investigate the possibility of positive effects following myocardial infarction (MI). However these three studies were not exclusively qualitative and included mixed methodologies to determine their results.

During the 1990's only 5 of the 15 published studies specifically focused on PTG and illness, while the others reported PTG as a secondary result. Mixed methods were used alongside interviews of differing structure. Entering the 2000's, nine studies specifically focused on PTG and illness, with only Parry and Chesler (2005) and Salick and Auerbach (2006) employing qualitative methodology exclusively.

It became evident during the review that authors had differing views on what constituted a semi-structured interview. For example, Hassin (1994) employed multiple unstructured, informal interviews, whilst other researchers based their interview on topics derived from the literature (8,11,25,27,45,54), quantitative questionnaires (2,4,6) and their own clinical experiences (8,9,57). Other studies used 'semi-structured interviews' with open-ended questions ranging in number from 3 to 14 to even 50 (Table 2). The range of qualitative analysis methods employed were: content analysis, phenomenology, thematic analysis, open-ended coding, grounded theory, and comparative data analysis.

Despite the multiple discrepancies on the definition of 'qualitative' data, only 30% of the qualitative papers reviewed in this study (over the past 32 years) has specifically focused on PTG and life threatening illness, and only 5% of these have used purely qualitative methods to extract their data.

2.5 Key themes

2.5.1 Reappraisal of life and priorities

The diagnosis of illness created a situation in which the participants began to engage in both positive and negative reappraisal of their life, as well as the restructuring of previous priorities. This theme was reported by all of the studies except for Manuel et al. (2007) and Heiland et al. (2002) who focused on new health behaviours/the body following the diagnosis of illness and Tartaro et al. (2005) who focused on the dualistic existence of growth and distress.

Respondents tended to reappraise their relationships with family members (spouse, offspring, parents, siblings) and close friends and reported more improved (closer, more open, better) relationships with the people close to them. Dahan and Auerbach (2006) found that husbands with multiple myeloma gained increased respect for their wives throughout their treatment due to the strength and efficiency the wife exhibited during their illness.

People reported surprise at the devotion and help from family and friends during their illness (17, 47). They also reported a positive change in roles with regards to strangers, neighbours, colleagues, health care professionals, support groups and camaraderie among people with the same illness (11,12,15,17,18,45,46,48,49,51,53,55,57). Schwartzberg (1993; 1994) reported a new sense of belonging or 'specialness' among men with HIV and the development of camaraderie/pride from dealing with the disease together.

Major changes to priorities in life were reported across the studies and ranged from how and with whom they decided to spend their day, to appearance, outdoor nature and monetary goods (18,45,46,52). Johansson et al. (2003) found that health became a very important priority for people and there was a reduced obsession with appearance (25, 37,45).

The studies consistently found that their respondents had a new appreciation of life, calling it a 'gift' (13,17,27,51) and 'thankful' (14,15,21,30,36) that they were touched by such life altering illnesses (Coward & Lewis, 1993). Specifically respondents mentioned an appreciation for 'the here and now', simple things and time (1,4,9,11,14,18,22,23,27,32,34,36,38,39,43,45-52,54,55). In addition, researchers found that people mentioned a new appreciation for their past and the life that they had (Dahan & Auerbach, 2006; O'Connor, Wicker, & Germino, 1990). This reappraisal of past life/behaviour also prompted a desire to change negative thoughts/behaviours/regrets (O'Connor et al., 1990).

The diagnosis of illness prompted many to revaluate and change life goals, learn new skills, go back to school and achieve new things (11,13,14,18,19,27,28,31,34,46,47,48,49,52,54,55,56). The issue of control was mentioned, with some finally able to relinquish control over their life and relax (1,2,14,18,21,22,44,45,47,49,50,52,55), whereas others felt they had finally gained control over their life (6,11,15,45, 54). Unique to three studies on HIV (36,48,49), the diagnosis of illness created a new found desire to leave a legacy behind. Participants in Schwartzberg (1993; 1994) believed that by educating people about their illness they became 'guides' for others and were able to leave their strength and story with the next generation of the illness. Coward and Lewis (1993) reported an urgency among men with HIV to create a legacy via volunteer work and an importance of helping others with this illness so that their contribution would live on after them.

2.5.2 Trauma equals development of self

A majority of the participants reported the phenomenon of self-development and transformation (e.g. spiritually, emotionally, psychologically, etc.) following their diagnosis and experience of illness (2-9,11-19,21-23,26-28,30-34,36-40,42-49,51-57), with participants reporting a new awareness of a possible self (26), authentic self (13,15,19,45,49) and a 'better self' (43,45) (more open, more empathetic, more creative and deeper more alive) (11,14,19,22,26,27). Various patients from Daiter et al. (1988) reported on the 'transformative powers of illness' and illness as 'a catalyst for change that was planned but not yet executed' (p. 615). Parry and Chesler (2005) found that childhood survivors of cancer felt their illness had psychologically matured them and developed them into more spiritual, wiser, empathetic and humanitarian adults. The idea of being transformed stemmed from their perceptions of seeing the self differently and thus transformed. Schwartzberg (1993) found that not only did men with HIV considered the illness a gift, but a 'thing of value', perpetuating the self-actualisation process, 'an agent that conferred specialness or unlocked some inner potential, strength or wisdom that had previously been dormant' (p.20).

Five studies found that the diagnosis and decline in physical functioning following physical illness developed their sense of humility and humbleness as they now needed to reach out and ask for help (17,43,51,55,57). By 'swallowing their pride' they were able to develop stronger interpersonal relationships, thus a positive outcome from their trauma.

A development of a 'stronger self' or 'a fighter' was reported throughout the majority of the studies (2-4,6,8,9,11,13-16,18,19,21,26,27,30,32,36,45,46,51-57). The main reasoning for development of stronger identity was the feeling of a sense of achievement in overcoming in physical suffering (3,26,26,53,56). Some reported feeling more proud of themselves and the development of increased self-esteem and confidence (4,26,55). In addition to this, many believed that the ability to overcome the diagnosis of the illness better prepared them for future adversity, thus the trauma developed a more resilient self (2,3,9,26,27,30,43,51,53).

The development of a more 'empathetic self' was repeatedly related throughout the studies (11,12,18,45,48,49,51,53,55,57). Generally, it was believed that the trauma of diagnosis developed a more patient and caring person. Not only did respondents have increased patience and compassion for others with their illness, but an increased emotional connection to humanity in general (2-4,6,7,11,17,22,23,26-28,31-33,37,38,40,43,45,46,48,49,51-53,55,57). The development of a more empathetic self increased their 'need to give back' to society for all they had done during their illness (2,17,26,51,53,55). This included a need to help educate people on their illness, suffering and triumph (7,17,37,43,51,57); to help fundraise in order to continue the help (51); work for organisations (2,51) and participate in research (51,55,57).

2.5.3 Existential re-evaluation

Following the diagnosis of potentially life threatening physical illness, forty-two studies reported some form of existential revaluation (2-15,18,19,21-23,26-28,30-33,35-39,42,43,45-49,51,52,55,57). The majority of studies focused on reflection of mortality, spirituality, meaning and purpose in life, finding reasons/making meaning from the illness as well as the belief in 'the greater the trauma, greater the growth' (31). Cella and Tross (1986) reported that by 'confronting sickness and struggling for health' people were able to attain 'significant existential gains'.

Tandon and Mehrotra's (2007) case studies found that the illness experience had made women become 'fearless of death'. Gotay, Holup, Muraoka, and Cook (2002) found that the illness created an awareness of 'vulnerability' and 'the shortness of time', as did Kennedy, Tellegen, Kennedy, and Havernick (1976) among people with advanced cancer, 'once you worry about whether you are going to die, nothing else seems quite as significant to worry about' (p.18).

Eide (2006) studied the transformation of Hawaiian women with breast cancer and found a large number of increased episodes of spirituality and return to faith, as well as spiritual practices (praying, attending church). Fatone, Moadel, Foley, Fleming, and Jandorf, (2007) reported positive spiritual changes repeatedly, specifically gratitude to God and strengthening of faith.

Following illness, people consistently reported discovering new meaning or purpose to their life (2,3,5,7,10-15,18,27,30,36,39,48,49). Dildy (1996) found that participants were able to finally 'see' their role/purpose in life following multiple illnesses. Three studies even reported their participants as feeling like 'chosen ones' (Hassin, 1994; Parry, 2003; Edvardsson et al., 2006). For example, Edvardsson et al. (2006) reported a heightened sense of 'uniqueness' and being 'the chosen one' following illness. Ultimately by making sense of the reason for obtaining the illness, Winterling, Wasteson, Glimelius, Sjoden, and Nordin (2004) found that advanced cancer patients were more noticeably able to attain greater personal growth and meaning.

2.5.4 New awareness of the body

Unique to illness related PTG, the majority of the studies reported a 'new awareness of the body' following the diagnosis of potentially life threatening physical illness (2,7,11,13,15,16,18,20-23,25-27,30,31,33-41,43-45,47-57). A new awareness of the body along with the creation of a 'physical self identity' is a positive and unique outcome from physical illness related trauma (11,13,26,27,39,47,53,55,57). Paterson, Thorne, Crawford, and Tarko (1999) studied the experience of transformation among people with diabetes and found a positive effect of the disease was the patients' new ability to differentiate the self and the body, sparking a review of their values, beliefs and assumptions regarding the relationship of the self and body.

Interestingly, some participants found that it was through the unique process of overcoming their physical suffering that propelled the experience of PTG (11,34,35,57). Illness was perceived to be the catalyst for positive transformation or growth (Daiter et al., 1988). Salick and Auerbach (2006) found that the 'reclaiming of the physical body' was a vital component to the growth process, '...a large part of beginning to feel better involved an attempt to regain aspects of their physical self...this was experienced as gaining a sense of physical power that had been taken away and a new sense of potency'(p.1030). Dahan and Auerbachs' (2006) findings among multiple myeloma patients also support the unique process of growth following physical illness, 'after a long period of feeling "dead" and "not human" the surge of physical strength was emotionally nourishing...recuperation helped re-establish the connection between physical and mental self' (p.383).

Participants began to research their own illness in order to understand their body and its current situation (16,20,22,37,39,47,51). Respondents in Paterson et al. (1999) discussed how illness related trauma forced them to take responsibility for their own their health and management of that said health. This responsibility included 'acting like a reporter' where they would monitor and record their health status, 'paying attention to every detail of the illness' (p. 796). Taking responsibility and monitoring one's health was repeated throughout the analysis (13,16,18, 26,31,37,38,39,41,43,48,51,55) as was the new ability to 'listen to their own body' (18).

Numerous studies reported the development of improved health behaviours following the diagnosis of illness (2,7,13,15,18,20,21,23,33,36-41,43-45,47,48,50,51,54,55). Physical activity was seen to be a great combatant in anxiety and negative moods as well as the maintenance of physical functioning (18,20-23,41,44,45,50,51,54). Sabiston et al. (2007) reported a potential link between group physical activity (dragon boat racing) and PTG among women with breast cancer. Reducing stress and avoiding potential stressful environments were frequently mentioned as new health behaviours (21,27,37,38,41,44,45,50,51,55). Sodregen et al. (2000) reported that the diagnosis of Hodgkin's disease prompted them to 'be kinder to their fragile frame' (p.91) and avoid stress whenever possible. Power et al. (2003) reported that the development of lipodystrophy (after HIV) caused patients to re-evaluate and improve their diet and exercise regimes.

Reports of routine health checks and vicarious health behaviours of family members and friends were attributed and perceived to be a positive outcome of their physical illness (7,30,33,36,38). Dunn et al. (2006) found that the diagnosis of colorectal cancer enforced greater monitoring of the body by the respondent and their families as did Tompkins, Henker, Whalen, Axelrod, and Comer (1999) who found that the diagnosis of HIV in mothers had the potential to highlight dangers of unprotected sex, therefore creating safer sex habits among their offspring.

In addition to adopting positive new heath behaviours, participants reported the cessation of risky behaviours, such as drug, alcohol and tobacco use as well as risky sexual practices upon the diagnosis of their illness (36,38,40,45,49,50,51). Heiland et al. (2002) reported a reduced rate of self indulgent behaviours (risky sexual practices, substance abuse) and an increase in health focused activities, attributing these positive changes to the diagnosis of illness.

2.6 Discussion

This study found 57 qualitative studies spanning 32 years of publications, with only 17 specifically aimed at researching PTG and only three of those using purely qualitative methodology. The four key themes to emerge were: 'reappraisal of life and priorities', 'trauma equals the development of self', 'existential re-evaluation' and 'a new awareness of the body'. The majority of studies focused on cancer and growth which suggests more research is needed in differing physical illnesses. This synthesis included eight studies that reported PTG across minority populations which, according to Britten et al. (2002), are beneficial to the analysis as they report across a variety of settings and populations.

In reflection of the previous PTG quantitative/qualitative literature on separate traumatic incidences (e.g. natural disaster, bereavement, war, etc.) the synthesis, and the studies within in it, offers a potential and unique sixth element or outcome to the growth process: a new awareness of the body by way of a diagnoses of life threatening physical illness. Survivors of natural disasters, emergency service workers, war veterans, and bereaved spouses and parents all grieve and grow from their adversity in specific and unique ways (Lev-Wiesel & Amir, 2006; Paton, 2006; Rosner & Powell, 2006). However, the qualitative research on illness specific PTG supports the idea that recovering and thriving from illness can create a new awareness and heightened importance of the body. Illness related survivors reported an increase in taking responsibility for their own health; monitoring one's health; listening to their own body; improved health behaviours (diet, exercise, reducing stress); routine health checks; vicarious health behaviours (self examinations, diet change); cessation of risky behaviours (drug, alcohol, tobacco and unprotected sex); and a new positive identification with their own body. Although similar findings have been reported in previous reviews (Thornton, 2002) this sixth outcome has been repeatedly overlooked. Reasons for this oversight in a potential sixth outcome could be due to the limitations within quantitative research, as were reported throughout the literature (Pakenham, 2007; Salick & Auerbach, 2006). Manuel (2007) highlighted that the PTG and coping results reported by their participants (women with breast cancer) were absent from the current scales of measurement, suggesting that to date, measurement tools are missing key elements of the PTG process.

In addition to the key themes and in agreement with PTG research (Tedeschi & Calhoun, 2006), these studies reported dualistic (positive and negative) aspects of PTG (10,11,13-15,42,45,48,49,52,55). Similar to the 'Janus' Two-Faced Model (Maercker & Zoellner, 2004) respondents were able to find some benefit from their illness while still acknowledging the distressing side of their situation. However, unlike the bereavement literature, where people would naturally change their loss if possible (Znoj, 2006), respondents in this analysis reported their illness as a gift which added value and even a 'bonus' to their lives (Schwartzberg, 1993, 1994).

Criticisms of the synthesis of qualitative literature stem from the belief that "the results of the individual studies are de-contextualised and that concepts identified in one setting are not applicable to others" (Thomas & Harden, 2007, p.11). Thomas and Harden (2007) suggest that by continually checking the context of the findings and translation of the themes across the studies situations, validity can be enhanced. In addition to this, by presenting data in tables, the audience is able to see the context in which the papers were conducted as well as the original aim, methodology, type of illness, sample and criteria. Thomas and Harden (2007) propose that by doing this, the audience is able to "judge for themselves whether or not the context of the studies the review contained were similar to their own" (p.11).

Due to the inclusion of all studies which stated the use of qualitative methodologies, there may have been a compromise in the quality of the studies chosen. However, without specific guidelines on exclusion of studies based on quality, it was necessary to include all relevant studies to our question (Daly et al.; Thomas, 2007; Dixon-Woods, 2006}.

Ultimately, the synthesis revealed that there is a novel element to the PTG process in physically traumatic situations. Thus, PTG was established via the process of losing physical stability and then 're-humanising' (Salick & Auerbach, 2006) through the reconnection with the body. As the synthesis clearly demonstrated a dearth of purely qualitative research on PTG in illness, PTG investigation needs to expand research practices to acknowledge the unique outcomes each trauma situation has the potential to emit.

CHAPTER THREE

METHODOLOGICAL CONSIDERATIONS AND METHODS SECTION

This chapter is separated into two components; the first part is a review of the epistemological and philosophical origins of the chosen methodological paradigm, including a thorough review of Husserlian and Hermeneutic phenomenology, interpretive phenomenological analyses and its similarities/differences to other qualitative methods (Thematic analysis, discourse analysis and grounded theory), limitations, etc. Also, this section will reflect upon Yardley (2000) and Elliot's (1999) guidelines for high-quality research. The second part is a detailed methods section that includes information on the participants, recruitment and study procedure as well as the analysis, results and write-up process.

3.1 Quantitative vs. qualitative debate

Within psychological research there are a multitude of philosophical viewpoints surrounding methodical paradigms. Epistemology is a branch of philosophy concerned with the acquisition of knowledge (Willig, 2001). Researchers must therefore choose which epistemological position they believe best suits their research question. The next section will review the traditional epistemological philosophies in addition to providing a rationale for this thesis' epistemological stance and methodological paradigm.

3.1.1 Positivism and post-positivism

Positivism is the traditional view of quantitative research which follows the belief that "there is a straightforward relationship between the world (objects, events, phenomena) and our perception and understand of it" (Willig, 2001, p. 3). Positivism is focused on objective knowledge and discredits any influence of the researcher. It is focused on discovering the absolute truth and employs a realism stance, "there is a single, unitary real world, within which the events of interest to psychology take place" (Ashworth, 2003, p. 11). The Hypotheico Deductivism approach proposes that scientific theories are created by rigorously testing hypotheses through observation, experience and experimental avenues. Therefore, the main aim of quantitative research is the prediction of behaviour, using large sample populations, standardised, structured and controlled environments and measurement tools to make causal associations (Langdridge, 2004e)

Criticisms of this scientific method stem from the fact that it does not acknowledge historical, cultural and societal factors nor does it allow for theory generation (Willig, 2001). In addition, this type of methodology has been criticised for 'oversimplifying' human behaviour and neglecting the individual (Langdridge, 2004e). Post-positivism merely challenges the positivist's belief that there is one perfect representation of reality (Lincoln & Guba, 2000) and moves away from the strict view points of positivistic epistemology.

3.1.2 Qualitative research

Qualitative research, and the constructive-interpretive paradigm, shifts from the traditional scientific method (quantitative) to more idiographic, subjective ontological perspectives. Qualitative research is concerned with the inductive study of individual experiences, through text and meaning (Langdridge, 2004b, 2004e). This paradigm is concerned with the study of rich, subjective experiences unlike the cause and effect focus within positivistic methodology (Willig, 2001). This idiographic focus stems from the belief that psychology needs to focus on the unique individual and the unique factors and experiences that are individual for each person. There is not as much emphasis on generalisation to the masses (Ashworth, 2003) Overall, it is has the benefit of uncovering undiscovered elements to phenomena that have been overlooked or neglected through traditional scientific methodologies.

Criticisms of this type of approach usually stems from the fact that this type of research does not employ traditional methods of validity and reliability testing, nor does it have the ability to generalise, replicate or predict (Langdridge, 2004e).

3.1.3 Phenomenology

In order to fully understand the philosophical underpinnings of the method used within the thesis, the following section is a brief review of the history of phenomenology from its origination to present day diverging schools of thought. By explicitly documenting and examining the theoretical and philosophical, the researcher ensures that the question formation, interviewing process and analysis are free of ambiguity (Lopez & Willis, 2004).

Phenomenology is "the science of experience" (Langdridge, 2004d, p. 274) and stems from the philosophical viewpoint of intentionality which posits that our mind or consciousness is always of something and is not limited to our own private selves. It is connected to the outside world, therefore phenomenologists are attempting to study the experience of the consciousness and its outside world (Langdridge, 2004d). There are two ways to achieve intentionality within phenomenological research. First of all, idealism is the belief that we can only know what is in the world through our mind. Idealists' reality is based on what their mind tells them, not by what actually is. Realists, however, believe that we can only know our world by what is in the world, therefore we can go and study the phenomenon of the world as is. Langdridge states that phenomenology goes beyond idealism and realism and focuses on our access to the experience, "The important thing for phenomenologist's is not whether there is a real world beyond our experiences or whether it is all in our minds but what we have access to...the shared public realm experience" (Langdridge, 2004d, p. 277). Thus, phenomenologists are focused on the intentionality of a phenomenon.

Phenomenology was philosophically conceived by Edmund Husserl in the late 1800's (Ashworth, 2003). His objective was to alter the positivistic view of searching for the 'real truth' behind the account, and simply take the subjective experience as reality. Husserlian's phenomenology deals with the theory of 'the reduction', which simply states that the researcher must attempt to bracket (ignore and cut-off any preconceived ideas/notions/hypotheses before they begin to investigate) themselves from their presuppositions and interpretations and see the phenomenon in its true state (Finlay, 2008). Husserl eventually deconstructed the reduction into four categories: "epoches of the natural sciences, epoches of the natural attitude, the transcendental reduction and eidetic reduction" (Finlay, 2008, p. 5). To commence, the researcher must bracket their scientific background and perceptions and address the phenomena as it is experienced. Secondly, the researcher must bracket off their knowledge of their natural attitude meaning they must forget their perceptions, feelings, emotions and psychological (natural) attitudes towards a phenomenon and exist in a new way of being. Transcendental reduction requires the researcher to bracket their philosophical/spiritual beliefs and subjective thoughts in order to focus upon transcendental consciousness. Eidetic reduction follows the theory of intuition of essences which states that the researcher must attempt to deconstruct the phenomenon by altering specific components (free imaginative variation) in order to ascertain which components of the phenomena are essential to its essence. This descriptive (eidetic) branch of phenomenology suggests forgetting previous knowledge and forgoing literature reviews in order to get the true subjective account of the phenomenon as told by the participant (Lopez & Willis, 2004). Husserl also proposed the theory of Radical Autonomy which states that human are free and directly influence their environmental surroundings. These influences (culture, society, politics) do not influence a person's free agency (Lopez & Willis, 2004). In its totality, the goal is for the researcher to achieve transcendental subjectivity by way of bracketing their previous intuitive knowledge of science, their life world and attitudes.

Husserl's students (Heidegger, Gadamer, etc,) identified problems with the reduction and heralded the inevitability of the influence of horizons of experience defined as "temporal horizons of our past experiences and future anticipations" (Finlay, 2008, p. 8). They acknowledged that in order to fully understand the lived experience of others we must acknowledge our own past as it will inevitably leak into our way of perceiving the world (Finlay, 2008). Heidegger disagreed with Husserl's call for the absolute erasing of previous knowledge and accepted that the researcher would inevitably bring their past knowledge into their study, and by doing so, enhance the overall study. Hence, the researcher needs to know the area, be interested in the area and be able to identify limitations within the research in order to progress the area of research (Lopez & Willis, 2004). Thus, the creation of the second branch of phenomenology, hermeneutics, was created to go beyond the descriptive and search for meaning within human experience, either known or unknown to the participant themselves (Lopez & Willis, 2004). Hermeneutics puts particular emphasis on interpretation, or 'being-in-the-world', which states that any interpretations and understandings of the lived experience is a direct result of our previous and present selves (thoughts, knowledge, understandings) and being-in-the-world (Finlay, 2008). The important thing for a phenomenologist is to be aware of and transparent of these biases and "question and provoke our pre-understanding" (Gadamer, 1975 as cited in Finlay, 2008, p. 9).

Another concept within Heidegger's branch of phenomenology is that of situated freedom which states that although humans are free to make their own choices, their freedom is curtailed by the constraints of their life situation. It is from the uncertainty of making decisions with unknown consequences and dealing with those consequences that one can derive meaning from their experience. This is in direct contradiction of Husserl's concept of radical autonomy discussed previously. Thus, Heidegger's interpretive phenomenology focuses on how social and historical influences impact upon the way in which people make meaning from and experience phenomena.

Further divergences from Husserl's descriptive phenomenology surround the use of theory in question formulation. Although hermeneutics does not use theory in the positivist sense (hypothesis testing), it does use it to focus the researcher and their decisions regarding their study (e.g. sample, subjects, research questions, etc.; Lopez & Willis, 2004). This framework carries through into the interpretation and analysis and the researcher must therefore be explicit on how the results were influenced by the theoretical approach.

Hermeneutics is also intent on clarifying the inter-connectedness of the researcher and the participant during their interview exchange. Heidegger reasoned that co-constitutionality is at the forefront of hermeneutics and is when "the meanings that the researcher arrives at in the interpretive research are a blend of the meaning articulated by both participant and researcher with the focus of the study" (Lopez & Willis, p.730). This has also been defined as fusions of horizons (the horizons of experience), where there is a fusion of each person's backgrounds in the attempt to derive meaning from the experience and will change depending on the persons involved and the theoretical framework of the study (Gadamer, 1976).

The current study was conducted under the guiding of hermeneutic phenomenology which, in present day, is primarily practiced using two main schools of thought: the Duquesne school created by Amedeo Gioirgi and the Interpretive Phenomenological Analysis (IPA) created by Jonathan Smith. These schools divided due to Smith's desire to break away from descriptive analysis to more interpretative, as well as outwardly acknowledging the role of researcher. The next section is a detailed review of IPA and its similarities/differences to other qualitative methodologies.

3.1.4 IPA

Stemming from a realist perceptive, IPA is primarily concerned with understanding how people view, make meaning from and experience phenomena. IPA is focussed on discovering the participant's individual experience of PTG through the occurrence of recurring themes. It is a phenomenological account of an experience through the person's own perception (Smith, Jarman, & Osborn, 1999). It is an inductive, non-hypothesis testing approach with the focus on the individual as the 'expert' in the experience. Throughout the interview session and the analysis, the researcher acknowledges their inevitable influence on the process and outcome of the data and uses this as the interpretative component of the procedure, thus moving away from the traditional scientific theoretical stance of realism, towards a more contextualist view of reality (Madill, Jordan, & Shirley, 2000).

Ultimately the entire procedure and analysis depends on the participant, and not the researcher, to explain what is true about the phenomena of interest:

> "IPA does not make any claims about the external world. It does not ask whether participant's accounts of what happened to them are true or false or to what extent theory perception of an event corresponds to the external reality" (Willig, 2001, p. 67).

The role and axiology (ethical and moral beliefs) of the researcher are very important components to IPA, and an important separation between IPA and the traditional phenomenological schools of thought. Specifically, IPA demands a reflexive standpoint from the researcher and acknowledges that the analysis will inevitably be shaped by the researcher's own interpretations.

3.1.5 IPA versus thematic analysis, discourse analysis and grounded theory

There has been a lot of debate surrounding the differences between IPA, inductive thematic analysis, discourse analysis and grounded theory. First of all, until 2006, thematic analysis was regarded as an 'umbrella' term in which all qualitative analysis fitted under. Since then Braun and Clarke (2006) have argued that thematic analysis is not simply a generic term but an actual type of qualitative methodology. IPA differs from standard thematic analysis in that it is tied to phenomenological epistemology and has a far more structured method of application (Braun & Clarke, 2006).

Discourse analysis arose in the 1960's and is based on textual data. This type of methodology employs an absolute realist epistemology and is concerned with generalisability. Discourse analysis has been further deconstructed into discursive psychology and Foucauldian discourse analysis, each stemming from differing philosophical underpinnings (Wittgenstein and Foucault respectively). Discursive psychology focuses on how people use words and language to do certain things and centres around the action of words or discourse practices (Langdridge, 2004a). Foucauldian discourse analysis focuses upon the power elements of language and how words can be used to construct the social world (discourse resources). Foucault believed that knowledge could be transmitted through discourse and hold power over societies' conduct (Langdridge, 2004a). The sampling for discourse analysis tends to follow any number of text based data and thus no interviews are required. The analysis of the data is completed after collection and can be quite detailed. Analysis of the textual data requires linguistic repertoire and notes the subject's position within a discourse (Scottish IPA Group, February 29th, 2008).

The debate between IPA and grounded theory however is a little more heated. A brief description of grounded theory and its ontological roots can shed light on the differences between the two methodologies. Emerging in the 1960's, grounded theory was rooted in a social science ontological perspective that was focused on social processes, the nomothetic, objective and generalisable. The main issue to recognise is the fact that grounded theory stems from a sociological school of thought and is used in, and applied to, the social sciences. Typically, grounded theory uses theoretical sampling methods to recruit large sample sizes within a heterogeneous and stratified sample. The interview style tends to be structured or semi-structured, focusing on the researcher's interests. Grounded theory follows simultaneous data collection and analysis. The interviews tend not to be recorded, however, if so, they are transcribed on a very general level. The analysis is rigorous, detailed and prescriptive in nature. Grounded theorists employ the individual as a unit of data collection but social processes as a unit of analysis. The analysis is focused on experience and social processes, upon reflexivity and description of the data and strives to be purely inductive (bottom up). The degree of analysis is exhaustive, with constant comparison, and all analysis is finite once the themes have reached saturation (Scottish IPA Group, personal communication, February 29th, 2008; Charmaz, 2003; Langdridge, 2004).

In comparison, IPA typically uses small and even case study sampling sizes to focus on the idiographic nature of experience. IPA uses purposeful, homogenous, self-selected (expert) samples in order to understand a specific group of people at an idiographic level. Using a homogeneous subset does not 'confound' results (which implies a positivist, quantitative ontology), merely it gives insight into a specific group of people and raises questions for further research. The results of IPA studies therefore allow us to say something about certain groups in detail rather than all groups in general. Interviews can be unstructured or semi-structured focusing on the first person accounts of specific thoughts, feelings and experiences. They tend to be lengthy and in-depth interviews usually lasting at least one hour. Debate surrounding the frequency of interviewing has been raised however, and at present they can be either a one-off, repeated, diary, blog or autobiographic. Data analyses can be either simultaneous or delayed, with the majority using the latter. The transcription requires a detailed verbatim account with some attention to non-verbal material (pauses, laughs, crying, or other nuances that would have been picked up on during the interview). This is rigorous, not prescriptive and tailored to the individual analyst. IPA analysts embrace and maintain the individual as a coherent mode of data collection and a unit of analysis. Experience, agency, thought/intentionality and emotions are all considered. The analysis is inductive (bottom up) however it acknowledges deductive processes at work throughout the research process (the joint activity of IPA). Ultimately, there is a balance between the unique and the group, but always with a focus on the individual. Finally, this type of analysis is infinite, meaning there is not a final, closed list of results (Scottish IPA Group, personal communication, February 29th, 2008).

Willig (2001) argues that IPA and grounded theory (subjectivist form) are quite similar whereas Landridge (2004d) believes that IPA is more similar to thematic analysis. Although comparable, grounded theory was created to research and describe social processes in the social sciences, whereas IPA was specifically created to research and describe individual psychological experiences and phenomena in psychological sciences. Also, Willig (2001) argues that due to the divergence of grounded theory and the debate surrounding the "correct" version to use (full vs. abbreviated, subjectivist vs. objectivist, Straussian vs. Glasserian, realist vs. social constructionist), IPA can offer researchers freedom to engage in an uncomplicated and developing methodology.

3.2 Considerations of phenomenology and IPA

Langdridge (2004d) proposes three main criticism of phenomenological research: "over simplest view of language, the emphasis on description and the problem of bracketing" (pp. 289-290). The first issue deals with the fact that the phenomenological researcher simply takes what is said as the reality of the participant's experience. The second criticism is regarding the descriptive nature of phenomenology and is where IPA and the traditional Duquesne school of phenomenology divide, as Smith believed the Duquesne school to be far too descriptive. To further support IPA, the introduction of interpretation as part of phenomenological analysis eliminates the limitations of the descriptive nature of traditional phenomenological research (Smith & Osborn, 2003). Finally, Langdridge's third criticism of phenomenology is the issue of bracketing which IPA again tackles by acknowledging the fact that we, as researchers, are attempting to bracket even though we recognise that this is impossible.

Specific criticisms of IPA have centred upon the "conceptual and practical limitations: the role of language, the suitability of accounts and explanation versus description and the fact that is IPA really phenomenological" (Willig, 2001, p. 63). First of all, Willig argues, like Langdridge, that the over focusing on language can be dangerous and simply represent how a person describes an experience at a certain time and place rather than telling us about the experience at all. Willig (2001) also doubts the suitability of the participants' accounts, which ultimately puts into question how well people are able to articulate their thoughts, feelings and meaning surrounding a lived experience.

A common critique of IPA, from more quantitative researchers, is the fact that IPA is not aimed at explaining the phenomenon, more so reporting the individual experiences of it. IPA is focused on perceptions and how a person makes sense of their own experience, therefore overlooking 'why' they are experienced and why differences may occur (Willig, 2001).

Furthermore, Willig and Langdridge both argue that there is question as to whether or not IPA is truly phenomenological. This stems from the fact that IPA is focused on cognition and directly contradicts phenomenology's basis of intentionality, "Genuinely phenomenological research should not study people's cognitions; instead it should aim to understand the lived experience" (Langdridge, 2004d, p. 65)

3.2.1 Issues with retrospective accounts

As IPA is mostly retrospective, Giorgi and Giorgi (2003) offer insightful debate into the benefits and negatives of using solely self-reported retrospective accounts. The potential issues with retrospective accounts are the possibility of error or deceit. First of all, they argue that error (memory or perception) in recounting the retrospective phenomena is not as big an issue as critics believe due to the fact that what the phenomenologist is trying to understand is a subjective, not objective account of the individual's experience. Therefore, how the person remembers the phenomena, correctly or incorrectly to the objective researcher is not of importance. What is important is how the individual remembers and experienced that phenomenon. Technically, there can be no "wrong" answer.

Deceit, however, is more dangerous to the research as the person is only engaging for a brief amount of time and might not give detailed accounts of their experience (Giorgi & Giorgi, 2003). To combat this, longer and more detailed interviews can detect and weed out participants whose interview appears to be scripted or controlled. In addition, Giorgi and Giorgi (2003) argue that is fairly hard to 'deceive' an interviewer if the interviewee is not entirely sure about what they are there to speak about, "no specific hypothesis or theory is being advanced, so it is difficult to know why deceit would motivate the participant unless to cover up personal failures or embarrassments" (p.47). Finally, deception is an issue that hovers over both qualitative and quantitative analysis. The possibility of 'cheating' is just as likely on a questionnaire based research paradigm and detection of this is far more difficult.

3.2.2 Rationale for using IPA

Although the assessment tools have been found reliable, the area of PTG is still in need of further rich and detailed explanation, attainable only through qualitative methods (Calhoun & Tedeschi, 2008; Cohen, Hettler et al., 1998). Unstructured interviews, as conducted in IPA, give the respondents the freedom to express elements of growth that are not restricted to or found on the itemised questionnaire. This allows for the detection of unusual and unique elements of the phenomenon to be acknowledged instead of being ignored (Cohen, Cimbolic, Armeli, & Hettler, 1998). In addition, IPA allows insight into the process and not just the outcomes of PTG, as shown in quantitative assessments (Cordova, 2008). Due to the fact that researchers are proposing more idiographic and rich research on understanding the experience, process and meaning making of PTG, the use of IPA as a methodological paradigm was a perfect marriage between what needs to be explored and what can be attained, "also useful would be intensive case studies or studies of a smaller cohort of individuals designed to understand the depth and scope of responses" (O'Leary et al., 1998, pp. 146-147). IPA has not yet been used to understand the phenomenon of PTG and has the unique opportunity to go beyond quantification of existential phenomena and delve into new areas of research with no pre-conceived hypotheses, thus enabling new and undiscovered elements of the phenomenon to be identified (Mayers et al., 2005).

3.3 Quality within qualitative research

Finally, before outlining the actual methods used within this thesis, a quick review of quality within qualitative research is needed to recognise the proposed guidelines of this epistemological paradigm. Attempts to assess quality within the study will be discussed throughout the thesis as well as in the general discussion.

Elliot, Fischer, and Rennie (1999) define the aim of qualitative research as to understand and represent the experiences and actions of people as they encounter, engage and live through situations. While quantitative research focuses on testing causal relationships in huge data sets, the in-depth research undertaken by qualitative researchers give more insightful and idiographic recounts of experiences and phenomena (Yardley, 2000). Due to the vast number of emerging qualitative research within the health and social sectors of psychology, there has been a cry for some sort of guidelines for publishers and readers as to what constitutes proper qualitative methodology (Dixon-Woods et al., 2007; Elliott et al., 1999). Yardley (2000) posits that there are four main components to good qualitative research. First of all, research should have sensitivity to context, meaning it must "acknowledge and represent good solid understandings in theory; demonstrate knowledge of the relevant literature; recognise the socio-cultural setting; the participant's perspectives and all ethical issues" (p. 219). Secondly, qualitative research must show commitment to rigour, which requires "in-depth engagement with the topic, methodological competence/skill; thorough data collection and depth/breadth of the analysis". Thirdly the research must have "clarity and power of the description and argument; show transparent methods and data presentational fit between their method and show reflexivity". Finally, the fourth characteristic of good qualitative research, according to Yardley (2000) is that it must have "impact and importance on theory, social cultural aspects and practicality for community policy makers and health workers" (p.219). However, this last recommendation appears to only apply to good qualitative research within the health sector.

Additionally, Elliot et al. (1999) propose seven issues for qualitative research and publication: 1) Owning ones perspective requires the researcher to acknowledge their own values and beliefs and what they as a person bring to the analysis; 2) situating the sample requires a detailed review of who the participants are in order to help the readers understand who they are reading about and how that might impact on the phenomenon; 3) grounded in examples simply means providing examples from the data (quotes) that clearly illustrate the theme; 4) providing credibility checks requires the researcher to check with the participant to make sure they are getting an accurate account of the interview data; 5) coherence refers to demonstrating coherence in the data with the provision of a model or map; 6) accomplishing general versus specific research tasks and resonating with the researcher refers to how the researcher "is able to bring the participant's experience to 'life' and go beyond description to interpret deeper and difficult to understand meanings" (p. 220).

Counter arguments to Elliot's (1999) and Yardley's (2000) 'check list' stem from its potential to induce 'methodolatry' (subsequently discussed) and the unstableness of the credibility check. For example, some participants might feel at ease or open on the day of the interview, however, if faced with member checking they might be shocked to read what they have said and change their mind so as to not paint themselves in a bad light. This does not help the researcher discover their true experience if they have had the time to edit and socially bias their experience. In addition, within IPA, the data are a direct result of the participant at that point in time and the interviewer's interaction with them. Therefore, the themes that emerge will be based on the dynamic between that encounter and thus be interpreted as such. Independent auditing negates the entire purpose of IPA (interaction between interviewer and interviewee) as it requires an outsider to review simple text, without any idea of the participant or context, and interpret the experience in their own way. Therefore, the rationale for using independent auditing within this thesis was for "completeness not convergence" (Madill et al., 2000, p. 10) and to enhance the overall analysis.

3.3.1 Against 'methodolatry'

Within qualitative research, there is a risk of inciting 'methodolatry' which is defined as causing the researcher to overlook the content and meaning of their data based on the rigidity of their prescribed methodology. This can set the research and method backwards as it stunts the production of quality research; "preoccupation with the purity of method frequently deteriorate to a kind of method fetishism or methodolatry" (Danzinger, 1990 as cited in Chamberlain, 2000, p. 286). Hard, steadfast rules for method procedures can therefore reduce the quality of qualitative research and limit the researcher in their analysis.

3.4 Owning ones perspective

It is at the discretion of the researcher as to whether or not to divulge personal information regarding their connection with the topic area or the participants. It is of benefit to the researcher to clearly and honestly state where they are coming from as this will inevitably influence their analysis of the text. By doing so, it allows the reader to keep an open mind when reading the interpretive text as they are able to judge for themselves whether or not the researcher has been influenced by their background. Elliot et al. (1999) posit this as part of their check list for good qualitative research.

Therefore I must note that although, as of yet, I have had no direct connection to the trauma of cancer experience, I have experienced a traumatic event in my past that may have influenced my desire to research this area. However, I argue that it would have impacted little on my interview technique or analysis as the women in this study were there to talk specifically about growth. Therefore I contend that I did not search for the phenomenon of PTG as it was already the topic of discussion. In addition, this traumatic event occurred over 14 years ago and has no bearing on my present life for the past 10 years.

3.5 Method

3.5.1 Question formulation

Following from Heidegger's (1962) stance on the use of theoretical frameworks within question formulation, the Researcher chose to formulate a question based on their previous knowledge of exercise and existential psychology. Specifically, the Researcher was interested in not only the experience of PTG, but also if exercise within group settings, following trauma, can play a role in the attainment of growth. Using this theoretical framework, participants were chosen specifically to suit the study question (Lopez & Willis, 2004). Thus, not only had they experienced PTG, but they had also participated in an exercise intervention immediately following the traumatic event.

At this point in time, the Researcher did not have any preconceived hypothesis regarding the potential of exercise to influence PTG, however, desired to explore the experience of this unique subset. If exercise did have any role in the experience of growth following trauma, then this would be the perfect sample to study. Thus, the question was first and foremost, "What does your experience of finding positive benefits mean to you?" If exercise and activity was indeed a part of their experience, then it would naturally emerge. This was an area of PTG research that had not yet been tapped into and could therefore contribute to future health policy. Question formulation was reviewed with an IPA expert and deemed appropriate within all philosophical and theoretical positioning.

3.5.2 Participants and recruitment procedure

The participants were ten female breast cancer survivors, from the West of Scotland, part of a Cancer Research UK (CRUK) funded study on the benefits of physical activity as a rehabilitation strategy for women receiving treatment for breast cancer (Mutrie et al., 2007). This was the first and largest randomised controlled trial exercise intervention completed within the UK. 1144 women were approached during their chemotherapy/radiotherapy appointments by recruiters over a one year period (January 2004-2005). From the 1144, 313 women with stage 0-III breast cancer agreed to attend a pre-screening meeting with the researchers. Four women did not meet the inclusion criteria (stage 0-III); 110 women were then excluded based on the 'concurrent unstable cardiac, hypertensive, or respiratory disease; cognitive dysfunction; and regular exercise (Mutrie at al., 2007, p. 2); 66 declined to participate and 40 dropped out for 'other reasons' (p. 3).

The remaining 203 women were on average, 6 months post-diagnosis, ranged from 29-76 years of age and came from a variety of occupational backgrounds. They were randomly split into two groups (intervention group and control) and measured on various outcome measures at three time points (baseline, 12 weeks and six months). The measures included 'general quality of life (QOL) (Functional assessment of cancer therapy-General); Becks depression Inventory (BDI), the positive and negative affect scale (PANAS), body mass index (BMI), seven day recall of physical activity (Scottish Physical Activity Questionnaire), performance in a 12 minute walk test and score on a mobility test' (p.2). The programme provided specially designed aerobic classes, 45 minutes in length, which ran throughout the day and at evenings at eight separate sites across Glasgow.

Following Cancer research UK (CRUK) ethical approval, participants for this thesis were recruited using purposeful sampling from the Mutrie et al. (2007) study. An information sheet (appendix I) was mailed to each participant in the exercise group (n=100), via the original researchers, close to the time of the one year follow-up. The information sheet described PTG and positive benefits as defined by Tedeschi and Calhoun's (2006) examples of growth. Women who believed they had experienced PTG phenomenon were invited to describe their experiences in an interview. Once the number of participants reached ten, the recruitment was stopped due to recommendations for smaller sample sizes within IPA (n= 6-10) (Smith & Eatough, 2006). It is vital to make it clear that this was a study of women with early stage breast cancer who perceived that they experienced positive life changes since their diagnosis, had taken part in a group physical activity intervention and knew that the Researcher was interested in the potential links between physical activity and positive life changes.

Furthermore, in compliance of Elliot et al. (1999) guidelines for good qualitative research, a section on 'situating the sample' has been included (appendix II) in order to allow the reader insight into who these women were and how their background might have influenced the results. For confidentiality purposes, the women's names have all been changed.

3.5.3 Descriptive statistics

The original Mutrie et al. (2007) study used several main outcomes measures including the Functional Assessment of Cancer Therapy (FACT) questionnaire, Beck depression inventory (BDI), positive and negative affect scale (PANAS), body mass index (BMI), seven day recall of physical activity, 12 minute walk test and assessment of shoulder mobility (Mutrie et al., 2007). Two variables that were found to have a significant association were the 12 minute walk test and shoulder mobility range while the BDI demonstrated non-significant trends in favour of the intervention (0.083 and 0.064 effect estimates at 12 and 24 weeks). The Researcher decided to focus upon these three variables as comparisons for several reasons. First of all, the 12- minute walk test was included as it was deemed important to determine whether or not the women were more physically competent and active at baseline and whether or not they became so as a result of the intervention. Excelling beyond their peers may have given the women a heightened confidence in their physical selves and contributed to the topics discussed within the interview. The rationale for shoulder mobility was the same. Finally, the Researcher was interested in not only their physical baseline statistic and achievements, but the women's psychological scores pre and post-intervention. The BDI scores were deemed appropriate to use, rather than the PANAS, as it is a reliable tool and showed interesting trends. In addition, the Researcher was only able to obtain the PANAS raw data scores for the 200 participants, and due to time constraints, preferred to focus on the already equated BDI scores. The Researcher extracted the ten women's baseline, post-intervention and nine month scores for these three main outcome variables and transformed them into percentile scores (Table 5). Ultimately, the range of scores shown by this group of ten did not show any trends at baseline and post-intervention. This indicated that in terms of fitness levels, depression and shoulder mobility they were not a unique sub-population within the Mutrie et al. (2007) study.

Table 5. Percentile scores for the ten women, part of a sample of 100 women, in the intervention group on three of the seven representative measures.

Part.#	12 min. Walk Test		Shoulder mobility range		Beck's Depression Inventory	
	Baseline	3 months	Baseline	3 months	Baseline	9 months
33	69.15	66.01	52.21	50.26	87.81	45.18
62	95.02	84.4	95.56	94.7	n/a	37.34
133	97.5	88.34	23.15	38.09	49.23	n/a
136	47.26	66.99	71.42	88.88	50.76	40.36
167	70.14	95.14	45.81	57.67	91.37	90.9
197	50.24	74.75	52.21	66.13	22.87	37.34
210	82.58	n/a	78.32	78.3	49.23	67.46
234	91.04	n/a	23.15	66.13	13.7	29.15
235	8.95	n/a	11.82	26.4	63.95	31.9
281	62.18	n/a	66	83.59	31.97	40.36

The Researcher also obtained the women's descriptive demographic variables (Table 6) in order to situate the sample further. The women's ages ranged by 20 years; they were all married; the majority had only a high school education and self-reported themselves as regularly active up to six months before their diagnosis. The researchers determined regular participation in physical activity as: 1) Exercise e.g.

weight training, aerobics for 2-3 times per week; hillwalking for at least 2 hours/ once per week; OR 2) Sport e.g. golf, hockey, football, netball, athletics, swimming for 2 – 3 times per week; OR 3) General e.g. walking, cutting the grass, vacuuming, washing the car accumulating to at least 30 minutes/4 -5 times per week. The main treatment type and plan was a lumpectomy with a combination of radiotherapy and chemotherapy. A reflection upon the samples characteristics and how they may have influenced the facilitation of growth is discussed in Chapter Eight.

Table 6. Characteristics of participants

Age group	**N**
43-53	5
54-63	5
Marital status	
Married	10
Education	
A level	6
Degree	2
Professional qualification	1
Missing data	1
Treatment type	
Mastectomy	2
Lumpectomy	8
Treatment plan	
Chemotherapy	1
Radiotherapy	1
Combination	8
Activity levels prior to diagnosis	
Some activity but not enough to meet description of regular activity given above	1
Regularly active but only began 6 months prior to diagnosis	2
Regularly active and was so for longer than 6 months prior to diagnosis	7

3.6 Practice and preparation

Prior to the commencement of interviewing, the Researcher partook in practice interview technique sessions with two experts in IPA. A pilot or practice interview was then undertaken, transcribed verbatim and reviewed by an expert interpretative phenomenological analyst, Dr. Reid, in order to enhance interviewing technique. Dr. Reid suggested areas of improvement such as allowing the participant to speak as much as possible, embracing silences, elimination of leading questions and minimizing missed opportunities.

In addition, it emerged that a recent negative experience influenced the practice interviewee's ability to clearly explain her experience of PTG from cancer. Therefore, a crucial question that could impact on the quality of the data collected was added to the start of the interview schedule: 'Is there anything that is happening in your life that might affect how you are feeling today?' This final question was asked to every participant and proved to be a valuable asset to the quality of the data as it allowed people to acknowledge their current state of existence and whether or not they were able to clearly discuss the phenomenon of PTG from cancer.

3.7 Interview procedure

To commence, each participant was asked to re-read the information sheet, read and sign two consent forms and fill out a brief information sheet for future contact purposes (appendix I). The participants were informed that their tapes would be destroyed two years post-PhD completion and that the transcripts would be seen by other colleagues for validity checking, but names would remain confidential.

Secondly, it was made clear to the participant that this was not a therapy session, but that if they felt they needed to discuss anything that might have come up during the interview, contact details of therapists would be provided. This clarification was done on recommendation from Professor Paul Flowers due to the sensitive nature of the interview topic. The women were then told that the interview length was dependant on them and that there were no right or wrong answers as the interest of the study was in their experiences.

The participants were then asked to think about whether or not there was anything happening in their life that might affect how they were feeling today and influence the interview. Once it was established that they were able to conduct the interview, they were asked one key question: "What does finding positive benefits from your trauma mean to you?" The term 'positive benefits' was used interchangeably with PTG due to potential confusion and negative connotations between the psychological terminology posttraumatic 'growth' and the medical terminology of 'growth' meaning tumour. The interview was then conducted in an unstructured, open ended fashion. All subsequent questions followed from the participant's comments. During periods in which there were condensed meanings, narratives and understandings, the Researcher would reflect and restate the topics and then ask them to focus on and explain one or all of those areas that were salient to them. This entailed using 'minimal probes' such as 'can you tell me more about...?', 'how did that make you feel?', 'can you explain further?' to fully understand the participant's comments.

When sensitive topics emerged (e.g. mortality) a method designed to check for consent to continue with the question was used. For example "You just said (sensitive topic) ... are you all right and can you tell me more about that?" In addition, if the participant looked for questions/leading they were reminded that this was about them and their experiences.

Although it was decided to conduct the interviews based on one main question, a brief list of topic areas was kept (appendix III) that could be accessed if the interview became stilted. This has been debated among IPA researchers, however, it was felt that it may be necessary in instances where the interview was not 'on track'. Smith and Osborn (2003) provide a detailed description on how to build an interview schedule, however the Researcher preferred to keep the interview as unstructured as possible and kept the list to a bare minimum with topic areas (not entire questions) on which to follow, 'the investigator has an idea of the area of interest and some questions to pursue" (p.57). Issues, through the Researcher's own knowledge of the area, that were assumed to emerge were: closer relationships (family and friends), change in values or philosophy; spending more time with loved ones, re-prioritising, cancer, exercise intervention, social group, optimism, psychological hardiness and resilience.

A reflective diary was employed by the Researcher throughout. This qualitative tool is used after the session to record initial thoughts on the session (e.g. how it went, length, depth and quality), interviewee (e.g. what she wore, hair colour, personality and humour), interesting quotes and the interaction between the participant and Researcher (e.g. report, personality clashes). This tool enhances the quality of the study and the data because it improves mental recreation of the interview long after it has taken place.

3.7.1 Justifying open-ended interview

Justification of employing one question with a list of topic areas stems from the fact that there is no hard and fast rule to carry out a similar order of questions for each individual, hence becoming a structured interview (Smith, 2003). Instead, the interview takes direction from the participant, being participant led, and therefore each participant's interview may vary considerably depending on what they would like to talk about and what was most salient to their experience.

Finally, the participants were asked if they had any feedback on the interview and how it went. The participants were then debriefed. The interviews were taped using a SONY audiocassette recording with a small microphone. It was not believed that the presence of the microphone was a hindrance on the quality of the data collected. The length of the interviews ranged from 40 minutes to 2 hours.

3.8 Analysis

3.8.1 Influence of researcher in analysis

Stemming from its name, the researcher has an important role in research employing IPA. Phenomenology, as well as other qualitative methodologies, attempts to reach epoch, or bracketing (discussed previously). Therefore, the researcher must strive to see the data and description of the experience as it is from the other's perspective, not their own. Moving from positivistic objective ontology, the researcher clearly acknowledges the fact that they can never be 100% objective and thus clearly and systematically engage with the text bringing their own reflexive account to the results. The themes, insights and eventual results of the analysis are a direct result of the researcher's interpretation of the participant's experience through intense engagement with the text (Willig, 2001).

3.8.2 Individual versus all

It is entirely up to the researcher's preference as to whether or not to use the original themes from the first transcript as a starting point for analysis or to start over completely with no guidelines (Smith & Osborn, 2003). It was decided to engage with each individual transcript one by one rather than on a group based review. This is ideal for multiple participant studies (Smith, 2003) as it keeps the idiographic nature of the ontology. For this analysis, the Researcher decided to approach each person as a separate and unique individual and record their experience as it was told by them, and not influenced by an ordered data set from the participant before them.

3.8.3 Review

To familiarise the Researcher with the text, the individual transcripts were read through three times prior to commencing exploratory coding. This was to ensure a deeper connection and engagement with the individual and their text (Smith, 2003). The tapes were also re-played over the course of the analysis and write-up in order to ensure a correct representation of the women's experience and the reporting of it.

3.9.1 Exploratory coding

Exploratory coding is the most time consuming and intricate component of the analytic process. The process entails a word-for-word, line-by-line review recording anything of interest in the right hand margin of the transcript print-out. These comments and observations focused on three main areas of interpretation, as suggested by Flowers (2006). First of all, the Researcher recorded and noted the description and content of the account by highlighting the use of words, phrases and terms at face value. An example of this is:

Transcript (Claire)	Exploratory Coding
But I found, when your hair started to come back in, it was wonderful. That was, that was like springtime!	Springtime: happy, joyous

The second part of exploratory coding focuses on the non-verbal account of the experience (pauses, laughter, hesitation, etc.) that is 'silently' between the language. Following this, the Researcher reflected upon how their use of language and meaning were connected. An example of this is:

Transcript (Claire)	Exploratory Coding
But I found, when your hair started to come back in, it was wonderful. That was, that was like springtime!	Rejuvenation-focus on the positive things Springtime: happy, joyous

Finally, the potentially deepest component of exploratory coding was the conceptual and interrogative coding. This part was the most detailed and takes the analysis beyond the descriptive as the Researcher starts to question the underlying meaning behind phrases and accounts of experiences and starts the interpretive engagement with the text, person and overall process (Flowers, 2006). An example of this is:

Transcript (Claire)	Exploratory Coding
But I found, when your hair started to come back in, it was wonderful. That was, that was like springtime! That was like, you know, it was like seeing a plant starting to grow. You feel as if, 'oh well that's... you know, it must be getting better, something's coming in, it, it' That was great! And then just never look back from that, you know?	Rejuvenation-focus on the positive things Springtime: happy joyous, and suffering for the ultimate goal-chemo's for the good. Plant-is she a plant that was dormant and now growing? Spiritual re-birth as a new woman. -Sign of health, over the illness and becoming whole again-hair becomes a sign of health not sickness -Transition

3.9.2 Emergent themes[5]

Once the line-by-line interpretive review of the individual was complete, the next stage was to compile a list of emergent themes. This involved reviewing the themes for the participant throughout the transcript and condensing them into coherent theme titles that retained the interpretive essence of the original text. This stage is also where the exploratory coding is transposed into more psychological terminology and higher levels of abstraction (Smith & Osborn, 2003). The difficulty with this phase of the analysis is locating salient examples of themes that will have enough 'theoretical connections' within the individual transcript and across the data set while still retaining a clear connection with the original text. Thus, the entire transcript is reviewed and all salient text is transformed into emergent themes. Within this, some of the text will always be richer than other sections and is simply a reflection of what was important to their experience.

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[5] Initially, exploratory data was then analysed for emergent themes using Nvivo. However, it became evident after two transcripts that the essence of the person's experience was becoming lost in a 'vacuum' of codes. Thus, the researcher decided to return to hand analyses.

Due to the amount of data generated in the exploratory coding, it would be impossible to generate emergent themes for each section, therefore this is where the Researcher's interpretive element of the analysis comes in again. The following is an example of the process of exploratory coding to emergent theme of 'cocoon to butterfly' and the eventual recurrent theme of 'reconnection with the body':

Emergent themes	Transcript (Claire)	Exploratory Coding
rebirth cocoon to butterfly	But I found, when your hair started to come back in, it was wonderful. That was, that was like springtime! That was like, you know, it was like seeing a plant starting to grow. You feel as if, 'oh well that's.. you know, it must be getting better, something's coming in, it, it' That was great! And then just never look back from that, you know?	Rejuvenation-focus on the positive things Springtime: happy joyous, and suffering for the ultimate goal-chemo's for the good. Plant-is she a plant that was dormant and now growing? Spiritual re-birth as a new woman. -Sign of health, over the illness and becoming whole again-hair becomes a sign of health not sickness -Transition

Once the emergent themes were identified, the Researcher compiled a list of the themes for the individual and looked for connections between them. This is where the Researcher attempts to analyse, make sense of, and cluster the themes into theoretical orders. This is also where the Researcher began to see that certain themes were more important and hierarchal to the individual, and that other themes stemmed from them. Therefore a preliminary list was completed for each individual transcript as well as a visual model to document and make better sense of the entirety of the experience (see Chapter Four for finalised maps of the experience of PTG for each individual).

In addition, none of the themes were omitted at this stage due to the importance of keeping all themes until the final group analysis so as to not lose any data (Langdridge, 2004d). This process allows for the continual elimination of certain themes that do not fit with the emerging experience or those that do not give sufficient amounts of rich data with which to add to the picture of the experience (Smith & Osborn, 2003).

3.9.3 Continuing the analysis

As previously detailed, the continuation of the analysis involved reviewing each individual transcript as a sort of 'case study'. Although the women did repeat themes, the Researcher was also able to recognise unique and individual themes to each individual person when they were deemed salient to them. The differences in the experience are just as important as the similarities (Smith & Osborn, 2003).

Due to the fact that a basic list was not used throughout the analysis to match and identify new themes, when a new and salient theme would arise, later on in the analysis, the other transcripts were re-analysed for this theme in order to connect the participants accounts (Smith & Osborn, 2003). In addition, all of the themes were again left for final group analysis and the creation of a final super ordinate list.

3.9.4 Determining the final super ordinate list

Once the final transcript had been analysed, themes listed and a map for that individual person created (see Chapter Four), the themes were entered into Nvivo for storage and organisation in order to create a super ordinate themes list. This is the most interpretive component to the analysis, requiring the analyst to prioritise which themes are the most important to focus on and then condense them (Smith & Osborn, 2003). This process is done not on the basis of statistical prevalence, but other important issues, "the richness of the particular passages that highlight the themes and how the themes helps illuminate other aspects of the account" (Smith & Osborn, 2003, p. 76).

Braun and Clarke (2006) argue that a high number of instances of a theme across the data set does not necessarily mean that it is more important. In fact they argue that what quantitative researchers might consider a theme (based on prevalence and instances) is not necessarily what interpretative or qualitative researchers would regard as a theme, "it is not the case that if it was present in 50% of one's data items, it would be a theme, but if it was present in only 47% it would not be a theme" (p. 82). In addition to this, a theme can be created even if it is given little attention to over the data set or even found in one participant, just one or two times. Thus, the themes presented within this analysis were not necessarily based on quantifiable instances, "but rather whether it captured something important in relation to the overall research question" (p. 82). Braun and Clarke (2006) argue that the debate surrounding how to determine 'prevalence' differs from one qualitative methodology to another and even go as far as to question the need to report and the importance of this issue at all.

3.9.5 How the researcher determined 'prevalence'

Prevalence of a recurrent theme was determined on the richness of the theme within each participant's account, as well as the occurrence across the set (Table 7). As the analysis continued, themes were eventually translated into sub-themes (see Chapter Four) or merged into higher order themes due to lack of prevalence and the enormity of the entire data set. Braun and Clarke (2006) suggest that this is when the researcher will review and as they try and write-up and make sense of the themes they realise that themes are either "not really themes (e.g. if there are not enough data to support them, or the data are too diverse), while others might collapse into each other (e.g. two apparently separate themes might from one theme)" (p.91). Overall, four of the main themes were present in all ten of the participants. Philosophy change and self-identity had nine participants, existential re-evaluation had eight participants. Each theme contained sub-themes which were variations and/or previous themes that were clustered into smaller sub-themes. Chapter Four focuses, in detail, upon determining prevalence of themes and sub-themes, as well as the Researcher's justification for focussing upon the three analysed themes reported within this thesis: Narrative from growth-to-growth, exercise class and the body. Chapter Four will also review the idiographic nature of growth according to each individual using visual maps in order to situate the individual's and group's experience more clearly.

Table 7. Prevalence of themes within master theme list

Theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
Exercise class	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Existential re-evaluation	✓	✓	✓	✓	✓	✓	✓		✓	
Narrative of growth to growth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Philosophy change	✓	✓	✓	✓		✓	✓	✓	✓	✓
Self identity	✓	✓	✓		✓	✓	✓	✓	✓	✓
Society	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
The body	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

3.9.6 Writing up

It is understood among interpretive phenomenological analysts that the writing-up stage is indeed a continuation of the analysis (Smith & Osborn, 2003) as one is trying to move the themes lists into a coherent and story like account of the experience using the theme table as a guide.

3.9.7 Presentation strategy

Smith and Osborn (2003) suggest that the write up can be done in one of two ways: either presenting a separate results (only themes) and discussion (links to existing literature) or alternatively, the author can decide to link the themes to the literature as they are discussed in one large results and discussion section. In each of the three results chapters, the Researcher decided to use the latter presentation style and discuss the themes and how they link to existing literature within one large section in order to keep the linking clear and concise. This was mainly due to the fact that the reader would find it difficult to recall and see the links between the data and interpretation when the text was not in front of them. This way, there was a clearer connection between the text, the experience and how the results link to contemporary literature. The conclusion section merely ties up the limitations and suggestions for future research.

3.9.8 Validation check

Validity for IPA cannot simply be attained through traditional quantitative or qualitative methods. IPA is founded around the belief that it is impossible to understand fully our participants' world due to the inevitable biases and interpretation of their experience. Ultimately, the validity of this study is entrenched in the examples used to demonstrate interpretations of the experience of PTG (Flowers & Buston, 2001).

Two independent auditors (IA) were enlisted to review the data to ensure its quality. The decision to use IAs, as opposed to inter-rater reliability, was not to determine or authorize one reality, but based on the fact that although "attempting to ensure that the account produced is credible and justified in terms of the data collected, it is not necessarily the only or definitive account which could be produced" (Smith & Osborn, 2003, p. 235).

The first IA was an Eye Movement Desensitization and Reprocessing (EMDR) psychologist whose research includes PTG and phenomenology. The second was a colleague tutored and knowledgeable of the IPA process. Each auditor was sent an independent auditing package (appendix IV) which included instructions, a list of themes and corresponding quotes. They were asked to match the quotes with the themes listed. In addition, they were asked to comment on the appropriateness of the themes tittles and suggest alternative titles/matches if they believed this was warranted.

IA (1) found the exercise quite difficult, yet was reassured as he had the same problems with the independent auditing of his own work. This reiterates the difficulty and influence of the interviewer's individual interpretations versus an outsider's interpretation. IA (1) felt that items 14, 17, 22 and 23 (see appendix IV) consisted of two 'combination' themes. Number 8 was an excellent example of 'Downward Social Comparison' exactly as per Tedeschi and Calhoun (1995, pp. 65-66). IA (1) chose control themes for 11 and 15 due to Foucault's work on power relations specifically due to the inherent gender issues (appendix IV).

IA (2) reported that the process/exercise was very thought provoking and very worthwhile. IA (2) grouped the 30 quotes into only 13 themes (see appendix IV) which proved difficult to decipher upon cross analysis. Six directly matched with the Researcher; three were the 'same thing' however he used longer and more detailed titles, resembling typical emergent theme titles; 4 were unmatched due to the lack of explanation on the original Researcher's part. For example, the Researcher did not explain what the theme 'face-to-face' meant as it was matched with a quote regarding acceptance of death due to coming face-to-face with death. IA (2) titles this 'mortality, acceptance of', however, once this theme title was explained at the post-meeting, IA (2) agreed with the original titles. This ultimately highlights the difficulty with employing independent auditing as some of the theme titles and quotes may not be explicit enough outside the original context and without the interpretation of the primary researcher.

Overall, their insight into the themes highlighted links within the current literature which the Researcher had not originally been aware of (e.g. downward social comparison) and was deemed a worthwhile addition to the study.

3.9.9 Reflexivity of the author

Upon reflection, I feel that I had a significant influence on the interview process and analysis. As a female, I felt that I would have had a far greater connection with participants from the start than a male interviewer. I believe my gender created a more open atmosphere in which to discuss female preoccupation with the body, appearance, breasts and the impact of losing a breast as well delve into sexual practices and lack there of.

I felt that being North American was both helpful and hindering. I feel that I also got a lot more explanation from the women due to the fact that they felt they needed to go deeper in order for me to understand what it was like for them. For example, Helen commented on a British comedian whom I had never heard of. She then went into great detail of his life and, more specifically, his appearance (he was bald). This subsequently triggered a previous fear of hers which surrounded her husband going bald and thereby changing her opinion of him. This led to her reflecting upon the irony that she was now the one who was bald. I'm not sure this previous fear and reflection would have emerged if she had not stopped to reflect and explain. However, during the transcription phase, there was great difficulty transcribing the data due to the Scottish accents and colloquial Scots vocabulary that I was not yet familiar with.

As a Catholic I feel that I was able to understand and identify existential issues regarding religion (the majority were devout Christians) and God better than an atheist or agnostic would have as I am familiar with terminology, practices, rituals and expectations of Christian organisations.

As a former accident survivor, I felt that I had an innate understanding of the shock of trauma and felt that I created an empathetic, but not counselling, atmosphere in which to discuss this. In addition, this was my second major IPA study, therefore I felt that I used my previously gained knowledge about the interview process and technique for analysis to create a more credible study.

The next chapter focuses on the general findings from this thesis, concentrating on four of the main themes that are already identified in saturation within the current PTG literature. By highlighting the futility in analysing these four themes any further, the Researcher will attempt to provide a rationale for centring this thesis upon the remaining three themes. The Researcher will also illustrate the prevalence of sub-themes for each participant, in addition to providing a visual map of the experience of PTG on a collective and idiographic level.

CHAPTER FOUR

GENERAL FINDINGS AND PREVALENCE OF SUB-THEMES

4.1 Introduction

Among the ten women, there was a general consensus in the improvement of their QOL and a heightened appreciation for things that were previously taken for granted. Examples of this come from Claire and Brenda who both believed that their lives had become enhanced, more contented and re-prioritized in addition to discovering "what really matters in life". Isabelle has even gone as far to say that she is "grateful" to her cancer diagnosis for positively changing her life.

> *Claire*
> *"And I think I have a much better lifestyle now! [really?] Ya, definitely. That's, that's definite [...]So, em, ya, it's definitely changed us now[....]you know, just happy with what you've got. Contented with what you've got and very grateful for what you have".*
>
> *Brenda*
> *"And it's...and I feel my life's better! I know it sounds crazy (laughs), but I feel the quality of my life is better because (sniffles) I've prioritized (sniffles) and I know what matters".*
>
> *Isabelle*
> *"It (cancer) made...life very precious...and I stopped taking things for granted...Em...so...I'm grateful in that it has brought all these positive aspects into my life, its made me mentally aware of the positive side of my life."*

Following the identification of exploratory, emergent and recurrent themes, the Researcher recognized similarities to previously reported growth research as well as novel contributions to the discipline area. Due to the fact that IPA, and this thesis is about exploration and theory development, the Researcher decided to focus upon the three themes which included new elements not previously reported in the literature; narrative from growth-to-growth, exercise class and the body (discussed in Chapters Five, Six and Seven respectively), as they were deemed themes with the most potential for theory development. The aim of this chapter is to demonstrate the prevalence of each main and sub-theme as well as briefly review how the four remaining themes fit within the existing literature. Furthermore, this chapter will situate the sample further by employing visual maps of each individual's experience of growth.

4.2 Determining sub-theme prevalence

In general, the sub-themes were considered as group recurring themes if five (half) or more of the women recounted similar experiences. Rationale for inclusion of sub-themes described by four or less sources was at the discretion of the Researcher and these were included on the basis of the richness of data attached to the theme as well as its saliency for the person who described it. For example, in the exercise class theme the sub-theme of 'new relationship with daughter', was only mentioned by Florence, however, this was such a huge positive experience for Florence the Researcher justified retaining this. This demonstrates the Researcher's attempt to retell the group story while also retaining the idiographic nature of the phenomenon. Overall, Florence had a very different view of her experience, which was limited to two main positive outcomes; initiation and introduction of exercise and a new relationship with her daughter. Further justification for the inclusion of one participant sub-themes stems from Husserl's branch of phenomenology which believed in eidetic structures and states that "there are features to any lived experience that are common to all persons who have the experience..." (Lopez & Willis, 2004, p. 728). Thus, elements of Florence's experience would potentially be found within other survivors stories and therefore warrants further reflection. The next section will reflect upon the general findings (Philosophy change, Existential re-evaluation, Society and Self-identity) and how they relate to the current literature. The remaining three will be discussed in detail within Chapter Five, Six and Seven.

4.3 Themes

Once more, the following is a brief review of the four themes that were deemed redundant in the progression of PTG theory development due to the saturation of evidence and research that has already been completed on them. Despite this, the Researcher felt it was necessary to reflect upon these four themes, in brief detail, in order to portray a complete picture of the women's experience of growth.

4.3.1 Philosophy change

Following the experience of cancer, people tend to re-evaluate worries and re-prioritise their life. Original PTG research has frequently highlighted these dramatic philosophy changes (Antoni et al., 2001; Tedeschi & Calhoun, 1995, 2004a, 2004b) and the emergence of this theme was of no surprise (see Table 8). Overall, the women felt that they had gained a new perspective or deeper insight into the meaning of their life via the diagnosis of cancer. For example, Claire details below how her cancer diagnosis shifted her focus from inane problems and worries to real, more important issues which ultimately made a 'huge difference' to her quality of life.

> *Claire*
> *"And...But it gets everything into perspective. It gets everything! Your whole life in perspective [...] And, em, I think it stops you from getting caught up in things that are not important, like, em, just wee problems, like the washing machine doesn't work, or something doesn't work at home. Well, it's not the end of the world! You know? It's not a big deal! [...] Em, just taking things in perspective...very, very much so...ya...Em, and I think it's made a huge difference."*

The diagnosis also acted as a sort of wake up call or a desire to 'carpe diem' (seize the day). Additionally, the women felt that they had previously taken their life for granted and that they had been existing rather than living. This led to reports of enhanced interest in pursuing new goals and achievements, mimicking previously documented PTG findings (Arman et al., 2001; Pakenham, 2007; Salick & Auerbach, 2006; Tedeschi & Calhoun, 1995). For example, Elaine experienced a new-found restlessness to seek out her purpose in life and set herself new goals, including starting up her own business and returning to her artistic roots.

> *Elaine*
> *"I sometimes feel as though there must be something else for me to do here. And, I don't know what that is. Eh, sometimes I get wee notions that I want to, would you believe it, start a wee business of my own [...] Or...eh...things like...eh, I used to be quite artistic and creative, and I've really let that go. And I would like to do something with that again."*

Changes in perspective also included reports of feeling more in control of life as well as the freedom to finally surrender control on elements of life that the women realised were out of their hands. For example, Justine began to fly after years of intense fear of air travel and truly believed that by relinquishing her need to control things around her, she enhanced her overall quality of life.

> *Justine*
> *"I hated flying. I know this might sound really stupid but I actually hated flying, and I wasn't a good flier. Some of the time I'd have to go to the doctor and get diazepam to get me up [...] And since I've had the breast cancer, I would actually go up in a rocket! I mean it doesn't bother me in the slightest! [...] And now, you know, that's changed completely. I think 'why was I worried?' You know? It's all so stupid. Just little thing like that, you know? Em, and I find that's made a difference to my lifestyle as well because we go away on quite a lot of holidays, you know, maybe six, seven, eight times a year so we're flying a lot [...] And that's been quite a positive thing in my life!"*

Gaining and relinquishing control is a common report from survivors within PTG research and perceived as an important component to enhancing life after trauma (Arman & Backman, 2007; Arman & Rehnsfeldt, 2002; Fredette, 1995; Lam & Fielding, 2003).

Some of the women felt that their experience led to an out-pouring of emotions and finally let them express their feelings freely and without embarrassment. Gloria discussed how she became, and has maintained, more demonstrative towards those she loved.

> *Gloria*
> *"I was much more open and demonstrative [...]there isn't a telephone conversation with, with anyone in my family, and that's including my brothers and sisters and maybe even some nieces nephews, yeah nieces and nephews, it always, it's always 'I love you', before, at the end of the telephone conversation. And that came from there [...] and that stayed with me".*

Ultimately, Gloria perceived this to be a huge benefit of her cancer diagnosis. Enhanced emotional expression has been reported within the PTG literature and perceived, by survivors, to be a benefit of their adversity (Manne et al., 2004).

Interestingly, Brenda, Justine and Kirsty felt that their new found priorities and philosophy change influenced the lives of the people around them, leading to vicarious PTG. They reported instances where their cancer scare had actually caused people around them to experience a wake-up call and change their own philosophy, suggesting that PTG is attainable without experiencing the trauma first hand. This phenomenon has been reported by other researchers studying the experience of PTG among carers of cancer (Mehrotra & Sukumar, 2007; Weiss, 2004a; Winterling et al., 2004), HIV (Cadell, 2007) and multiple sclerosis patients (Pakenham, 2005b); therapists (Arnold, Calhoun, Tedeschi, & Cann, 2005; Linley & Joseph, 2007; Linley, Joseph, & Loumidis, 2005) and terrorist attacks (Linley, Joseph, Cooper, Harris, & Meyer, 2003).

The changes in the women's philosophy towards life were perceived to be a positive benefit of the cancer. Due to the vast amount of research already supporting this theme, the Researcher chose not to further analyse philosophy change as it was clear it would not add further to the existing literature.

4.3.2 Existential re-evaluation

In accordance with the existing literature, the shock of diagnosis led to the women experiencing a sense of existential re-evaluation in three ways: mortality, religion and suffering equals life (Table 9). This is understandable as it was each of the women's (except for Gloria) first encounter with coming face-to-face with the prospect of death. The women expressed a re-evaluation of the concept of mortality and believed that they had developed a new acceptance of death. This was quite profound as most of the women had never previously contemplated death, feeling a sense of invincibility and immortality. However, once confronted with cancer, they had to re-evaluate their beliefs in the after-life and achieve some comfort with the idea of their own death. Here, Brenda discussed her elation at the hope of everlasting life with her family as well as how she no longer feared death in the same way as she did before.

> *Brenda*
> *"Oh it makes me feel [confronting and accepting death] oh, wonderful. Absolutely fantastic. Really, really fantastic [why?] Well, just that there is going to be something so good like, having had a wonderful life. You know, because, some people don't get this lucky. I'm married to the man I love, you know, I've got 2 children, I've got my sisters are just, I mean I don't know where I'd be without them...And my friends... But have all that and then knowing at the end of it, I'm going to meet up with them again, it's something! 'Cause I think that, I used to worry about that... I used to think, 'oh god...I'm gonna die and I'm not going to see Jim again or the kids...or I'm never gonna see my mum again...and now, I'm just like... 'ya...I think I will'. You know, I really think I will [...] You know, when someone told me [I had cancer], I thought, oh god that's it, I'll just like, write my will (laughs), but em, no. And as I said to you before, amazingly, I am not afraid at all. I don't want to- I have no intention of going, you know, but (pauses) I don't know... I'm not, I'm not afraid."*

Brenda also used the term sell-by-date to describe her belief in the notion that each and every person has an expiration date, thus releasing her needs to control her own morality. Helen, on the other hand, used biblical passages to demonstrate her belief in a pre-determined sell-by-date.

> *Brenda*
> *"And anyway, I think it's all mapped out (laughs). It's totally mapped out anyway, but it's what you do with that time, isn't it? So even if you think, I mean I'm a great believer in like, ok, you've got a sell by date (laughs), of your soul. I think you have, I think you have [...] But it's just, how you deal with the time, just how you deal with things up to that sell by date."*

> *Helen*
> *"I also firmly believe where it say in Ecclesiastes 'that there's a time to born, and a time to die'. And that is it. You won't go dead before your time, so what's the point in worrying about it."*

The existential re-evaluation of mortality is a common experience of survivors who have come close to death. An evaluation of the extensive research and findings on this connection was given in Chapter Two, section 2.5.3.

Of course, the concept and acceptance of death links directly to the notion of the after-life and is inextricably tied into religious beliefs. The majority of the women were devout, however previously lapsed, Christians. The diagnosis and contemplation of 'what happens next' led to a re-evaluation of their religious beliefs and a return to religious faith. Not only did the women go back to and increase their sense of faith, they also described developing a closer relationship with God. For example, Diane expressed how she felt a presence by her side while she was going through her darkest times and how she had been devoid of this connection prior to the diagnosis.

> *Diane*
> *"Em, I've always, I've always believed in God, but I feel closer to him. Uh huh, hmm. And there's a hymn...which I'm really fond of... 'Walk with me, Oh Lord, through the darkest nights and brightest days.' I felt that God was at my side, I don't know if that make sense. But I felt a spiritual presence there [...] But that was a hymn that I just felt, I felt that God was always looking after me [Interviewer: And that was since your diagnosis?] Uh huh [Interviewer: Did you feel that presence before?] No! (laughs) I was too busy to even think about it! You know, I suppose I always thought it was there, but I felt that I knew He was there when I was ill."*

Justine even recalled a religious experience where, upon entering a church and asking for divine help, she immediately felt a calming sensation which she interprets as God's presence and power.

> *Justine*
> *"There was one particular day, I think I had actually come out of the hospital and I went to mass with my husband, and I was going in the church doors, and all I could think of was 'Oh God please get me through this'. [...] And I thought, please God, please...get me through this. You know, help me to cope with this. And, I just suddenly felt really calm. I mean, up till then, I was churning, I- I was at the stage where I couldn't eat, because I thought, 'I'm going to throw up if I keep eating'. This is just- I was trying to take all this kinda shock horror in. Em... and it was just when I said that, going through the church doors it just, this calmness, just suddenly came on me. And I mean, I've been calm since."*

The return to religious faith led to increased spiritual practices, such as prayer and mass attendance, as well as increased participation within the church communities. The women mentioned a huge belief in the power of prayer and overwhelming emotional and spiritual feelings when being prayed for by the community. Again, this is a well documented PTG outcome following trauma occurrences (Eide, 2006; Fatone et al., 2007).

Lastly, the women felt that this experience has awakened them to the realization that people need to suffer in order to truly live. Thus, by identifying their trauma as necessary for self-actualization they seem to comprehend the trauma as more building upon, and not shattering, the former self. Gloria provided evidence of this ironic reflection of trauma from the sub theme suffering equals life.

> *Gloria*
> *"...I suppose I've come to the conclusion that em, (pauses) that anyone having a nice, pleasant, good thing, always good things happening to them life, hasn't really had a life. They haven't had a life. They haven't lived. [why do you think that?] Because I think, I think...we all need to go through, whatever experiences, whether its physical health problems or it's...um, financial, um...emotional, psychological. I think we need to do that, t-to grow, to develop into the kind of people that... we should, we could be."*

Again, the diagnosis/trauma was perceived by Gloria and most of the women as a gift or a rite of passage into a membership of self-actualized human beings. The women also believed that set backs and adversity over their life span prepared them for bigger traumas. Here, Helen discussed her frustration at those who can't handle the diagnosis at a later age as a result of never experiencing adversity throughout their 'nice life'.

> *Helen*
> *"I sometimes feel that people that they get to a certain age, and they've had a very nice life, thank you very much. And when something happens...instead of, they're not able to take the attitude or position, of 'well thank you... Thank you Lord that I've got to this age without anything happening to me'. But they almost, then complain!"*

This concept of building up personal resilience though intermittent stressful events is akin to Janoff-Bulman's theory of psychological preparedness and is discussed in Chapter One, section 1.2.2.2. Overall, existential re-evaluation is an extremely common theme within PTG, being one of the Transformational Model's (Tedeschi & Calhoun, 2006) 'big five' domain outcomes of growth.

4.3.3 Society

The main theme of Society (Table 10) was created to encompass the multitude of positive and negative influences that society (people, expectations, social conventions) had upon the women's overall experience of growth. As discussed within Chapter One, section 1.3.3, social support and social networks are frequently reported facilitators and inhibitors of the growth process and are included in the main comprehensive models of growth (discussed in Chapter One) (Joseph & Linley, 2005; Tedeschi & Calhoun, 2006). For this reason, further analysis of the theme of Society was deemed unwarranted by the Researcher. The positive influences of society dealt with improved relationships with family members, medical staff, greater friendships (role changes) and increased feelings of self-worth as a result of overwhelming support.

First of all, the women described their families as important components to their experience as well as improved relationships with family (husband, offspring, sisters, brothers, parents, in-laws, etc.) as a result of their trauma. The women also reported that their experience of PTG was influenced by both their positive, and sometimes negative, interactions with the medical staff. The support and kindness shown to them by their doctors and cancer ward nurses was influential to their overall experience. Very few reported negative interactions overall. Interestingly, the women viewed the doctors and nurses as experts on the objective experience of cancer, while they perceived their fellow ward members as experts on the subjective experience. They seemed to derive satisfaction with having both types of experts in their lives.

By and large, the women reported a huge shock at the social support demonstrated by their peers. This led to feelings of enhanced self-worth and confidence that was not present before their diagnosis. Not only was the support abundant at home, but uniquely the women felt that their experience in the ward was quite positive and led to camaraderie and strong social cohesion. Camaraderie among cancer patients is discussed further in Chapter Six. In addition to this, the women repeatedly commented upon the positive influence of the Maggie's Centres, a Scottish based cancer information centre which offers support, socially, emotionally, etc., as well as provide courses for women with cancer.

It also seemed as if acquaintances stepped up to fill the roles of the neglectful friends (discussed below). Role changes were reported on many levels, from some finding that their neighbours had now become friends, or a general acquaintance had changed into a sister-like figure. Gloria felt that she had ironically gone from the role of a teacher/counsellor during traumatic situations, to the student, and this had a profound effect on the initiation of her growth process. Also, the roles of the women's children seemed to change over the course of the diagnosis and recovery process. The women recalled that their children had become more adult-like, perhaps due to the maturing realisation of the prospect of death within the family. Justine recalled that her experience made her more appreciative of her children and now saw them as adults and good people rather than just 'her kids'. This had a profound positive effect on their relationship post-diagnosis.

Finally, Brenda recalled how she was able to use social interactions, through work, as a positive escape. Maintaining connection in a society that did not tie to chemotherapy or cancer gave her an outlet which was deemed crucial to her recovery. On the whole, these positive social interactions and special support had a significant influence on the women and their experience of growth.

Unfortunately, the Society theme also included negative social interactions in the overall experience of growth. These included the dread and difficulty of telling people of their diagnosis, familial tensions with the sick role, awkward and patronising encounters with their social crowd, neglect by old friends and distain for media fear-mongering. For example, Claire recalled a negative occurrence at her husband's tennis club which caused her great discomfort at the hands of insensitive and socially inept peers. While she understood that it was difficult for people to relate to her, she still felt hurt and effected by these negative social interactions.

> *Claire*
> *"But the ones, that em, and it's not their fault, I know that, it's just the way, the perception they have of breast cancer, would tend to come up to you, and you're standing next to them and they (pauses) stoop down to you, and talk down to you and can be very patronizing [...] Em, there was once, towards the end, the worse bit in March last year, we did go to a function. My husband's a squash convener, and tennis club thing, and it was like queues of people coming up to me, and I had this wig on...and I thought I looked alright! you know? But they were all going, you know, 'this and that and you're coping so well, and this is awful'. You know, the way they were talking I felt as if I should be six feet under! It was- it was... I had to, eventually, I think I took half an hour of it, and I couldn't smile any more, I said you know, excuse me, and I just had to leave. Because I was just getting too upset."*

Disappointingly, the majority of the women were at the receiving end of neglect by old friends. This was very hurtful and surprising to them as they found that some of their closest friends abandoned them during their darkest times. This desertion was by either not keeping in touch, reducing phone calls and interactions to complete forsaking of their friends in need.

> *Brenda*
> *"Oh no, well first of all the other thing was like my friends, some friends, who I thought would be there, and that I could of counted on them (pause), you couldn't see them through dust. Some people didn't come near me."*
>
> *Diane*
> *"Others, there was one, one of my friends from university, em, she has stayed away. I don't know, but maybe some people, and possibly other like that in the past, they don't know how, they don't know what to say. They don't know how to handle it. Em, I don't push it with her, but she's kinda kept her distance. I found it very disappointing."*
>
> *Elaine*
> *"The downside of that was some people were a bit funny about it. [what do you mean?] Well (pauses), some people just lost touch...completely."*
>
> *Justine*
> *"I suppose friends as well, I've actually (pauses) you see, you see people's attitude changing...when you've had...cancer you're going through treatment, and people who I thought were really, really good friends (pauses) maybe didn't phone me very often or you know, come and see me."*

Unfortunately, the incidence of neglect by old friends is not uncommon but, although hurtful at the time, survivors eventually perceive it as a blessing as they are able to see who their true friends really are (Tedeschi & Calhoun, 2006).

Only Florence reported the sub-theme of hesitation of continued friendships, however it was retained due to her unique relationship with the women from the exercise class. She perceived them to be a negative reminder of her experience and felt that continued social interaction was counter-productive to her recovery.

> *Florence*
> *"And I've met them...probably only once, twice since it finished, but em, I think, I personally think it's just something you know, I would like to meet them, you know, if I saw them again, fair enough.*

> *But I don't think, you know, I think it's just a reminder [...] it's just a reminder and it's just something that, you know...I'm sure that we may have had other things in common or, you know, but it was more that was the focus and you know, I don't think anyone wants to be reminded of that [...] I think, em, I mean I don't have anything really to do with them..., I don't think I have anything else really to do with them [...] So I think, although with these people, em, I would you know, if they asked me to do something, I would do something for them, but I don't feel as if I could ring them up and you know. I don't think they'd be able to help me... But I think they gave me all the help that I needed at the time."*

Finally, negative social interactions took place in the women contempt for media fear mongering. This specifically dealt with the negative portrayals of cancer patients on television adverts and within the media. For example, Claire recalled the negative impact of an NHS advert on passive smoking and how she saw that this was priming the public for learned helplessness after diagnosis.

> *Claire*
> *"There was an advert recently for em, passive smoking, em, where they were showing a woman, eh, you know, with a bald head and 'this is a nuisance' and I just thought, I know they had to...in fact, I emailed them, em, and they said they had to hit hard to really impress you know, upon people how bad it is, to smoke and how it can affect people. [uh huh] But at the same time, for people who are going through treatment, and have a bald head, they don't want to see that advert. [why?] That's quite upsetting for them, because it looks as if your saying (pauses) it looks as if your saying, if you, em contract cancer, from passive cancer, you may die! [Uh huh] And you don't need that, if you have a bald head. You really don't need that. Because you're not necessarily going to die."*

Society's emphasis on appearance was a strong theme within the experience of growth. Specifically, the women felt that society placed a large emphasis on the importance of appearance. An extreme example of this is illustrated by Brenda as she recounts how, by maintaining the appearance of a full head of hair, she incited insidious jealousy among the other cancer patients on her ward.

> *Brenda*
> *"But, I didn't really lose all my hair and with a hair band I could, although it was really thin and flattened to my head, with a hair band if I put it in, and I could push it forward and it looked...and it was dead funny every time I went up for my chemo, everybody was like, 'so how come you've still got your hair?!'(laughs). I was like,*

> *imagine someone being jealous of you, in a chemo ward! You know (laughs)."*

The importance of appearance was again highlighted in the women's belief that they had to wear a wig in order to make other people feel more comfortable. They felt society expected them to appear a certain way and had to maintain wearing the wig in order to conform to society's ideals. Helen even described being bald as almost like being an animal at a zoo, with society gawking and making assumptions, forcing her to wear her wig.

> *Helen*
> *"It-I-wore- I'll tell why I wore my wig...Kate -it was for other people [...]And...so I would never ever doing anything that outwardly would let-a stranger know that what we were going through as a family- as a husband and wife [...] But it was really, because other people looked at you! And that was the reason I wore the wig. It was to stop people looking at me...because I didn't want that..."*

The connections between society, identity and hair loss are discussed in further detail within Chapter Seven, section 7.4.4. In conclusion, these positive and negative components of Society have been frequently reported upon by previous PTG research and therefore were excluded from further analysis.

4.3.4 Self-identity

Finally, the main theme of self-identity (Table 11) reported upon how the ten women viewed their own sense of identity from the general to specific (female, sister, mum, cancer patient, etc.). Components of this theme are actually discussed throughout the thesis; however specific attention is not paid to the main theme in its entirety due to its saturation within the PTG literature.

Firstly, the women reported a change in identity with regards to what it means to be 'normal'. More specifically, they reported a separation between their cancer selves (sick); their normal selves (healthy) and their put upon identification as a cancer 'victim'. Kirsty reports how she identified her previous life, and self, as 'normal' and as it was devoid of serious illness. The diagnosis, therefore, subtracted her from this category.

> *Kirsty*
> *"Hmmm...(long pause) well, up until I had this, this illness, I never had a day's illness in my life[really?] I never had any*

> *illness in my life, I had a cold and the flu. But I never had a serious illness. So that for me was just like a normal life."*

Claire also equated her identity of being normal with the association of being healthy and participating in mundane daily life versus being sick and in the hospital.

> *Claire*
> *"It [normal], it means, just going for your shopping, doing all the things you did before you had breast cancer. [ok]. It represents normality. Not being in a hospital. Not being, em, sitting with an injection thing in your arm, or stuck to em, you know, all the tubes and all the rest of it. It means being out of hospital and em, not (pauses), just, just not having all the side effects and everything."*

Justine, on the other hand, identified herself as being normal throughout her cancer treatment. Although she recognised she was sick, she identified herself and being normal under the present circumstances. Justine had great difficulty with the labels society tried to classify her with, such as a cancer patient, victim, sufferer, etc. and could not identify with these classifications. By identifying herself as normal, and not a victim, Justine developed a stronger sense of self that appeared to contribute to her process of growth. Justine's comments also link well with the sub-theme of body and identity which is discussed in detail within Chapter Seven.

> *Justine*
> *"Normal is just, getting on- everyday activities. Getting on with your life. Not...I suppose its not being defined by...breast cancer. Not being, you know, that person...you know, it's like, I'm me- I'm not the person who had breast cancer. I mean, I had it...and hopefully it's gone. But I never, ever want to be defined by- by illness. You know, I still want to say well I'm me, still ok. [...]-I- don't like the word cancer patient. Or cancer victim. Victim actually quite annoys me [...] somebody had said something about that and I thought, do I look like a victim!? You know? I don't feel a victim! ...Because, I never actually felt like a victim. Never in my life."*

By overcoming the trauma of diagnosis, the women identified themselves as stronger and more rounded (self-actualised) people. This is a well documented outcome of the growth process and involves survivors feeling enhanced confidence and strength as well as feelings of pride and achievement for overcoming adversity (Curtin et al., 2002; Luoma & Hakamies-Blomqvist, 2004; Milne, Guilfoyle, Gordon, Wallman, & Courneya, 2007). This sense of strength led to the identification of their selves as experts on trauma and recovery, leading the PTG outcome of needing to give back (discussed within Chapter Six, section 6.4.1.2). These ten women felt they could inform, respond to and identify, with greater empathy, to other cancer patients than healthy individuals.

Despite these interesting findings, narrative from growth-to growth (Table 12), exercise class (Table 13) and the body (Table 14) proved additional to the existing literature and was therefore the Researcher's rationale for focusing upon them in greater detail.

Table 8. Prevalence of sub-themes within the philosophy change theme

Sub-theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
New perspectives	X	X	X	X		X	X	X	X	
Control- relinquish/gain			X					X	X	
New expression of emotion	X					X				
New goals and priorities	X	X		X		X		X	X	X
Wake up call-carpe diem		X	X	X		X	X		X	X
Living vs. existing:	X	X		X				X		
Life for granted	X	X						X		
Vicarious PTG	X								X	X

Table 9. Prevalence of sub-themes within the existential re-evaluation theme

Sub-theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
Mortality	X	X	X						X	
New acceptance of death:	X	X	X			X	X			
Sell by date	X						X			
Religion										
Return to religion	X		X	X	X	X	X		X	
New relationship with God/spiritual world:	X		X				X		X	
Religious experience			X						X	
New spiritual behaviour:			X		X	X			X	
Power of prayer					X	X	X			
Suffering= life	X			X		X	X			
Psychological preparedness		X					X			

Table 10. Prevalence of sub-themes within the society theme

Sub-theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
Improved relationship with family	X		X		X		X	X	X	X
Interaction with medical staff:	X		X	X	X	X	X	X		
Expert vs. expert			X		X	X	X		X	
Negative social interactions:		X	X							
Telling people of the diagnosis		X	X	X		X	X			X
Family tensions with the sick role				X		X	X			
Hesitation of continued friendships					X					
Neglect by old friends	X		X	X			X		X	
Media fear mongering		X							X	
Role changes:										
Neighbour to friend			X							
So-so to sister	X		X	X						X
Role change of children									X	
Teacher to student						X				
Shock at social support	X		X	X			X	X		X
Cancer ward as a positive experience	X									
Maggie's centre			X							X
Positive influence of social support	X			X			X			
Humour		X	X				X		X	
Societies emphasis on appearance	X	X	X				X			X
Importance of appearance:	X	X	X				X			X
jealously in cancer ward	X									
Wigs		X					X			X
Zoo							X			
Work as a positive escape	X									

Table 11. Prevalence of sub-themes within the self-identity theme

Sub-theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
Identity		X	X			X	X	X	X	X
Body and identity	X	X	X	X		X	X			X
Expert on trauma						X				X
Rounded identity						X				
Stronger self	X	X	X		X					X
Normal	X	X	X		X		X		X	X

Table 12. Prevalence of sub-themes within the narrative from growth-to-growth theme

Sub-theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
Shock of diagnosis	X	X	X			X	X	X	X	X
Fear of unknown- Blindfolded		X	X					X	X	
Limbo	X							X		
Need to find reason why	X	X		X	X					
Cognitive processing										
Choice between two paths:										
Succeed vs. succumb	X	X		X		X			X	X
Positive vs. negative attitude:	X	X		X		X	X			X
Lemonade out of lemons	X			X			X		X	
Two types of people			X			X	X			
Live vs. die		X		X		X				
Engage vs. not engage:	X	X		X	X					
Cloud- worry of re-occurrence			X	X	X					
Irony- the cancer myth; cancers ok	X	X		X	X	X	X	X	X	X

Table 13. Prevalence of sub-themes within the exercise class theme

Sub-theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
Saviour:	X	X	X	X	X	X	X		X	X
Importance of research/Need to give back	X			X	X	X			X	X
Safe environment		X		X	X		X	X	X	X
Positive support system	X	X	X	X	X		X	X	X	X
Cancer bond	X	X	X	X	X		X	X	X	X
Role models:	X	X		X			X	X	X	X
Cross comparison	X	X					X	X		X
Sounding boards	X	X	X		X				X	X
New rln with daughter					X					
Somatopsychic principle										
Physical and mental benefits of exercise	X	X	X	X	X	X	X	X	X	X
Body is alive	X				X		X			
Transference of skills	X	X	X	X	X				X	
New health behaviours due to class:		X	X	X	X	X		X	X	X
Responsibility for own health	X	X			X	X		X	X	
Barometer						X				

Table 14. Prevalence of sub-themes within the body theme

Sub-theme	Brenda	Claire	Diane	Elaine	Florence	Gloria	Helen	Isabelle	Justine	Kirsty
New Body:										
Fear of new body		X	X	X	X				X	
Negative effects of chemo:	X	X	X	X	X		X	X	X	X
Importance of health	X	X	X	X	X			X	X	
Reconnection with body:										
Cocoon to butterfly		X		X			X			
Listening to body:		X		X	X			X	X	
Self/vicarious monitoring	X				X					
Using body as barometer						X				
Mind/body interaction:	X	X	X	X		X	X	X	X	
Power of positive thoughts	X					X			X	X

4.4 Maps of the experience of PTG

The following section is a visual portrayal of the prevalence of the themes/sub-themes in the experience of PTG on a group and individual level. The maps were created by the inclusion of all final master list themes and sub-themes listed in the tables above. The maps are not proposed models of growth, however they allow for a clearer vision of the experience for each of the females and the process on the whole.

The maps clearly illustrate that some of the women had far more intricate experiences of growth (Brenda) whereas others had less detailed accounts of the process (Isabelle). Also, the maps visibly reveal which themes were more salient to each woman. For example, Florence's experience was heavily influenced by her participation in the exercise class and did not experience any form of existential re-evaluation; Elaine experienced heavy cognitive processing of her diagnosis, while Isabelle experienced little, etc. As discussed within Chapter Three, it is as important to the research and understanding of the phenomenon to consider the experience on a group level, while still maintaining the idiographic nature of the methodology.

In conclusion, the remainder of this thesis will focus upon the three most influential main themes within the general findings and endeavour to integrate the findings in order to progress current PTG theory.

MAP OF EXPERIENCE OF PTG

BRENDA'S EXPERIENCE OF PTG

CLAIRE'S EXPERIENCE OF PTG

DIANE'S EXPERIENCE OF PTG

ELAINE'S EXPERIENCE OF PTG

FLORENCE'S EXPERIENCE OF PTG

GLORIA'S EXPERIENCE OF PTG

HELEN'S EXPERIENCE OF PTG

ISABELLE'S EXPERIENCE OF PTG

JUSTINE'S EXPERIENCE OF PTG

KIRSTY'S EXPERIENCE OF PTG

CHAPTER FIVE[6]

NARRATIVE FROM GROWTH TO GROWTH: AN EVALUATION OF BREAST CANCER SURVIVORS COGNITIVE PROCESSING STRATEGIES IN THE EXPERIENCE OF PTG

5.1 Abstract

The cognitive processing mechanisms by which PTG occurs are much debated, but recently, and in direct contradiction to historical links with depression, rumination has been seen as a critical factor in the attainment of PTG (Tedeschi & Calhoun, 2006; Watkins et al., 2005). The aim of this chapter was to broaden the understanding of PTG, its cognitive process and outcomes using interpretive phenomenological analysis (IPA). Ten female breast cancer survivors, who had experienced PTG, participated in an individual, open-ended interview. These were transcribed verbatim and analysed for themes that reflected their experience of growing from adversity. This chapter focuses on one of the emergent themes, Narrative from growth-to-growth, which details the thought processes of these ten women from the initial finding of their growth (tumour) to their attainment of PTG. This theme was further deconstructed into 'shock of diagnosis' and 'cognitive processing of diagnosis' which comprised of 'choice between two paths' and 'irony'. Findings point to further consideration and clarification of the temporal nature of survivors' cognitive processing, the role of adaptive and maladaptive repetitive thought within PTG, as well as operationally defining and identifying what truly constitutes a traumatic event.

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[6] This chapter is currently in preparation for submission to the *Journal of Positive Psychology*.

5.2 Introduction

Debate and uncertainty has reigned amongst PTG researchers regarding the cognitive processes involved in the attainment of growth. As discussed in Chapter One, section 1.3.4, early models of unintentional change viewed growth as one of a number of potential responses to trauma. Quantum Change, as proposed by Miller and C'deBaca (1994), focused on the ability of trauma to catapult the person into one of two new levels of functioning, either lower or higher than which previously existed. The Resilience and Thriving Model created by O'Leary and Ickovics (1995) is similar to the Quantum Change Model, except for the inclusion of a third level of functioning following trauma: thriving (O'Leary et al., 1998). Within these models the timeline for change appears to be quite short or instantaneous.

The Model of Transformation as proposed by Tedeschi and Calhoun (2004b; Tedeschi & Calhoun, 2006) is the most developed and widely used model of growth which understands PTG as the result of excessive rumination (or cognitive processing) following a seismic event (discussed in Chapter One, section 1.3.4.2). Tedeschi and Calhoun (2006) differentiate between this type of cognitive processing and depressive rumination found within PTSD. Cognitive processing theorists believe that intrusive thoughts are important for recovery (Creamer, Burgess, & Pattison, 1992) and that the amount of rumination is positively correlated with the amount of PTG (Calhoun & Tedeschi, 1998; O'Leary et al., 1998). Growth, therefore, requires the lengthy procedure of incorporating trauma information into pre-existing schemas, or developing new schemas to accommodate new information; failure to do so can result in extreme distress (Janoff-Bulman, 1992; Lepore, Silver, Wortman, & Wayment, 1996). The Tedeschi and Calhoun (2006) model posits that following a traumatic event, the person is presented with challenges, such as attempting to reduce emotional distress, disengaging from previous goals and changing schemas and narrative development. In order to overcome these challenges and achieve growth, the person unconsciously initiates a three tiered process of rumination commencing with automatic and intrusive thoughts, which then become more manageable and then eventually deliberate. Ultimately, this model has caused a huge shift in attention towards the possibility of rumination or cognitive processing as an imperative component in the process of growth (Phelps, Williams, Raichle, Turner, & Ehde, 2008).

However, there are potential issues with this model. Firstly, it was created from data generated by the posttraumatic growth inventory (PTGI). Although the measurement has high internal consistency (Cronbachs's alpha=.90), the 21 item questionnaire has been criticised for: being numerically and theoretically restrictive by not allowing for reports on changes that are not in the 'big 5' domains (McMillen, 2004); utilising limited populations for validation (college students and breast cancer patients); a lack of acknowledgement of negative changes, leading to positive response bias; and using confusing language (Park & Lechner, 2006). In addition, the PTGI lacks illness specific symptom questions, health related benefits, depression and anxiety items, and cultural/religious differences (Stanton et al., 2006).

Secondly, concern with this model lies with the temporal sequence of initiation of PTG. Campbell, Brunell and Foster's (2004) 'Ego Shock' theory of growth disagrees with the initial process of Tedeschi and Calhoun's (2006) Transformation Model. They propose that in the immediate aftermath of trauma, the body and the self do not disintegrate, but go into a state of shock or 'ego shock', where the person is temporarily 'frozen'. This state of 'frozen ego shock' is relatively short and only creates a temporary change to the self.

Thirdly, Hobfoll, Canetti-Nisim and Johnson (2006) criticised the Tedeschi and Calhoun's model for its restrictedness and exclusivity[7] on cognitive processing, attributing negative psychological outcomes, following reports of PTG (Tomich & Helgeson, 2004), to be the result of increased rumination. Specifically, there is a major fault with the structure of the feedback loop system, which suggests that in order to achieve PTG, people must proceed through three stages of rumination (Campbell et al., 2004; Hobfoll, Canetti-Nisim, & Johnson, 2006; McMillen, 2004; O'Leary et al., 1998). The model is first set-up in a uni-flow diagram format, which proposes that it is only when a person unconsciously initiates the automatic and intrusive rumination process are they able to enter into the feedback loop process of PTG. It appears that a person cannot initiate self-disclosure (writing or talking), nor any proximate/distal socio-cultural components (e.g. social support) without first

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[7] In response to this critique, Tedeschi, Calhoun & Cann (2007) have acknowledged that while cognitive processing and cognitions are indeed important, they do not paint the entire picture.

ruminating over their trauma. Finally, the problem of implying that uncontrollable repetitive thought is crucial during the early stages of PTG (Tedeschi & Calhoun, 2006) revolves around the fact that rumination has been linked to mental distress and health problems (Nolen-Hoeksema, 2000; Nolen-Hoeksema & Morrow, 1991; Papageorgiou & Wells, 2003; Segerstrom et al., 2003) but the relationship between PTG and rumination have proven inconsistent (Tedeschi & Calhoun, 2006).

To further understand the role of cognitive processing in the facilitation of growth, the aim of this chapter was to explore the cognitive processing experience of PTG within a group of female breast cancer survivors.

5.3 Method

5.3.1 Methodological paradigm

Please refer to Chapter Three, section 3.1-3.2.2 for details regarding the methodological paradigm.

5.3.2 Participants

Please refer to Chapter Three, section 3.5.2-3.5.3 for details regarding the participants.

5.3.3 Procedure

Please refer to Chapter Three, section 3.5.2 and 3.7 for recruitment and interview procedure respectively.

5.4 Analysis

Please refer to Chapter Three, section 3.8 for details regarding the analysis and section 3.9.8 for issues regarding validity.

5.5 Discussion of findings

The results presented below will briefly reflect upon the main theme narrative from growth-to-growth's sub-theme 'shock of diagnosis' before extensively reviewing the frequently reported sub-theme 'cognitive processing of diagnosis'. This salient sub-theme examines how the women's cognitive thinking processes retold in a story like fashion, beginning with what they thought the moment they found the growth (tumour), right through to how their thinking processes aided in their eventual attainment of growth (posttraumatic). Ultimately the women's reflective story telling of their cognitive thinking processes from 'growth' to 'growth' was an important component to their experience. Additionally, this chapter will compare and contrast the women's experience in relation to the current cognitive processing theories and models of growth.

5.5.1 Shock of diagnosis

There was no doubt the diagnosis of cancer was a huge shock for each of these women. Kirsty recalled the disbelief and sudden surprise at her diagnosis as she went from healthy to sick in an instance.

> *Kirsty*
> *"You know, I didn't have nothing wrong with me, and all of a sudden, this was diagnosed and...um...I just... I just couldn't believe it, I mean, it didn't happen to me, it happens to other people. It doesn't happen to you."*

This shock, however, was short lived and, as will be demonstrated, the initiation of her (and the other nine women's) journey of PTG was similar to the flicking on of a light switch. This evidence will be shown to be in direct contradiction to the devastating 'shattering of former selves' and excessive ruminative temporal sequences as outlined in the currently used models of growth (Janoff-Bulman, 1992; Tedeschi & Calhoun, 1995).

5.5.2 Choice between two paths

The women repeatedly spoke of there being a conscious processing of 'choice' between two paths in the immediate aftermath of their diagnosis. For each person, there were slight variations on what choice they believed they were facing, such as succeed versus succumb, to adopt a positive versus negative attitude, to live or die and to ruminate or not. Thus, at each point in their process of recovery and growth, they verbalised these crossroads of conscious 'choice making' which is presented in detail in the following section.

5.5.2.1 Succeed or succumb

The women recalled instantaneous thinking processes, following the news of their diagnosis, which were presented in clear black and white decisions with regards to succeeding versus succumbing. Elaine discussed how her thinking processes, following her diagnosis, were clearly mapped out in this way.

> *Elaine*
> *"So, I think you have two paths. You either go up, or you go down. And I didn't want to go down."*

For Elaine, these 'two paths' seem akin to two diverging roads from a fork in the road, and the choice of which path or road to take was a very clear and conscious decision. Like Elaine, Claire also discussed the two divergent and separate 'roads of thinking', however, Claire visualised her path to recovery with only one road; the right one (succeed) and comments upon how succumbing was not an option.

> *Claire*
> *"That was just, that wasn't the way I was thinking at all! [going to die] I wasn't going down that road. That's not even... that's not there! (laughs) you know? Em, and I wasn't in the tunnel. As far as I was concerned, I was never in a tunnel."*

In addition, Claire also describes how the notion of being in a 'tunnel' was not applicable to her recovery either, insinuating that her decision to move on from her trauma was indeed heavily one-pathed. Similarly, Brenda clearly described the choices to reacting to the diagnosis of cancer; to laugh or cry, to sink or swim. The simplicity of her words mimics the simplicity of her story regarding her thinking processes during her experience of PTG.

> *Brenda*
> *"It's just a case of I think, well...what else can we do? (laughs) You know? Bloody hell...here we are!!! You know? If you don't laugh, you'll cry [...] What do you do? You either sink or you swim, you know? And I had no intention of sinking, you know, none at all. It wasn't even on my radar."*

Brenda again demonstrated a distinctive single minded focus in which she was determined to win over the cancer. Indeed, her 'radar' was so highly in tuned to this one path that, like Claire, succumbing was not an option. Gloria also discussed her black and white attitude towards 'bad things' which could almost seem cold or removed. However, throughout the interview, Gloria exuded a clear sense of strength from her ability to face and quickly move on from traumatic situations.

> *Gloria*
> *"But ya, I think, I think it, it makes, like when bad things happen, or what is bad, sort of, like an illness, it happens, it's like I say to my clients, 'shit happens. Deal with it'."*

Once the two options, succeed or succumb, were open to them the initiation of moving down the right path was swift. Here, Kirsty commented upon on how her 'get up and get on with it' attitude happened immediately after the diagnosis.

> *Kirsty*
> *"I find that now, you just got to get on with it. You know? There's no point in sitting down and feeling miserable, and oh well, you can't do this and you can't do that... You've just got to go on [...] You've got to be positive and just think, well, come on, get on with it...I think this get up and get on with it attitude started more or less right away."*

In relation to the existing PTG models, the speed at which Kirsty describes her choice to deal with her trauma seems to relate more to the theory of Quantum Change by Miller and C'deBaca (1994), which proposes that positive change is dramatic and relatively quick, unlike the incremental stages of growth suggested by Tedeschi and Calhoun (2006). This is similar in some ways to Curtin et al. (2002) who found within their study of transformation among kidney dialysis patients, that patients reported epiphany like moments of clarity where they decided they had one of two options and chose to keep living. Dildy (1996) also reported that personal transformation following trauma began with the conscious and clear cut decision to move away from negative thought and choose to deal with the trauma. Salick and Auerbach (2006) also discussed the concept of 'choosing to go on' following medical trauma. Similar to these ten women, they reported an immediate and simple choice to deal with the trauma (forward planning, abstract thinking and imagination) in which the patients gained inner strength (PTG). Thus, rather than engaging in a process of rumination this evidence supports a short temporal sequence of conscious and focused thinking patterns at the start of a process that resulted in the experience of PTG.

More importantly, the decision to choose the right path and choosing to deal with the trauma seemed to be a solitary and personal decision undertaken without the input or influence of others. This is at odds with the PTG models which posit that such decisions are achieved through self-disclosure and social-support, e.g. the Transformation Model (Tedeschi & Calhoun, 2006), the Shattered Assumptions Model (Janoff-Bulman, 1992), and the Organismic Valuing Model (Joseph & Linley, 2008a). Overall, the diagnosis of their illness (seismic event) was perceived to be a straightforward and even positive challenge that did not require excessive cogitation for attainment of growth.

5.5.2.2 Positive versus negative attitude

The notion that a negative attitude was a choice was repeated throughout the interviews as the participants appeared to believe that they had power over their attitude. Brenda's simplistic questions truly express this straightforward choice of attitude.

> *Brenda*
> *"...you've got to embrace life-God you're only here once! You've only got one shot at it? What's the point in being miserable when you can be happy? And I think that's what it is-Why be miserable when you can be happy? Why be unkind, when you can be kind?"*

Kirsty also claimed to have power over whether she felt depressed, and could allow, or not allow, herself to feel happy or sad.

> *Kirsty*
> *"I'm not having that! [giving into depression]. I'll go out and I'll maybe just go and go for a walk, if my husband's not in. And, or I'll just go and phone somebody and have a chat. You know, but mostly, as I say, I'll probably go out for just a, just a walk about, and then I feel fine! That's it you know. I don't allow myself to get depressed, or down. I just don't."*

Interestingly, Kirsty believed that it was within her power to resist a recognised mental health problem (depression). In addition, Kirsty found that by changing her surroundings, or engaging in social interaction, she could prevent herself from getting 'depressed' or 'down'. Her attitude was a choice and upon further reflection, it seems that it was this choice or power over her own thoughts that could have enabled her power to move on from her adversity.

5.5.2.2.1 Two types of people

Patients who 'chose' to adopt a negative attitude were perceived by these ten women as a different type of person altogether. Diane and Helen described a term used amongst themselves entitled the 'poor me syndrome' or the 'cancer card', that they believed that you could choose to use. It was a certain type of person who chose to succumb to the negative mental state of pity and ruminating about a life that 'could have been' versus getting up and getting on with life under the principle that there are no guarantees in life.

> *Diane*
> *"The poor me syndrome is... eh, poor me, everybody's back at work. You know, promoting themselves in their career. Here I am going every 3 weeks to chemotherapy. Em, my life, might not be...my life might be terminated soon. Instead of thinking, well, how can anybody say that about anything really? There are no guarantees in anything. That's the effects of the poor me syndrome. It's really comparing yourself with every one in the world."*

> *Helen*
> *"The one thing I would never ever do...is what I would term 'play the cancer card'. You know, (whispers) poor me! I've got cancer. You've gotta be nice to me. You know I have cancer. You're not to be nasty to me!"*

These separate negative personality types were perceived by these women to have an effect on the cancer patient's choice to deal with the trauma, choice of attitude and choice to live or die.

5.5.2.2.2 Lemonade out of lemons

Stemming from their belief in two types of people and view points, the women displayed evidence of the cognitive ability to make "lemonade out of lemons", or find something positive about their immediate experiences. For example, Elaine, who was not from Glasgow, turned the journey, from her home to the cancer ward, into an opportunity to see places in her own country that she had not yet visited.

> *Elaine*
> *"And I also got to see other places in Glasgow that I'd never been to before. Which, that was quite interesting [uh uh]. Eh, so that was...good."*

Helen reiterates this unique outlook on her experience travelling to and from her home in the West of Scotland to Glasgow for her cancer treatment, and even likens it to a holiday. This is a perfect example of how these women took lemons (chemotherapy sessions) and produced lemonade (a holiday).

> *Helen*
> *"That [time spent in Glasgow during cancer treatment] was very positive because we looked on it as a holiday and we just did all the things that...normally tourists would have done, like visiting a lot of places that we [laughs]*

> *never visited in Glasgow! And em, so that was a very enjoyable time, 'cause we got a holiday."*

Further examples of this attitude were reflected in their perceptions of hair loss. Although this was truly devastating to them (discussed late and in Chapter Six) they were able to see the 'bright side' of chemotherapy induced alopecia.

> *Brenda*
> *"...and I lost the hair on my legs, but I never had to shave my legs or anything like that (laughs). Under my arms...It was great!"*

> *Helen*
> *"That's another, that's another positive side, I saved a lot of money on waxing! [both laugh] Fortunately, funny enough, the underarms has never come back!"*

5.5.2.3 Living versus dying

Similar to the previous sub-themes, the women believed that they had some choice as to live or die (although they recognised the seriousness of their medical condition). Claire discussed how by blocking out the negative thoughts, she was able to not 'make it the end' for herself.

> *Claire*
> *"But if people think that they're going through treatment, and that is the end, they can make it the end for themselves! [...] But em, you know, I think, (pauses), feeling positive, not, not even, you just block it out, and its not even in your mind[...].But, em, I think your attitude plays a part, I think it does play a part in it [surviving and thriving]."*

Claire's description of her experience of feeling positive and blocking thought processes during her journey to PTG is different from the intrusive and uncontrollable ruminative stages of PTG progression suggested by Tedeschi and Calhoun (2006). Gloria, who worked in hospitals, had many years of experience with patients who were ill and truly believed in a person's choice to live or die, of course within medical reason.

> *Gloria*
> *"Um, but also, trying to explain to people and tell people, not just me, because lots of medical staff, lots of oncologists will agree with this, that your attitude can make and enormous difference to the outcome of your illness. If someone who is negative and crushed by it, is... much more likely to die from*

> *it than someone who has a positive[...]I know lots and lots of other people who have come through terrible things, so there's no need, there's no need for you to lie down and be crushed by it. Unless you actually choose to."*

Again Gloria's beliefs do not reflect a long, step-by-step process with multiple extraneous variables influencing her journey. Her simplistic and yet slightly chilling words reflect her passion behind her belief in the fact that survivors can in fact choose life or death.

In relation to the PTG theory, the women's belief in control over such fundamental issues could be perceived as the initiation of active, or indeed avoidant, coping mechanisms which have both been found to be beneficial when used in a dynamic fashion over the course of illness to growth (Lechner et al., in press; Stanton et al., 2006). Perhaps instead of relying on external influences (e.g. medical staff, treatment) for their survival, the women gained a sense, or even illusion, of control over their fate by focusing on the power of internal attributions there by reducing stress and facilitating growth (Taylor & Brown, 1994).

5.5.2.4 Engaging versus not engaging in rumination

Following from this clear two path thinking processes, the women reported that if the occurrence of negative repetitive thoughts did begin to emerge, they were able to choose whether or not to engage with them. Elaine discussed how she had contemplated 'thinking about thinking' about the trauma and came to the conclusion that this would 'drive her mad'.

> *Elaine*
> *"I think if you dwell upon things...that's not going to help [...] I'm not going to let it stop me. I'm not thinking about it all the time. [ok, ok]. Eh, you would go mad if you did that."*

Again, Brenda recalled how after confronting the nature of ruminative thinking and what she perceived to be the consequences of dwelling upon possible negative outcomes, she consciously decided that it would be more destructive than productive causing her to 'nae get up in the morning'.

> *Brenda*
> *"...And as I said, you know, if we read about all the things that could possibly happen to ya, I would'nae wanna get up in the morning! [uh huh] I mean you would just (pause) you would just be worrying about it. So what the point in worrying? I mean this is*

> *what I said to her, 'what's the point in worrying about something that might never happen? (pause) you know? You're just, you know, getting yourself into a state. Stop reading it!'"*

O'Connor, Wicker, and Germino (1990) support this finding in their study on cancer patients' existential search for meaning. Specifically, they found that almost half of their patients found meaning and growth from their cancer by not dwelling on it, "one respondent found it helpful, when negative thoughts came into her mind, to 'just hum and sing; and after a while they just leave'" (p. 172).

Under the umbrella term of maladaptive repetitive thought, the participants in O'Connor et al. (1990), as well as this study, demonstrated negative automatic thought processes or the antecedent cognitive thought processing to full-blown rumination (Segerstrom et al., 2003). However, the participants recalled that they had a choice to engage with these brief negative thoughts or to ignore them. The key words here are *brief* and *choice* which is not expressed in the Tedeschi and Calhoun (2006) model which advocates a stage of intense, uncontrollable automatic rumination. This distinction in terminology and concept warrants future research but suggests that Tedeschi and Calhoun's (2006) model should be extended.

5.5.2.4.1 Cloud or worry of re-occurrence

What did appear to be happening within these ten women's thinking patterns was a form of worry, but, unlike rumination which is heavily a "why me", past oriented focus with no practical outcome or solution, their negative thinking surrounded the concern or worry of re-occurrence, a future focused problem in which they attempted to resolve, as described by (Papageorgiou & Wells, 2003). Elaine specifically used the term 'cloud' to describe her cognitive existence following cancer diagnosis while Diane explicitly demonstrated worry oriented thinking patterns as she discussed future focused thoughts. However, Diane seemed to believe that she was in control of these thoughts and could stop them at any time.

> *Elaine*
> *"I think with cancer, there's (pauses), I'd describe it like a cloud... that never quite clears. Doesn't meant to say you cant enjoy yourself, but , it will always come back, you know, in your mind, that you've been told you have it."*

> *Diane*
> *"But now and again I do worry, you know, what if this comes back? When did it come back in other people. And then I just think, ah, stuff it. But it's not, I don't think about it every day! I don't. I think you move on with your life."*

5.5.3 Irony: The cancer myth; cancer's ok

Although the diagnosis of cancer was initially traumatic, there was evidence, from these ten women that the psychological experience of growing from adversity was not. Thus, the trauma of being diagnosed was not entirely 'seismic' enough to shatter their previous selves (Janoff-Bulman, 1992). The women even go as far as to express their desire to eliminate the common 'cancer myth' which proposes that a cancer diagnosis is the end of the world. Once faced with their test results, Justine and Brenda realized that it was not as bad as they had envisioned and even go on to proclaim that their cancer experience was, overall, ok.

> *Justine*
> *"...I mean, I was scared, as I said before I started this treatment. Em, but having gone through it, you think, what was there to be scared of? [...] You can get on with your life. It doesn't stop you living."*

> *Brenda*
> *"...say to people, it's not the end of the world! You know? It's not! Bad luck...but it's not the end of the world, you know? You can have a good life, you know? And... you know and, turn that around, and draw a positive experience from that, instead of a negative one."*

Though the diagnosis was initially tough, Helen felt that she was blessed for the experience of having cancer as it added so many positive aspects to her life.

> *Helen*
> *"I was really blessed. And that's all I can say to you. And that's the way I look at it...being a positive experience in my life."*

Isabelle felt that her diagnosis and chemotherapy experience had given more to her than it had taken away, as did Justine who reported that chemotherapy was actually positive.

> *Isabelle*
> *"So, I-I would say the positive aspects of the illness far outweighed the negative aspects of it."*

> *Justine*
> *"Em, so I can't say it was a horrendous experience going through this chemotherapy. It was, it was fine. It was very positive."*

In connection to the existing PTG models, these quotes do not entirely fit into the portrayal of the survivor as helpless to negative thinking and the shattering of their inner worlds (Janoff-Bulman, 1992, 2004; Joseph & Linley, 2008a; Tedeschi & Calhoun, 2006). Indeed, these quotes put into question the entire notion of what actually constitutes a 'traumatic event' and the systematic cognitive processing that results from distressing experiences. Cordova et al. (2007) reported similar contradictory findings within their study on stress and growth following cancer, reporting that only half of their participants reported the diagnosis as traumatic, while one third did not regard it as life threatening at all. Thus, the women's lack of traumatic connection to the event seems to link with Campbell et al.'s (2004) 'ego shock' theory which posits that although the event (diagnosis) is initially registered as traumatic, the person is only temporarily frozen, not shattered, which would account for these women ability to reflect upon their thinking process of growth with such fondness.

Ultimately, this evidence of positive thinking patterns and non-seismic shattering of pre-trauma selves directly contrasts the stereotypical 'cancer sufferer/ cancer victim' archetype that is portrayed in contemporary society via NHS television adverts and sensationalist reports within the tabloid papers (Fairburn, 2008; Prynn, 2008). The women felt that research projects which focused on growth following traumatic events were imperative in sending out their message to future cancer patients: that the diagnosis of cancer does not necessarily mean the end; it can be the beginning of a positive future.

> *Brenda*
> *"Hopefully we changed all these other doom and gloom people. Change their mind and say that something positive can come from...bad news, you know?"*

> *Justine*
> *"And I think this, you know, maybe this research will show that [people can grow] and hopefully (laughs), in so many years time, people will think, no it's ok..."*

5.6 Conclusion

These ten women's experience of PTG exhibited brief, controllable and self-regulated negative thoughts but did not show evidence of the three stage rumination process within the Tedeschi and Calhoun (2006) model of PTG. First of all, the women articulated a clear choice in their cognitive processing strategy. Their choice of the 'right path', their attitude and to live or die was portrayed as a clear and conscious decision, which was within their power to ascertain. When they experienced ruminative thought, they were able to engage in a process of thought stopping and choose whether or not to partake. Finally, they expressed a desire to expose the 'cancer myth' and regale their stories which demonstrated that the experience of cancer was not as bad as the media and society create it to be. Although initially scary, the process and growing from it was actually, OK, calling into question what actually constitutes a traumatic event as well as the previous held belief that there needs to be a systematic self crumbling in order for people to begin the growth process. Overall, the time line of the initiation of growth seemed to be far quicker than Tedeschi and Calhoun (2006) map out, mimicking the speed of the 'Quantum Change' (Miller & C'deBaca, 1994) or temporary 'Ego Shock' (Campbell et al. 2004).

Perhaps the overall cognitive processing experience for these ten women was due to the nature of the trauma (illness diagnosis). Even within specific traumatic events (e.g. terrorism) there are multi-variations of the trauma (e.g. ongoing versus single occurrence) and therefore multiple cognitive processes of overcoming the adversity (Hobfoll et al., 2006). Therefore, within cancer related trauma, once the diagnosis was confirmed, the women perceived that they had considerable control over and could actively pursue a way of fixing the trauma, unlike other events which can not be undone or fixed and may need reflection, rumination and excessive cognitive processing to understand and deal with the trauma. By perceiving control over their path, (their choices to succeed, attitude and even over life and death itself) the women may have been existing in and exhibiting positive illusions of control, which have been reported to have a positive affect on psychological adjustment to stressful and adverse events (Taylor & Brown, 1988; Taylor et al., 1984). Ultimately, the results of this study provide support for proposed extensions of the Tedeschi and Calhoun model (e.g. Sabiston et al., 2007) to further extend the theory of growth into more trauma specific contexts (see Chapter Two and Eight).

Research has also suggested that reducing negative cognitive processing in the immediate aftermath of trauma may reduce the subsequent risk of PTSD symptoms and depression (Phelps et al., 2008). These women had all participated in an exercise intervention during chemotherapy which was found to enhance physical and psychological well being (Emslie et al., 2007; Mutrie et al., 2007) as well as facilitate the growth process (although this was not evaluated or the focus of the original RCT). Chapter Six demonstrates how these women used the class as a form of healthy self-distraction, which has been linked to enhanced growth in the immediate aftermath of trauma (Lechner et al., in press), providing structure and purpose to their lives and ultimately leaving little room for idle thought and negative cognitive processing (rumination).

Where the evidence of this study agrees with Tedeschi and Calhoun's (2006) model is with regards to the existence of adaptive repetitive thought or reflection, defined as "curious and intellective self-examination" (Segerstrom et al., 2003, p. 910). There was evidence of reflection as demonstrated by Isabelle's earlier quote on life as more precious now due to her experience of cancer. Research has shown that the reflection upon existential issues and self-examination can lead to the revaluation and reappraisal of life and priorities and eventually growth (Segerstrom et al., 2003). Ultimately, the study highlights the confusion surrounding Tedeschi and Calhoun's (2006) choice of wording within their model, as these ten cancer patients' cognitive processes tended to be future (worry) and present (reflective) focused and not the cycle of excessive past oriented rumination, suggesting a reconfiguration of terminology within the model.

With regards to limitations, the issues of cognitive dissonance, denial, and deceit must be reflected upon. Researchers have claimed that fake positive outlooks or the rejection of negative thinking could be detrimental avoidance oriented coping tactics used following traumatic events (Fromm et al., 1996). Therefore, the PTG the women expressed within this study could have simply been an attempt to reduce any dissonance of the negative experiences of the cancer. In defence of this, and following from the epistemological underpinnings of IPA, if the experience of growth and positive changes is real to the participant, then the researcher must accept it as real, thus making the study and analysis real. Furthermore, Taylor and Brown (1994) argue that objective accuracy (versus subjective reality) is not indicative of positive wellbeing. Deceit, however, is more dangerous to the research as the person is only engaging for a brief amount of time and might not give detailed accounts of their experience (Giorgi & Giorgi, 2003). Counter arguments for this are threefold. IPA employs a traditionally longer and more detailed interview technique that other forms of method collection (semi-structured, structured) therefore enabling the interviewer to detect participants whose interview appears to be scripted or controlled. In addition, Giorgi & Giorgi (2003) argue that it is fairly hard to 'deceive' an interviewer if the interviewee is not entirely sure about what they are there to speak about, "no specific hypothesis or theory is being advanced, so it is difficult to know why deceit would motivate the participant unless to cover up personal failures or embarrassments" (p.47). Finally, the participant is just as likely to cheat on a questionnaire based research paradigm and the detection of this is far more difficult. Further reflection upon the use of IPA as a methodology as well as potential limitations to the overall study is discussed further within Chapter Eight, section 8.4.2.

Future research could extend the rich data reported here and conduct larger scale tests on the temporal sequences of cognitive processing within growth and the specific nature of survivor's thoughts (e.g. negative automatic thought, worry, reflection or rumination). Furthermore, future research should attempt to tackle the 'cancer myth' by operationally defining and identifying what truly constitutes a traumatic event and the degree of trauma needed to initiate the occurrence of PTG; especially when the traumatic event, in this case, has been regarded as a unanimous 'OK'. Further reflections and suggestions for research development are discussed in detail within Chapter Eight.

The next chapter will move away from the theoretical cognitive processing of PTG to review the perceived influence of an exercise class intervention on these ten women's experience of growth.

CHAPTER SIX[8]

THE PERCEIVED INFLUENCE OF AN EXERCISE CLASS INTERVENTION ON THE PROCESS AND OUTCOMES OF POSTTRAUMATIC GROWTH

6.1 Abstract

The aim of this chapter was the explorative documentation of the experience of PTG among breast cancer patients and the role, if any, that a group based physical activity intervention had in the attainment of growth. Ten female breast cancer survivors, from an already existing study, participated in an individual, open-ended interview. Employing interpretive phenomenological analysis (IPA), interviews were transcribed verbatim and analysed for themes that reflected the women's experience of growing from adversity. The women attributed much of their process and outcomes of PTG to the experience of participating in an exercise intervention programme during rehabilitation. The programme's success in facilitating PTG could be viewed as superior in some ways to other group based therapies in offering the women a safe environment, positive support system, opportunity to transfer new skills and heightened health awareness/behaviours. Future research should acknowledge and conduct further investigations into the role of physical activity interventions as facilitators of the PTG process.

6.2 Introduction

Following on from the cognitive focus of the fifth chapter, we now turn to the potential role of physical activity and group based interventions in the facilitation of

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[8] This chapter was presented at the European Positive Psychology Conference (2008) and a paper from this chapter is currently in press: Hefferon, K., Grealy, M. & Mutrie, N. (In press).The perceived influence of an exercise class intervention on the process and outcomes of posttraumatic growth. Journal of Mental Health and Physical Activity.

the growth process. Although PTG following the diagnosis of cancer has been found to occur across age, socio-economic status and trauma type (Lechner et al., 2003; Stanton et al., 2006) there is evidence to suggest that certain variables can contribute to the attainment of PTG more than others. Social support and disclosure have been found to play a vital role in the process of growth (Cadell et al., 2003; Lechner et al., 2008a; Tedeschi & Calhoun, 2006) and both are featured in the Transformation Model of PTG (Tedeschi & Calhoun, 2006), Shattered Assumptions Model (Janoff-Bulman, 1992) and the Organismic Valuing Theory of PTG (Joseph & Linley, 2005). Social support can come from family, friends, other patients, medical staff, support workers, centres, etc., which in turn can highlight and increase appreciation for the people around them (Tedeschi & Calhoun, 1995). The mechanisms by which social support are believed to help are by affording patients the opportunity to discuss fears and worries, resolving issues out loud, and providing contact with other patients and role models. For example, Weiss (2004) found that those who had access to another breast cancer survivor who had experienced PTG had significantly higher benefit finding scores than those that did not.

In addition, to social support and disclosure, approach oriented coping (active, problem focused, positive reappraisal, support seeking) and avoidance coping (escape/avoidance, distraction in the immediate aftermath of diagnosis) styles of processing have been linked to increased instances of growth (see Stanton et al., 2006). Stanton et al. (2006) also found that coping styles are dynamic over the course of the cancer process with 'alternating approach–avoidance' methods of coping being used from diagnosis to growth.

Recent research has also started to focus on group based therapies as facilitators of the PTG process. Lechner et al. (2008) found that, following trauma, group based programmes can help enhance psychological adjustment and overall quality of life (QOL). Explanations for the success of these programmes centre on the fact that they inadvertently nurture factors associated with PTG (social support, role modelling, self-disclosure and releasing fears and worries). However, the existing literature on group based therapy facilitating PTG has been criticised for being serendipitous as interventions were not originally designed to foster PTG (Lechner et al., 2008). In addition, clinicians warn that the promotion of PTG within group based settings may induce pressure and expectations to think positive and the possibility of succumbing to the "tyranny of positive thinking" (Lechner et al., 2008, p. 225).

Physical activity programmes are an overlooked form of group based 'therapy' in the facilitation of PTG. Physical activity has recently become a safe and feasible adjunct therapy during and after cancer treatment by providing patients with a higher physical and psychological quality of life {Biddle, 2000; Campbell et al. 2005; Courneya, 2002; Courneya, 2000; Mutrie et al., 2007; Courneya, 2003; Weert et al., 2005}. The physical benefits of activity, for both normal and clinical populations, can include the reduced risk of developing obesity, diabetes, sleep disorders, high blood pressure, certain cancers and even premature death (Biddle & Mutrie, 2001; Mutrie & Faulkner, 2004). Psychological benefits of physical activity include enhanced body image, self-esteem and self-perceptions (Fox, 2000; Moses, Steptoe, Mathews, & Edwards, 1989); reduced depression and stress (Babyak et al., 2000; Hassmen, Koivula, & Uutela, 2000; Kritz-Silverstein, Barrett-Connor, & Corbeau, 2001); improved sleep patterns (Kubitz, Landers, Petruzzello, & Han, 1996); reduced emotional distress and increased well-being (Steptoe, Wardle, Pollard, Canaan, & Davies, 1996); reduced anxiety (McDonald & Hodgdon, 1991) and improved general cognitive functioning among older adults (Boutcher, 2000; Rejeski & Mihalko, 2001; Rejeski et al., 2001). In addition, physical activity has been reported to have a preventative element to the development of both physical and psychological illness, for example HIV progression (Arey & Beal, 2002; Mustafa et al., 1999), depression (Camacho, Roberts, Lazarus, Kaplan, & Cohen, 1991; Harris, Cronkite & Moos, 2006) and certain cancers (Lee, 1995; Lee, Hsieh, & Paffenbarger, 1995). Therefore, the physical, psychological and preventative benefits of increased exercise participation are extensive and, consequently, the reports of increased physical activity participation in the wake of a traumatic event are a welcomed novel PTG outcome.

The reported advantages of group exercise training are not only the enhanced physical benefits but the social aspects of group exercise which increase the enjoyment of the intervention (Emslie et al., 2007; Sabiston et al., 2007; Stevinson & Fox, 2006). Emslie et al. (2007) outlined in their qualitative study (also sub-sampled from the Mutrie et al. (2007) RCT) that the benefits of this type of group intervention are that they offer a non-pressurised supportive environment and the freedom with which to self-disclose without the pressure and expectations that other group therapies may induce. However, for those patients who go on to report PTG, the extent to which the psychological, emotional and existential benefits of an exercise intervention can contribute to this process are not known.

Similarly, the current research on determinants of PTG has not considered the potential for the somatopsychic influence where there is a positive effect of the body on the mind (Biddle & Mutrie, 2007; Harris, 1973; Mutrie & Faulkner, 2004). In particular, the current Transformational Model of PTG (Tedeschi & Calhoun, 2006) has not considered the body's role as a determinant of PTG, with only one study to date, recognising this potential link (Sabiston et al., 2007). Although a new area of PTG research, there is evidence to suggest that positive emotions can have an effect on the process of PTG (Linley & Joseph, 2004). Consequently, it is plausible that enhancing physical functioning and activity, which in turn enhances positive emotions, creates the potential for growth.

Despite these recurrent links between group based therapies, physical health and psychological adjustment (PTG), it is recognised that there is a severe neglect of the role of the body and health behaviours in the PTG literature (Park & Lechner, 2006). Therefore, the aim of this chapter was to investigate if engaging in a physical activity programme played a role in the experience of PTG within a group of breast cancer survivors. The degree to which the group exercise programme contributed to the known and previously unknown determinants of PTG was then assessed.

6.3 Method

Due to the nature of the study, each methods section and analysis section is identical and will not be repeated throughout.

6.4 Discussion of findings

Turning to the role of the physical activity programme; the following is a detailed account of how this programme was similar to and in some ways superior to generic 'group based therapy' sessions in the experience of PTG. Four of the six sub-themes were perceived to be positive components of the exercise class which can be related to the process of PTG: saviour, safe environment, positive support system and somatopsychic influence. The remaining two, transference of skills and new health behaviours, were perceived to be positive outcomes from their participation in the exercise class, and ultimately from their trauma.

6.4.1 Saviour

Overall, the women viewed the exercise class as a sort of 'saviour' and an integral part in their rehabilitation and process of PTG. Although the word 'saviour' was not explicitly used, during the analysis the author interpreted it as such and felt it was appropriate in which to begin to describe the perceived influence of the class. For example, Kirsty spoke about how she believed the class helped her to cope through her recovery and eventual attainment of growth whereas Diane discussed the practical side of the class which gave purpose and structure to her week. This seemed to get her 'back on track' away from self-pity and despair, clearing the way for recovery and eventually growth. The class seemed to act as a sort of 'healthy distraction' or focus for Kirsty and Diane and gave purpose to their day.

> *Kirsty*
> *"I think the- and I think that the keep fit programme that was run, by the cancer research, was excellent. Very good [...]Och, I'll just say as I've said, as I've said before, I thought the, the programme of keeping fit certainly helped me[...]Well, helped me to cope with it."*
>
> *Diane*
> *"It gave me structure during the week [...]So, it gave me structure. Em, and it helped me because of the camaraderie [...]It made me feel as if I was, I just wasn't sitting in the house. I was out there doing something [...] Well, if I hadn't had somewhere to go to [exercise class] I would have taken long lies. And then I would have been in the house, staring into space, and I would have thought, 'why me?'"*

Lechner et al. (in press) found that self-distraction, in the immediate aftermath of diagnosis, was associated with greater amounts of benefit finding. In this case, it seems as if the women used their participation as an active or purposeful form of coping which forced them to get out bed and to the classes, motivating recovery and eventual growth. The praise of structured physical activity as a 'saviour' for women during cancer treatment has been reported by other researchers, for similar reasons mentioned (Hennessy et al., 2005; Emslie et al., 2007; Stevinson

& Fox, 2006; Sabiston et al., 2007). To date though, physical activity programmes have not been linked to contributing to PTG.

6.4.1.1 Importance of research/Need to give back

Due to the perception of the class as a saviour to their rehabilitation, the women stressed the importance of this type of research (physical activity and growth) and had a huge interest in the outcomes of this specific study.

> *Elaine*
> *"I'm just glad that there's funding for people like you and Anna Campbell. And...it's good to know that money is being channeled into wider areas and it's not just into medicine and that type of research. I think this kind of research is very valuable."*

When referring to the results of the Mutrie et al. (2007) study, Florence expressed the need for the continuation of exercise class interventions as an option for adjunct therapy during rehabilitation.

> *Florence*
> *"You know, hopefully now, hopefully now they'll take this on board and that it can be something that is put in for the treatment, you know, along side the treatment. Some sort of exercise because I really found the benefits of it."*

Testament to the intervention's powerful influence again appears in the women's deep seated need to give back. Since the class was such a saviour to them, they felt a sense of duty to help where they have been helped and to give back to those that gave to them.

> *Florence*
> *"... I got the benefits from it [the exercise class]. I mean, I felt that I benefited because I was getting the exercise and I was meeting people, em, and I feel it helped me, so if there was anything they [the researchers] needed from me, em, you know, then [...] I'm quite happy to, you know, do anything I can..."*
>
> *Brenda*
> *"...Everybody should try and make a difference to somebody's life, you know? And you know, if I've done that for some people, that's great 'cause they've certainly done it for me! They've certainly done it for me. And it's not a one way thing, it's a kinda two way thing."*

This has been documented throughout the PTG literature with patients reporting a deep-seated need to give back, either through fundraising (Coward & Kahn, 2005), working for organization/charities associated with the illness (Coward & Kahn, 2005; Parry & Chesler, 2005), education of the illness, and their growth, to the general population (Danoff-Burg & Revenson, 2005; Eide, 2006; Gillen, 2005) and, as demonstrated here, participation in research (Coward & Kahn, 2005; Coward & Lewis, 1993; Dahan & Auerbach, 2006).

6.4.2 Safe environment

The women reasoned that the powerful influence of the class on their experience of PTG was due to the 'safe environment' it offered them; a place where they could go when they felt anxious, vulnerable or isolated. The class functioned as a safe environment in two distinct ways. First, there was the expertise of the instructors. Here, Justine recalled how the fear of her new body after surgery was a strong inhibitor of commencing physical activity due to the unknown limits of the body.

> *Justine*
> *"And of course, you have...the surgery and you are so and, it's like 'what can I do?', and you're like absolutely terrified to do anything [...] I mean I was actually frightened to do anything, because, I thought, I don't want to damage my arm, or you know, you've got- you've had surgery on your breast and all the rest of it and you're not sure what you can or can't do [...]Em, so when I went, I was accepted for the program and it was wonderful! Cause you knew... you felt so confident that you know, right, who ever is running this program, they actually know what they're doing (laughs) so you're not going to end up doing the wrong thing."*

Commencement of a regular exercise routine is difficult to instigate and adhere to due to physical and psychological barriers, even for healthy adults (Biddle & Mutrie, 2007; Rogers et al., 2006). However, this is multiplied when dealing with injury for fear of exacerbating the condition (Adamsen, Midtgaard, & SØnderby Pedersen, 2001; Emslie et al., 2007; Hennessy, Stevinson, & Fox, 2005). Thus, Justine and the other women experienced the class as a safe environment in which to undertake the activities due to the expert knowledge of the instructors. Cordova (2008) also suggests that education from expert sources can dispel anxiety and misconceptions surrounding cancer diagnosis and evoke approach oriented coping therefore facilitating growth. Hence, the proximity to expertise highlights another component of the exercise class or 'group based therapy' in the facilitation of growth. Emslie et al. (2007) also found that having expert instruction and classes tailored to suit the women's needs was a tremendously important benefit of their exercise class as it enhanced confidence levels in physical activity participation.

Secondly, the exercise class was a safe environment because it was a place in which they could come to and feel 'normal'. Hennessy, Stevinson and Fox (2005) also describe participation in group based activity as facilitating a sense of 'normality' and in the current study it did this by offering the women freedom from pity, humiliation, embarrassment from hair loss and most of all, isolation. Claire spoke about the confidence and new inner strength she gained within the class environment and the freedom of choice to wear, or not wear, her wig without any embarrassment or self-consciousness while having a "laugh"

> *Claire*
> *"And I'm thinking, 'oh my god!', you know? And, nobody's noticing you! Nobody can, nobody sees. You know, it's just you're feeling you've got this thing on your head. Em, so it's having confidence, and the exercise classes helped to give you that confidence. That there's other people doing the same thing, you're not alone, there's loads of people all in the same boat and we're all having a laugh about it. That's, that's what it was about"*

The ability to laugh and experience positive emotions in a safe environment has been linked with enhanced benefit finding following a traumatic event (Fredrickson et al., 2003; Joseph & Linley, 2008a; Linley & Joseph, 2004a). Overall, these ten women perceived this safe environment as a significant influence in their experience of PTG.

6.4.3 Positive support system

The physical activity classes also provided camaraderie. Research has repeatedly reported improved relationships with others as well as social disclosure and support as a determinant of the PTG process (Tedeschi and Calhoun, 2006). These new 'cancer friends' were a positive outcome of their trauma and were developed via the exercise class. The women repeatedly spoke of a 'bond' between themselves and the other women in the class due to an inherent understanding of their situation. Ussher, Kirsten, Butow, and Sandoval (2006) also reported a strong sense of community among participants, which they referred to as a "cancer family" (p. 2568). Kirsty described how the "dreaded illness" was a cohesive for bonding and affection towards each other.

> *Kirsty*
> *"Em, I would think, em, it's em...because we've all, well we've all had breast cancer[...] I just...I think it's because we've all had this dreaded illness, there's a bond...between us[...] And I just think it's this bond of...I don't know...maybe, perhaps affection in that, in a loose sort of term."*

The regular support from others familiar with the trauma of dealing with cancer created a connection for present and future friendships which ultimately could enhance their QOL. Justine found that it was not only the support she felt during the class, but the informal chats with coffee and biscuits, after the exercise class, that was her biggest support system.

> *Justine*
> *"You'd have a chat and you'd say, you know, when, when did you have your treatment? 'Oh I had it yesterday, you know?'[....] And I –I certainly found it a great help and support, Em, because it wasn't just- you went to the class for an hour and... you know you went home. Then they had a chat afterwards. We would have a coffee afterwards and have a wee chat [...] but, I would think the biggest thing, mentally was the emotional support from other women at the class. Em...I really think that was really the biggest support."*

Numerous studies have reported the benefits (enhanced confidence, coping skills, etc.) of social support groups during traumatic times (e.g. Adamsen, 2002; Midtgaard, Roth, Stelter, & Adamsen, 2006; Stevinson & Fox, 2006). However, support groups can also be perceived as "depressing, morbid and dwelling on illness" (Emslie et al., 2007, p. 6) and the people that attend them perceived as "needy, lonely, in poor mental health and obsessed with their illness" (p.6). Adamsen et al. (2001) reported that males participating in an exercise intervention felt responsible to their group to attend and add to the experience of the class, and indeed was central to stimulating comradeship. In general, exercise class support groups enable the participant to choose whether or not to disclose information about their illness in a supportive and energetic atmosphere. For these ten women, it was as a positive benefit to have people in their lives who understood them and an environment which gave them the choice in which to disclose their feelings or not. This choice of disclosure which the physical activity programme provided is something which other group therapies have neglected and may be an important facilitator of PTG.

Two key processes within the positive support systems that have been associated with PTG are 'role modelling' and 'sounding boards' and the exercise class provided both of these.

6.3.3.1 Role modeling

Exactly how the women supported each other was in the form of 'role modelling' or upward social comparison (Tedeschi & Calhoun, 1995, 1996). Justine explained how the exercise class provided the members of the class with the opportunity to associate with women who were completing their chemotherapy treatment, giving them a visual 'goal' or 'role model' to aim for.

> *Justine*
> *"Em... the physical activity programme, was very positive! I got a lot out of that. Em, I have to say that was really wonderful. From the point of view of meeting other people in the same situation as myself, you know when I was going through my chemotherapy and going through all this treatment. Em, meeting people who were in the same boat and meeting people who were just finished and you think, 'oh I'll be there in a couple of weeks!' Or months or whatever. That meant quite a lot."*

This type of role modelling has been found to have significant effects on the process of growth among cancer patients (Weiss, 2004) and group based interventions provide patients who otherwise have inadequate social support resources with access to other cancer survivors (Lechner et al., 2008).

6.3.3.2. 'Cross' comparison

In the exact opposite to upward social comparison, the women participated in a form of 'cross' comparison, or downward social comparison, meaning that, like Helen demonstrates, they compared their 'cross to bear' with the other women within the group, thus making them feel as if there were others who were worse off than them. Brenda recalled how she was quite lucky because this was her first time facing cancer treatment and not her third, like other women within the class. By confronting this, her 'cross' became lighter to bear.

> *Helen*
> *"I mean...there's an awful lot of people in an awful lot worse situations. [...] Then I am...at the minute. An awful lot of people. So you're just to be thankful. So say I am thankful...I got the cancer when I did! [hmmm] To me that's a very positive thing, too..."*
>
> *Brenda*
> *"God, I've got a cheek feeling sorry for myself, you know? I'm just feeling sorry for myself, you know, and these people have been through worse than me. I mean some people were up there for the third time [really] Uh huh. And they were still smiling [pauses] and you think...that's brilliant."*

Likewise, Kirsty echoed the majority of the ten women's shock at the amount of young women who were diagnosed and reflected upon how difficult it would have been to be diagnosed at such a young age with a young family. In this sense, they began to view them selves as lucky to be in their situation.

> *Kirsty*
> *"I couldn't believe how many young women were there. That, I was quite astounded at that [...] I was quite taken aback. I mean, as I say, you, well with an illness you associate it with older people. I mean there were some women, who were just in their 20's. I mean, I was really, really taken aback [...] It upset me, actually. It really did upset me, because I thought, och well, I'm- what age was I then?- 60? I think, and I thought, well I've come through life with no illnesses and here's these young women- with families and it really, really did upset me that. That, I felt that- I –I felt- I don't know, it just em... it kinda seems to get to me because every time I came home, I would say to my husband- see these young women? And I can't believe it! And-and-and I-I've said it to so many people. That I was really taken about that there was a number of young women who were getting treatment [...] I found that very profound and made me think about how lucky I had been".*

Joseph and Linley (2008) argue that the experience of positive emotions such as gratitude and appreciation may help facilitate the reduction of stress following trauma and potentially contribute to the broaden-and-build theory of resilience, and potentially growth. Thus, the class environment enabled the women to compare their 'crosses' to each other, feel appreciative for their own circumstances, potentially facilitating the growth process.

6.3.3.3 Sounding Boards

Another way in which these women supported each other was by using each other as 'sounding boards'. The group was an informal forum for discussion about fears and concerns that could not be expressed at home. Here, Florence talked about discovering links between her symptoms and the drugs via the other women's experience.

> *Florence*
> *"Because, em, although the side effects, everyone can be different, there were certain things you felt and thought...you didn't realize or you didn't actually know that maybe it was connected with any of the treatment that you were having. Or, em, the tablets or, you know...But, you when you share this with other people, 'oh ya, I felt like that as well, em, and it was things like that."*

Justine talked about how it was a forum for discussion about fears and ailments.

> *Justine*
> *"And if somebody was worried about something, you know you could say, oh that happened me as well. You know, that was ok! That was nothing. So, we all got a lot of support."*

It was also a way to learn insider tips via the other women in the exercise group. Diane talked about learning new methods to control sickness.

> *Diane*
> *"Em, and it helped me because of the camaraderie. Em, and...just talking about stages in other people's, you know, illness. And you picked up hints on how to alleviate sickness, just 'oh that's good, oh I must try that' kinda thing".*

This 'forum' environment has been a frequently reported benefit of group based therapies (Lechner et al., 2008). Emslie et al. (2007) reported similar findings for the class as a forum for discussions on cancer related general to specific topics (e.g.government benefits, travel insurance and alternative therapies). Mayers et al. (2005) found that women with HIV reported greater psychological adjustment due to teaching and sharing their experiences with one another. This camaraderie and positive support system fostered via the exercise class was perceived to be a powerful influence on the women's experience of PTG.

6.3.3.4 New relationship with daughter

Although this subtheme was mentioned by only one participant, it was deemed incredibly salient to her experience of the class and growth process and was therefore included as a component of the support system in which the class provided. Florence recalled how her involvement in the physical activity programme opened up a window of opportunity to reconnect with her slightly estranged teenage daughter. For her, it created a non-tense activity in which they could spend quality time. To commence, Florence discussed how before her cancer experience, that although she intended to give her daughter time, after the daily chores and routines, there was never any quality time left for her.

> *Florence*
> *"Because you work, I mean my job, it was half eight to half four, so by the time I got home, they would be in from school and then it would be, you get the tea on...and you know, before you know it, they'd do the homework, and before you know it, the evening's done. And then the weekend you kept busy doing housework you know, catching up. So I think, em, I really enjoyed that I could give her some time."*

The class provided an experience to partake in activities they both loved. This routine they shared during her cancer experience was perceived to be a huge benefit of the class and created a lasting closer relationship with her daughter.

> *"[...] She just loved going swimming. [...] Ya, ya, it was great. Ya...I used to enjoy going to pick her up from school and you know, so, she would come. One time, she came and one of her friends couldn't come swimming so she just came and sat in whilst we were doing the class, so em, I think, she enjoyed watching. [...] No it was good to have the time to do that, you know? [...] Well, it was, ya, it was something different... Because it was something we were doing constantly em, once or maybe, well once a week. It was once a week, ya, you know, em, if we had time at the weekend we would maybe go swimming. But that was once a week I would definitely pick her up from school and you know, it wasn't that she came in... it was just to have no tension, we were doing something together and that happened once a week, so ya it was good..."*

6.4.4 Somatopsychic influence

Although the women never explicitly linked the general physical benefits following physical activity to their attainment of PTG, it did appear to have an indirect influence on their PTG. The somatopsychic influence (Harris, 1973) was mentioned repeatedly throughout the interviews, specifically, the women believed that by increasing their physical activity levels and improving their over physical health, they could manipulate themselves into feeling good mentally. Therefore, the positive emotions elicited from the participation in exercise could have had some impact on their ability to achieve PTG (Linley & Joseph, 2004). As research has consistently supported the physical and psychological benefits of exercise, especially during cancer treatment (Mutrie et al., 2007), more exploration is needed to create definitive links between these two variables.

6.4.4.1 General physical benefits

The perceived direct physical benefits of the exercise included increased levels of energy, better sleep patterns and to alleviated nausea. Deliverance from the negative physical side effects of the chemotherapy, via physical activity participation, was perceived by the women to positively influence their recovery and could have potentially bolstered their experience of PTG.

> *Brenda*
> *"...So and that just helped me sleep better."*
>
> *Diane*
> *"I think it helped with the sickness. ...It helped the nausea."*

Research has consistently supported the short-term and longer-term physical benefits of exercise, especially during cancer treatment (Mutrie et al., 2007). Perhaps by reducing these negative day-to-day ailments, they were able to focus on more important and existential issues and develop their process of growth (Yalom & Lieberman, 1991).

6.4.4.2 Buzz

Of course, the 'feel good factor' or 'buzz' after exercise was mentioned. Elaine and Gloria talked about experiencing a psychological buzz and a 'heightened awareness' following activity which were deemed to be huge psychological benefits for those whom had never exercised before.

> *Elaine*
> *"It is, there's no doubt about it, you get a definite buzz... from exercise."*

> *Gloria*
> *"Good...em...good, although physically tired, physically sore, um...it never leaves you sort of mentally drained, it leaves you quite alert actually, a sort of heightened awareness."*

Meta-analyses and independent reviews have reported enhanced cognitive functioning after physical activity (Boutcher, 2000; Etnier et al., 1999). Gloria's experience of heightened awareness following physical activity connects to Slusher's (1967) theory of the body's potential of transcendence to self-actualisation through physical activity participation (as cited in Harris, 1973). Ultimately, the women perceived this buzz and their heightened mental cognitive functioning as a positive influence and outcome on their experience of PTG as some of the women had never participated in exercise previous to the intervention.

6.4.4.3 Body is still alive

The actual going through the motions as well as the positive connotations of exercise as a normal, everyday activity, which normal everyday people engaged in reinforced the women that they were on the right track to recovery. Exercise is something that the healthy can do and by participating in the exercise, they felt that they were 'normal' once again. When asked why Brenda perceived the exercise itself to have been an integral component to her process she responded by retelling how the exercise itself reassured her that although her body may feel beaten, broken and dead, when she exercised, it made her feel as if it was still alive; that there was something there, something underneath, still kicking, still alive.

> *Brenda*
> *"I needed to know, I needed to know that I could, I was still (pauses), with all this, the chemo and all the drugs, going through my body, that apart from just fighting to do the day to day things, It was really good that I knew that I was still capable of exercise. All be it on a lower level, you know. That was really important to me, to know that I could still do it 'cause I thought, well, you know, it's not killed off everything! (Laughs). You know? There's still something there and if I can work on that, you know, and make it better..."*

Furthermore, the positive emotions elicited from the participation in exercise could have also had some impact on their ability to achieve PTG (Linley & Joseph, 2004), however more exploration is needed to create definitive links between these two variables.

The previous four themes focused on how the women perceived the class to influence their process of PTG. The following section reviews two outcomes which occurred as a direct result of their participation in the exercise class which could have impacted on their PTG. Again, this is an area neglected in the PTG literature to date.

6.4.5. Transference of skills

This theme was quite prevalent and pertained to the unique ability of the class to enhance the women's confidence levels and transfer these new confidence levels to the real world. By testing themselves physically as well as mentally, these women gained courage, belief and mastery over the same bodies that they feared only a few months earlier. The class returned and, more importantly, increased their confidence to return to work, face the public without the wig and continue exercising. An example of this comes from Claire as she talked about how her new inner-strength, gained via the class and ultimately the trauma, helped her return to the workforce after her time off.

> *Claire*
> *"Em, so it's having confidence, and the exercise classes helped to give you that confidence [...]Em, but it's given me the confidence to go back to work [...] But I think the exercise classes, definitely, undoubtedly, helped, you know, to do that."*

Thus, the classes seemed to have a direct influence on Claire's attainment of confidence and creation of a stronger self, which is a frequently reported PTG outcome (Tedeschi & Calhoun, 1995). Most of the women recalled the main reason for the shattering of their confidence to be the severely traumatic loss of hair. However, for these ten women, the classes encouraged them to remove their wigs during the sessions (due to unpleasantness of a hot and itchy wig) with no embarrassment or feelings of isolation. Claire recalled the role modelling of bravery within the class and how it transferred to her facing the public minus her wig. This was an enormous achievement for Claire and the women attributed their new found courage outside of the class to the strength they acquired through the trauma and the class.

> *Claire*
> *"Just it gave you the confidence. Because, we, we would get hot doing our exercises, and take the wig off [...]And, I think, that helped you to, em, take the wig off earlier than you would have done. I, I was conscious of it, and I did have to be sort of pushed into, you know, going out without a wee bit at first[...] but it was because of the exercise classes that definitely, because that was you going out, em, with other people, very early on. And, em, not bothering. So then that gives you a wee bit of confidence to go somewhere else and not bother."*

This secondary trauma of hair loss has been found to be a prevalent issue relating to gender identity and femininity (Emslie et al., 2007). Lemieux, Maunsell, and Provencher (2007) conducted a review of the effects of hair loss on female cancer survivors and found it to be among the top most distressing or troublesome side effects of chemotherapy. Indeed, some women even went as far as to reject chemotherapy because they did not want to lose their hair (Tierney & Taylor, 1991).

The class also gave them the confidence for an easier transition to re-enter the world of physical activity after chemotherapy. The women believed that had they not "nipped it in the bud" they might not have had the self-assurance and ability to return to the physical activity after chemotherapy due to extreme fatigue, weight gain and loss of confidence. Brenda demonstrated this as she discusses the difficulty of recommencing activity without even a "wee level" of continued exercise.

> *Brenda*
> *"Also cause I kept up that wee level, it made me once I'd finished the chemo, and finished the radiotherapy, it was easier to start stepping it up back again [ok]. You know, whereas, I think if I hadn't done anything, I would have found it awful hard to get started [ya], you know?"*

Stevinson and Fox (2006) reported similar findings with participants' perception of the exercise class acting as a sort of catalyst for the reintegration of physical activity. Claire and Brenda's commentary on the enhancement and transference of confidence was a direct result of the class and gives researchers indications at the possibility of the exercise class as another facilitator of PTG.

6.4.6 New health behaviours

A prevalent theme of the analysis was the emergence of new health behaviours attributed to the occurrence of the trauma and the participation in the exercise class. These new health behaviours include increased exercise, changes in diet, and even vigilant self breast examining (which has been reported to be under-performed within the normal population, due to the potential existential barriers involved with the exam (Goldenberg, Arndt, Hart, & Routledge, 2008). Florence and Claire both speak of increasing their activity levels and challenging their bodies in ways they had not previously done prior to their trauma via taking part in 5k and 10k races. These races were also attended by other members of the Mutrie et al. (2007) study. PTG research has not included any focus on health benefits following trauma, and yet from these quotes there is a clear attribution of new health behaviours to the trauma and the participation in the exercise class.

> *Florence*
> *"Eh, well, I think it was, um, I've always tried to keep fit, maybe not quite as much as I do now. Now I try and aim for something everyday [...] I did the 5k and I'm doing another 10k in September. So you know. I would never have dreamed of doing these things [before the class]. I don't think I would have even thought about doing them. But I've tried to push myself to do them now."*
>
> *Claire*
> *"You know, em, and, we did the wee 5 k run thing, during treatment [...] I wouldn't never have done that. I've never done anything like that before [the class]."*
>
> *Diane*
> *"I had never, I mean I teach gym in the school, but I mean I'd never ever, ever been to the gym. It was my first experience in the gym [with exercise]. Uh huh. With exercise...I was doing things I'd never done before...I was doing, I'd never gone to the gym before."*

The class uniquely offered an opportunity to try new health related activities and promote continued use of these new habits. This is a new PTG outcome facilitated by group based intervention that is not addressed in the current literature. Although it can not be established whether or not these women would have begun a physical activity programme without the aid of the intervention, it is clear that these women's experience of achieving new health behaviors was a result of this exercise intervention class following the trauma of diagnosis.

6.4.6.1 Importance and responsibility for own health

The sudden diagnosis of cancer heightened the women's awareness of the need to take responsibility for their own health and health behaviors. This sudden consciousness is similar to Demark-Wahnefried's 'teachable moment' or 'cue to action' (Humpel, Magee, & Jones, 2007). Research suggests that there is a 'window of opportunity' in which health programmes and health practitioners must use to highlight healthy lifestyle changes and promote the patients' responsibility for their own health (Gritz et al., 2006). In this study, it is clear that the women's participation in the exercise class was bolstered by this window of opportunity and therefore enhanced awareness of their responsibility for their own health.

> *Florence*
> *"Em, I think to make me aware that, you know, I should be doing more exercise and [...] And it made me aware that, just everyday, em, things you do, you can out in some walking, you know. And even just a few minutes a day is better than nothing, you know?"*

This enhanced awareness and responsibility for their own health is a novel PTG outcome stemming from the trauma of diagnosis and was fostered via the exercise class.

The participation in a health based intervention programme, the presence of an expert and the physical motions of a check up enhanced the probability of the women continuing their exercise routine and reflecting upon their overall health status. Gloria describes how the exercise classes were a direct influence on her maintenance of a healthy lifestyle as she was aware that she was being monitored and must therefore take a step back and take stock of her health. Gloria perceived her enhanced health functioning as a unique result of the participation in the exercise intervention and is another element of this type of group based programme that warrants further exploration.

> *Gloria*
> *"I guess the research programme was making me do it, but I said that earlier. Um... the benefits...in having, in talking to someone at programme times and reviewing how you've been, em, I suppose was useful. Even if it was only sort of the ticking off of forms, it would make you, ob- obviously immediately, you needed to take a step back and look, 'well how have I been?'"*

6.4.6.2 Body as a barometer

Finally, some of the women reported the innovative use of the body as a tool for monitoring their own health status. Gloria described how she now used her body, with the help of physical activity, as a measurement for how her overall health is. Specifically, she had a walking route that she completed daily and when she found the route to be more difficult than usual, she would go to her doctor immediately. This reconnection with her body and use of it as a guide to monitor her overall health is a novel and positive outcome that transpired from her experience.

> *Gloria*
> *"It's a useful guide to me for how my physical health is... How long I can walk, and how far I can walk and, and how long it takes me. Because I still find myself, I have sort of peaks and troughs, physically. I'll have time where my energy level is just very way down. Em, and when that happens, well, I, I know right away by the fact that I can't quite manage my hard walk in the time that I normally would [...] So, I do it, to keep a monitor on my health and, and if it was, and if my energy levels were dropping for too long, I'd be going back and getting some blood taken, you know, even if I wasn't due for a check up."*

Such new health behavior outcomes are the epitome of the PTG definition, surpassing the level of functioning (psychological, emotional or what is evident here, physiological) than which existed before the trauma occurred (O'Leary & Ickovics, 1995). Gloria and the other women seemed to be functioning at a heightened physiological level (more active, more perceptive of their physical health) than before their diagnosis of cancer, learning this improved lifestyle via the exercise programme.

6.5 Conclusion

This chapter reviewed the experiences of ten female breast cancer survivors who participated in an exercise intervention. In summary, the women regarded the class as a sort of 'saviour' and there was evidence to suggest that this type of group therapy facilitated PTG in similar and additional ways to previous findings (see Lechner et al., 2008). The exercise classes provided a safe environment with expertise tuition, freedom from embarrassment and a warm environment in which to disclose fears, worries and problems. The transference of increased confidence from the class room to normal life fostered a new found inner strength. Positive outcomes achieved via the class were new health behaviours, a heightened awareness of their health and the importance of a healthy lifestyle and yet these have not been studied or properly recognised as important benefits from adversity. Ultimately, this study highlights the potentially unique influence of the exercise class on the process and outcomes of PTG. Thus, with regards to the 'bigger picture' in PTG research, there seems to be a place for physical activity group based programmes and issues relating to the body in the process of attaining and as an outcome of PTG; especially when the trauma is directly related to the body as in examples of cancer or illness.

There is, however, the challenge of determining whether it was the class or simply the activity that influenced experience of growth. Cordova (2008) posits that facilitation of growth can be achieved through the reduction of high physiological arousal using physically positive exercises, increasing a survivors "sense of control over their bodies and enhance the ability to observe, tolerate and at times regulate their thoughts and emotional reactions" (p. 195). On the other hand, Weiss (2004) found that there was a significant correlation between PTG and having contact with another who had experienced PTG suggesting that the role modelling and sounding board phenomenon within the class was the important element of the growth process. Nevertheless it seems that there was an interplay of the beneficial physical and psychological effects of the exercise itself and the emotional/psychological benefits of the class environment on the process of PTG. Further reflection upon the use of IPA as a methodology as well as potential limitations to the overall study is discussed further within Chapter Eight, section 8.4.2

Here, an exercise class was perceived to be one of seven main themes contributing to the experience of PTG. The findings reveal how and why these ten women perceived the exercise class to have been beneficial in their experience of PTG through components that have been previously reported and adding additional reasons for its success. These reasons included: providing an environment where they could choose to disclose, building confidence which could be transferred to other areas of life, giving them an opportunity to develop new health related activities, and enhancing their awareness and responsibility for their own health. Future research could extend the rich exploratory data reported within this study in order to develop more definitive links between group based physical activity interventions and the experience of PTG. Further reflections and suggestions for research development are discussed in detail within Chapter Eight.

CHAPTER SEVEN[9]

THE POTENTIAL ROLE OF THE BODY IN THE PROCESS OF POSTTRAUMATIC GROWTH

7.1 Abstract

Psychology has been criticized for its indifference towards the influence of the body upon positive psychological functioning (Frank, 1998). The aim of this chapter was to broaden the understanding of posttraumatic growth (PTG), and the potential role of the body in its process and outcome. Ten female breast cancer survivors, from an already existing study, participated in an individual, open-ended interview. These were transcribed verbatim and analysed for themes that reflected the women's experience of growing from adversity. The role of the body was found to be a vital component to the process and outcomes of PTG, with the sub-theme 'New body' deconstructed into three smaller themes: 'fear of new body', 'negative effects of chemo on the body' (fatigue, loss of desire), and 'reconnection with body' (cocoon to butterfly, listening to body, body as a barometer/monitoring). In addition, the analysis revealed how these ten women perceived the body as an integral component to their self-identity and how this impacted on their achievement of PTG. Future research should begin to acknowledge and conduct further study into the neglected role of the body as a contributor or determinant of the PTG process.

7.2 Introduction

As demonstrated in Chapter Two and Six, this thesis has highlighted the important role of the physical-self in the restoration of the psychological-self following trauma. However, psychological research has been criticised for its indifference towards the body (Stam, 1998) and the fact that it has not yet considered the integral influence of the body as a facilitator of the PTG process. This chapter

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[9] A paper from this chapter has been accepted for publication in the Journal of Humanistic Psychology

will review the perceived role of the body in the growth process following bodily trauma.

Physical trauma (cancer, burns, etc.) to the body, inside and out, can create an entirely different adjustment framework due its devastating effect on self-identity (Gilboa, 2001). The systematic decline of bodily functioning following cancer diagnosis (e.g. increased fatigue, weight gain, hair loss, steady attack on the body by the body) should therefore have a tremendously unique and different impact on a person's ability to cope, make sense of and eventually grow from their trauma. For example, a terrorist attack survivor has the relief of knowing that their trauma was indeed time limited and will most likely never occur again. However, cancer patients, and those with other traumatic and life threatening physical illness diagnoses, are never entirely "post-trauma'' (Cordova, 2008).

Frank (1998) reviewed the phenomenological/physiological literature of the body and its association with illness and proposed five main areas of body research, three of which are relevant when explaining the body's potential influence on the PTG process. The first area of research focuses on the ability of illness to disrupt our consciousness and call attention to the body. Evolution has enabled humans to become aware or conscious of their own mortality, which in turn creates great discomfort towards the body from the awareness that "the physical body is a vehicle which life passes unto death" (Goldenberg, 2005, p. 224). Terror Management Theory (TMT) is embedded in the innate, biological need to survive, leading people to experience existential fears and paralyzing terror with the realization of inescapable death (Pyszczynski et al., 2002). Death is the ultimate threat to the self and creates a natural call for preservation within an organism (Pyszczynski et al., 2002). TMT and PTG have traditionally been regarded as two opposing theories on the psychological adjustment of this realisation. PTG focuses on the positive changes that can occur when faced with mortality while TMT states that our behaviour is focused into finding meaning in life and value in ourselves, in order to combat the sheer terror of the inevitability of physical death, "how can one exist on a symbolic plane when ones physical body provides a constant reminder that we are made up of corporeal matter, prone to deterioration and death?" (Goldenberg, Arndt, Hart, & Routledge, 2008, p. 129).

TMT theorists have criticised PTG theory for neglecting the role which mortality salient environments (e.g. death threats, reminders of mortality) could play in the facilitation of PTG (Lykins et al., 2007). Mortality salience hypothesis suggests that when a person is reminded of the inevitability of death, their world view defence strengthens and the individual seeks to conform to the accepted beliefs and behaviours of their culture (Harmon-Jones et al., 1997). Using the mortality salience hypothesis on a woman who has just undergone a bilateral prophylactic mastectomy, her body would become a long term, inescapable reminder of the inevitability of death. Thus, unlike other trauma victims (e.g. a bereaved parent) whose bodies are still in tact, and were never threatened via the trauma, they are immersed in a mortality salient environment and forced to acknowledge and adjust to their experience with this transient reminder.

While PTG accepts that survivors will indeed confront the idea of death after trauma (Tedeschi & Calhoun, 2006) it does not consider the lasting effects of the damaged body on adjustment to trauma and achievement of PTG. Cozzolino, Staples, Meyers, and Samboceti (2004) believe that to understand the PTG process further, research should concentrate on how specific traumas can increase a person's salience of their own mortality and how this then affects the process of growth.

Mortality salience and the body directly link to Frank's (1998) second and third area of research, which posits that we can only know the world through our bodies and therefore our self-identity is a direct result of all worldly experiences via the body (Frank, 1998). Frank's theory therefore suggests that the experience of psychological growth may only be achievable through our physical self and state of being. This is especially accurate when dealing with female breast cancer survivors who must endure the demise of their perceived femininity via loss of hair/breasts, which, until the point of diagnosis, they believe has defined them (McCaughey, 2006; Welch, 1999). McCaughey (2006) conducted an integrative review of body image after bilateral prophylactic mastectomy. Overall the surgery was perceived as a threat to their "sense of womanliness" (p. 46) and feelings of reduced femininity (Welch, 1999). Negative physical changes to the female body included reduced sensitivity, scarring, grieving for the breast and dislike of intimacy surrounding the breast (Hopwood et al., 2000; Lodder et al., 2002).

A negative body image can have a devastating effect on a person's development of self-concept (Goldenberg, 2005). In addition, lowered physical self-esteem has been found to induce higher rates of depression and anxiety, as well as decrease overall well-being (Robert et al., 1999). Emslie et al. (2007) reported a perceived decline in body image stemming from hair loss, as did Lemieux, Maunsell and Provencher (2007) who conducted a review of the effects of hair loss on female cancer survivors and found it to be one of the most upsetting side effects of chemotherapy. Thus, by enduring and overcoming the negative physical experiences of chemotherapy, women can achieve new strength and appreciation for their physical functioning (PTG), leading to an increased awareness of their physical self and a positive reconnection with the same body that frightened them only a few months earlier.

The aim of this chapter was to acknowledge positive changes that are not currently addressed by the existing scales of assessment. In particular, the current literature and main models of PTG have not yet considered the body's role as a determinant of PTG and the health benefits following physical trauma. The degree to which the body contributed to the known and previously unknown determinants of PTG was then assessed.

7.3 Method

Due to the nature of the study, each methods section and analysis section is identical and will not be repeated.

7.4 Discussion of Findings

This chapter will focus upon the theme of a 'new body' and its influence on the process of PTG. This sub-theme was further deconstructed into three smaller themes: 'fear of new body', 'negative effects of chemotherapy on the body' (fatigue, loss of desire), and 'reconnection with body' (cocoon to butterfly, listening to new body, body as a barometer/monitoring). In addition, this chapter will review how these ten women perceived the body as an integral component to their self- identity and how this impacted on their achievement of PTG.

7.4.1 New Body

There was a clear notion of a sequential process within the women's experience of PTG, thus within the themes there is a kind of timeline of negative to positive relationship with their bodies. This ultimately would suggest that it is not necessarily having cancer that promotes PTG but the subsequent physical and psychological responses and processes by which they endure following trauma.

7.4.1.1 Fear of new body

The women frequently described a new found 'fear' of their new body following cancer stemming from the threat of reoccurrence, hair loss, breast loss, sickness, etc. There was a definite feeling of 'loss of control' over their body which ultimately was perceived to affect their growth process. Here Florence recalls a 'cloud of reoccurrence' that seems to follow her into every doctor's appointment. In addition to this, any aches or pains that would have been disregarded before the cancer have now become signs of something perhaps more sinister. Florence's new body was a mine field of potential harm in which she struggled to claim control over while also battling with her own embarrassment of bringing attention to this new body.

> *Florence*
> *"...And even every time you go for a check up, it's still you know, 'God, are they going to find something this time[...]I think its just a constant, that it will come back... Em and that you constantly, em, you know, sort of, you know feeling for lumps or bumps or you know, em, any aches or pains and things like that, you know? [Uh huh] Em, so in some ways I think maybe, em, I can be over, you know, I think 'oh God, I've got an ache' and I'll go to the doctors. Em, and then sometimes you sit, you feel a bit that I'm being silly, so I don't do anything about it. And then I worry about it 'cause then I think, well maybe no, I should be doing something you know, so..."*

Florence's body had become a transient reminder of her mortality (mortality salient environment) and the fear of reoccurrence supports Cordova's (2008) suggestion that cancer is not a time-limited trauma; its effects are long lasting, inhibiting these women to ever truly be 'post-trauma'.

Day-to-day activities carried out via the body have become a thing of 'terror' for Justine as she tries to get to grips with her altered physical form. Justine experienced paralyzing fear of further damaging the body after surgery, which reinforces the unique physical challenges and psychological processes these women endured to eventually attain PTG.

> *Justine*
> *"And of course, you have...the surgery and you are so and, it's like 'what can I do?', and you're like absolutely terrified to do anything [...] I mean I was actually frightened to do anything, because, I thought, I don't want to damage my arm, or you know, you've got- you've had surgery on your breast and all the rest of it and you're not sure what you can or can't do."*

Again, Claire recalled how she was 'scared' of her new body's vulnerability to infections and the restrictions this put upon her. Simply venturing into town became a potential disaster for her new body's susceptibility of infections and illness.

> *Claire*
> *"You know, you don't want to be in too many crowds of people 'cause you're scared of picking, your- your immune system's quite low, and you're scared of picking up too many other, you know whatever any other problems are about."*

Fear of the new body via 'loss of control' has been frequently reported following physical trauma (Milne et al., 2007; Sabiston & Crocker, 2008; Salick & Auerbach, 2006). Sabiston et al. (2007) interviewed female breast cancer survivors whom reported feelings of 'betrayal' by their own body, "you sort of think your body is giving up on you, like you're not in control; you have the right to be in control of your body and then this happens" (p.430). Salick and Auerbach (2006) repeated these findings with amputees who reported a devastating blow to their physical self upon losing control over their own body as did Milne et al. (2007) whom found similar reports of the distressing effects of loss of control by breast cancer survivors, "one of the worst things about cancer treatment is that you are no longer in control of your own body" (p.1477).

7.4.2 Negative effects of chemotherapy

The negative effects of chemotherapy are imperative for understanding the potential impact the body had on the women's process of growth from cancer. Declining physical fitness, increased and unstoppable weight gain, debilitating fatigue, changes in taste, loss of sexual drive and all-consuming sickness were experienced by the majority of the nine women who underwent chemotherapy.

A new appreciation for their health (a PTG outcome) and their bodies (past, present and future) was ignited as the negative effects were viewed as reminders of how much they value their health.

7.4.2.1 Weight gain

Unfortunately, chemotherapy is well known to induce unprecedented rapid weight gain (Courneya, 2003). Overall, all of the women reported weight gain via chemotherapy treatment. For most, they had never been heavy and thus seemed to feel as if they were living in a body that was alien to them. The following are comments on the negative effects of weight gain on the women which, by eventually overcoming the weight, led to an increased appreciation and awareness of their health and their bodies. Brenda described how she had never been overweight, with it negatively affecting her perception of self, whereas Gloria described the practical inconvenience of a heavier body.

> *Brenda*
> *"Och it made me feel kinda, och, self-conscious, 'cause I had never, ever been overweight. I've always been quite slim [...] I really didn't like it at all, em, and when I looked in the mirror, I thought, oh God...I don't look very nice (laughs), you know?"*
>
> *Gloria*
> *"Well, it's uncomfortable! I don't like it! Um, I don't want to have to go out and buy more clothes because the ones I've got don't fit me."*

Overall, these women had to accept, adjust and appreciate their new, heavier and uncomfortable body that was ultimately foreign to them.

7.4.2.2 Fatigue

Claire speaks here about her loss of energy and how this led to feeling down and depressed. All of the women experienced episodes of fatigue and lethargy from the chemotherapy, again finding it difficult to recognize their new tired, heavy bodies.

> *Claire*
> *"I mean, you're not that great. You are feeling pretty down, you know, em, you lose a lot of energy, you're very tired, you know, you can't just bounce around."*

7.4.2.3 Taste

Such a simple thing as 'taste' was negatively affected via chemotherapy and contributed to a new physical state of being. Kirsty became 'terribly' thirsty, needing to replenish her new body frequently throughout her interview and over the day. Claire recalled the 'rottenness' of her mouth and how this affected her ability to enjoy food, drink and general daily life, *"I always had a rotten taste in my mouth."* Living with this permanent revolting taste created a heightened appreciation for her health with the return of her body's proper functioning.

7.4.2.4 Sexual drive

A few of the women reported changes in their body with regards to sexual functioning and drive. Following chemotherapy, their new bodies seemed devoid of sexual urges and they reported a loss of the sexual self. Here Isabelle recounts how the treatment tamoxifen left her barren of sexual feelings.

> *Isabelle*
> *"...by the time they had (laughs), they had given me a few doses of tamoxifen, eh, sex just totally went out-I do-I do not have any sexual feelings left in my body."*

7.4.2.5 Sickness

One incredibly common negative physical side effect of cancer treatment is nausea or sickness. These women experienced gut wrenching periods of sickness which they had never encountered before. Suddenly, their old body had departed and a new, vengeful body had taken its place. The following is a candid account from Helen about how all-consuming and out of control the physical sickness had become.

> *Helen*
> *"...this isn't a particularly very nice story, but em [...] I got up, had a shower and got dressed- and this was only my second chemo- and eh... I started to feel sick. And, I knew I wasn't going to make the bathroom and went into the utility room off the kitchen and I was so sick, seriously sick, I lost control of my bladder. And I found that...humiliating, you know? I was so sick, I couldn't control...I had no control over my bladder. Apparently I didn't realize this can happen, in severe forms of sickness. In fact the oncologist said I was really lucky it was only my bladder. And, I find it very, oh I don't know, degrading? You know, you're so sick, and you can just feel urine trickling down your leg[...] I just, I felt so weak, because this sickness- I'm speaking, now maybe I had been standing being sick in these sort of wet trousers and*

> *that...probably for 20-25 minutes [gosh] So it wasn't like, a five minute slot."*

Toombs (1992) suggests that the embarrassment and shame stemming from the loss of certain physiological functioning can cause severe alienation of the body from the self. Helen's loss of bladder control created a deep sense of humiliation, or degradation as she described it, which in turn caused the disconnection or 'alienation' of her own body from the self. Helen's portrayal of her body as no longer controllable gives insight into what these women had to physically go through to come to terms with their new body and eventually grow from their trauma.

The negative effects of chemotherapy upon the body were a wake up call or catalyst for a new appreciation for, and importance of, these women's previous good health and wellness. Claire described a state of ignorance from people whom have never been sick and how lucky she was to now know what its like to be sick and what it is like to feel well.

> *Claire*
> *"When you go out the house in the morning now, you appreciate, 'I feel, ya, I feel well!' And it's a lovely feeling. [uh huh]. You know? Em, so, you know, that's a positive feeling as well [...] It's just, you don't, you do not realize how nice it is to feel...feel well".*

Brenda discussed how the loss of her health made her realize its importance above all else and how she would no longer take her physical self for granted again.

> *Brenda*
> *"Because if you don't have your health, you hav'nae got anything [...] But em...it's just that my health, I would never take (pauses), you know, never take it for granted...ever again."*

"Dysappearing" is the term given to the phenomenon of the loss of the body's "taken-for-grantedness" following illness (Frank, 1998). This term implies that all humans take their body and health for granted until something goes seriously wrong. Following illness, the body is thrust into the person's consciousness and then "dysappears" (Leder, 1990). This "dysapearance of the body" can in turn induce a change in sense of self, creating awareness that the self is in fact dependent on the body (Kliever, 1995). Ultimately, the loss of hair or a breast can entrap a person within this 'taken for granted body' and rapidly shove the body from the subconscious to their "experienced world" (Kliever, 1995, p. 60; Toombs, 1992). It appears therefore, that these women's illness pushed their bodies into their consciousness making them more aware of and appreciative of their physical self. However, this new appreciation for the physical self has not been adequately researched within PTG literature.

7.4.3 Reconnection with the body

Following the traumatic diagnosis of cancer and the negative physical/psychological effects of chemotherapy, there seemed to be a positive stage of reconnection with the body which was deemed to be an important part of the women's experience of PTG. Many of the women reported having a new awareness of their body and a more positive relationship with it than which existed before the trauma occurred. This, in itself, is a PTG outcome following physical trauma facilitated through the corporeal self.

7.4.3.1 Cocoon to butterfly

The physical body after trauma can provide two equally important states of mind: to remind us of our death and to remind of us of our life, "mortality salience should either facilitate avoidance of the body because it can remind us of our inevitable death or approach of the body because the body can also be an exhilarating reminder that one is alive" (Goldenberg, Spee, & Greenberg, 2006, p. 129). Evidence of this 'exhilarating reminder' was found among these ten women as their body became a vessel for hope when they began to see positive physical changes following chemotherapy.

> *Elaine*
> *"Your eyes look flat, there's no sparkle in them, and all the rest of it. When the chemotherapy stopped, and things started to grow back again, like my hair [...] Um (pauses) it was like spring...because everything was just, you know, bursting out! My hair! My face was really hairy at one point. It's still a wee bit furry. But em, the hair on my head was so strong. My eyelashes were just... crazy and I really began to feel so much better. I suppose, once that stuff, filters out of your system. I just felt really great..."*

Elaine's physical transformation from dull and 'flat' to 'like springtime' resembles the natural transformation of the butterfly; where her body was once dormant and hidden from the world (cocooned), upon completion of chemotherapy she began to emerge as the butterfly, alive and full of life (hair, energy).

Elaine also described her chemotherapy experience as a therapeutic and detoxifying phenomenon.

> *Elaine*
> *"Another positive thing was I felt, through all of it, although the treatments horrible, when I finished my chemotherapy (pauses) looking back, no not looking back, at the time even, I felt as though it was almost like a cleansing...experience."*

Elaine perceived the experience to be like shedding her skin (cocoon) or her old life and becoming a new and enhanced person at the end of it (butterfly). This is an interesting PTG outcome that was achieved via a physical stripping of the body of hair, sickness, fatigue (etc.) and then a rejuvenation of a new self. This type of rejuvenation process or PTG could only have been facilitated via the body.

Claire emphasized the rejuvenation process following chemotherapy, likening the re-growth of hair to 'spring time'. Her analogy of a plant staring to grow is similar to that of the butterfly emerging from the cocoon; a new rebirth of something beautiful. Interestingly, her hair has now become a symbol of health and renewal rather than sickness and disease.

> *Claire*
> *"You know I can only speak for myself, em, but, you know, when your hair's coming back in, you know it feels like spring time[...]But I found, when your hair started to come back in, it was wonderful. That was, that was like springtime! That was like, you know, it was like seeing a plant starting to grow. You feel as if, oh well that's... you know, it must be getting better, something's coming in, it, it- That was great! And then just ever look back from that, you know?"*

Dahan and Auerbach (2006) found the rejuvenating experience of 'physical rebirth' to be a strong component to their participants' process of psychologically growing from Myeloma. One male participant described a similar 'cocoon to butterfly' process, "as soon as I got back (strength) all these passions returned...so I think when all the hair returned and all these other things returned, everything returned. You know, you become your self again, which is the strength" (p.377). The perception of becoming stronger in the self is a very well documented PTG outcome (Tedeschi & Calhoun1995). What seems to be happening among these patients (inclusive of the ten women) is that by becoming physically stronger, the person then becomes mentally stronger, which a unique process of growth exclusive to physical trauma and recovery.

7.4.3.2 Listen to body/ Body as a barometer

This 'new awareness of the body' led to a novel ability to listen to their body in an innovative way. Isabelle recalled how she was previously disconnected to her body and interpreted signs of fatigue or pain as a sign of laziness. Since her trauma, she has allowed herself to listen to and accept what her body is trying to tell her without any feelings of guilt.

> *Isabelle*
> *"...One of the...one of the things people kept saying to me, which I actually didn't understand to begin with was: listen to your body. Eh, and I said 'ok' so, I feel hellish! Right my body is telling me I'm not feeling very well [...]I think it was, people very wisely saying to me now and then 'listen to your body'. 'Listen to your body'. Your body will tell you what you can do and what you can't do. And now, instead of saying to myself, 'och you're just making and excuse for being lazy', I say, no my body is telling me, I've had enough! I want rest today [...] So, as I say, I've just got to work out what my body is capable of doing and not to over stretch it."*

Not only were the women able to 'listen' to their body, they were also able to use it a tool for monitoring their own health, implying that they had become so reconnected and aware of their physical self that they were able to deduce their overall internal health from their external physical functioning levels. Please see section 6.4.6.2 where Gloria described how a daily walking routine kept her body informed on its internal health. Gloria's ability to use her body as a barometer, or a tool, to monitor her overall health is a highly beneficial result of her reconnection with her body, and ultimately a positive effect of the cancer.

Heightened awareness of the body has been reported as an outcome of physical illness (Fatone et al., 2007). Pakenham (2005a) reported an increase in listening to and acknowledging the body after the diagnosis of multiple sclerosis. In addition to this, participants became more aware and took more control of their health while also reevaluating their lifestyle (diet and exercise).

7.4.3.3 Self and vicarious monitoring

Reconnecting to their new physical selves increased the probability of self breast examinations for these ten women as well as extending to vicarious self-monitoring among family, friends, acquaintances and colleagues. Florence described how she regularly keeps up her monitoring of aches and pains and regular/spontaneous doctor check ups. She was finely tuned into her body's existence and could now identify abnormal functioning, a benefit from the cancer experience.

> *Florence*
> *"Although, em, if there's any, you know, niggle or anything, then I'll start to say, oh, I found such and such or I feel, you know, I've got pain here or something. And then it's, I must admit, I'm straight to the doctors [...] So I think, now that, if there's anything, then I would just make sure that I get it checked straight away just in case."*

Brenda recounted how her experience had educated and forced people around her to self-monitor and reconnect with their own bodies- to learn what is normal and not normal for their physical self. Therefore, the diagnosis and survival of cancer had the ability to reconnect non-diagnosed people with their own bodies and potentially prevent future health illness.

> *Brenda*
> *"And I'm the same with my family and friends...making sure they're ok, they're looking after themselves and they are keeping well ...oh and another really good thing that's come out of this is loads of people have said to me, as a result of me, they're all checking their breasts all the time."*

This is an extremely important health benefit as research has reported contrasting theories on incidence levels of breast self-examination. Goldenberg et al. (2008) examined existential barriers to breast self-exam behaviors. They concluded that self-examination and monitoring is directly influenced by the women's concerns about their mortal self, thus, perceived 'risk-death' links can reduce breast self-exams. Yet, from this study, we can see an increase in self and vicarious physical monitoring and breast examinations following the trauma of cancer.

7.4.4 Body and Identity

The influence of the body on identity is essential in understanding the PTG process in the aftermath of physical trauma. Research has suggested that self-identity is affected by and learned via the body (Dahan & Auerbach, 2006; Frank, 1998; Paterson et al., 1999). The physical self can be thought of as encompassing all elements of fitness, endurance strength, health and appearance (March, 1998 as cited in Sabiston et al., 2007) and has been lauded as accounting for a large component of overall well-being. Dahan and Auerbach (2006) reported that patients with myeloma were only able to rediscover their 'self' via the 'restoration of the physical self' (p.377). Therefore, the body was imperative in destroying and then re-establishing these ten women's sense of physical, gender and self-identity (beyond a 'cancer patient').

The loss of a breast, hair, gained weight and changed appearance was found to impair some of the women's sense of identity. Here Diane and Kirsty explained how losing their hair negatively impacted their sense of femininity, insinuating a loss of gender identity.

> *Diane*
> *"Em, it was very traumatic. For me, and I heard a lot of people in the manual saying this, it was worse that losing the breast [...] Em, but it is a terrible experience to lose all your hair. And I, I know it's stupid 'cause it's to make you all better, but it's one of the side effects of the...you just want your femininity."*

Kirsty even likened the experience of hair loss for her, as a female, as the 'end', insinuating that negative physical changes in appearances are equal to a sort of 'death' or end of the self.

> *Kirsty*
> *"I think because, I think...em...I think, for a female to lose her hair is the absolute end!"*

Kirsty continues her discussion on the devastating effects of hair loss and even considers it to have been as traumatic as the diagnosis of cancer itself!

> *Kirsty*
> *"Em, I just...I just, I mean I was totally gob smacked after my first chemotherapy session. And the next couple of days, I had a shower and my hair came out in handfuls...that was I was shell shocked I would think that was as bad as being told I had breast cancer..."*

The loss of hair through chemotherapy has been found to be a prevalent issue with gender identity and femininity (Emslie et al, 2007). Lemieux et al. (2007) reported that alopecia among women with breast cancer was considered to be a secondary trauma to the diagnosis of illness and found it to be 'frequently ranked among the top most distressing/troublesome side effect of chemotherapy' (p. 1246). Indeed, some women even went as far as to reject chemotherapy on the grounds of 'unwanted hair loss' (Tierney et al, 1992). Therefore, as expressed in the previous theme, the experience of and victory over negative physical and gender identity changes (cocoon to butterfly) was a part of the experience of PTG for these ten women.

While the research on the negative effects of hair loss on female identity has been quite consistent, studies have produced contrasting evidence on the emotional connections to the breast following mastectomies. Fatone et al.'s (2007) study on African American/Hispanic women with breast cancer revealed de-feminizing trends following the loss of their breasts, "my breasts were my pride and joy...I don't feel like a woman anymore...I feel like less than a woman" (p.120-122). However, the women within this study did not reflect the same connectivity to their breasts as previous research has suggested. Here Claire recalled a sense of impassiveness towards her breasts and a clear separation of the body as an aesthetic entity versus a functional entity.

> *Claire*
> *"You know, it's really, it's a breast! (laughs) and it's your hair! [...] You know, it's not something that's meaning that you are physically unable to do anything."*

Claire's indifference towards her breast was mimicked in Taleghani et al.s' (2006) study among Iranian women with breast cancer. Their participants viewed the loss of their breast as minimal to the potential loss of an arm or leg, "My breast plays no role, and I can easily do without...I have not lost a hand or a leg" (p.268). In addition, Sabiston et al.'s (In press) participants reported a general unconcern for their breasts following cancer diagnosis, "I never was a breast person...they're part of me, but they're, they're nothing special" (p.13). This is interesting in itself due to the fact that it questions the physical and social conventional views of what anatomically constitutes a woman.

A forced upon new identity as a 'cancer patient' or 'victim' (which they did not like to be referred to as) was a result of public perceptions of their post-trauma bodies. Here Helen retells how her physical appearance (bald head) was an immediate indication of physical illness and she was labeled a 'cancer patient' by another diner in a restaurant.

> *Helen*
> *"I-I can clearly remember being in a restaurant...and you could-you could sit and you could lip read! (whispers) She must have cancer!' You know, you could see this person telling her friend who had her back to me, 'oh ya, oh, yes. Uh huh'. (pauses)[...] But it was really, because other people looked at you! And that was the reason I wore the wig. It was to stop people looking at me...because I didn't want that..."*

Helen spoke of how this was a regular occurrence and felt that by not wearing a wig, she would be automatically putting her illness out 'on display' to the public. Again, this is a unique element of the PTG process as survivors of physically related traumas are more likely to have their trauma experience 'on display' than survivors of mental and emotional trauma. By rejecting and overcoming this forced identity as a 'cancer victim', these women perceived themselves to be stronger, braver and grow from the experience.

Salick and Aeurbach (2006) reported similar findings among amputees and MS patients who felt they lost a sense of their physical self when identifiable by a cane or other visible markers of disabilities. Sabiston (2007) supports this with findings from breast cancer patients whom reported unease in their self/body while in social situations where the body was on display (change rooms, beaches, swimming pools, social events) (p.13) and propose that this can potentially lead to social physique anxiety, which is "a subtype of social anxiety that occurs as a result of the prospect or presence on interpersonal evaluation involving ones physique" (Hart, Leary, & Rejeski, 1989, p. 96).

7.5 Conclusion

The aim of this chapter was for the explorative documentation of the potential impact of the body on the women's process and outcomes of PTG. In summary, there was a clear notion of a timeline of negative to positive physical and psychological transformation that contributed to the process PTG. The fear of their new body stemmed from the negative physical effects of chemotherapy. The apparent 'truce' of the body (alleviation of physical ailments) led to an existential/phenomenological 'reconnection with body' spurring a transformation of their physical and emotional self or 'cocoon to butterfly'. The women began to start listening to their new body and using their body as a tool (barometer) to monitoring their overall health. In addition, the chapter reviewed how these women perceived the body as an integral component to their self-identity and highlights how the rebuilding of their identity contributed to process of PTG.

Ultimately, this chapter highlights the unique perceived influence of the body on the process and outcomes of PTG. Thus, with regards to the 'bigger picture' in PTG research, there seems to a place for the body and issues relating to the body (e.g. mortality salience, TMT, physical identity) (Cozzolino et al., 2004; Goldenberg et al., 2008; Lykins et al., 2007) in the facilitation, and as direct outcomes, of PTG. This recognition of the body's role is especially imperative when the trauma is directly related to the body as in examples of cancer or illness. Sabiston et al. (2007) adapted the Transformation Model of PTG (Tedeschi & Calhoun, 2006) after their study revealed a unique relationship between women's physical self- perceptions and overall self-worth on the growth process. Their revised version (discussed further in Chapter Eight) included a focus on more proximal stages of PTG (physical activity and personal control) as well as a shift in physical self-perceptions (athletic identity, competitiveness, more aerobically fit, stronger and more physically competent). Similar to the findings within Chapter Five and Six, these results emphasise the need for continued research and the potential restructuring of this model of growth (Tedeschi & Calhoun, 2006) which thus far neglects the role of the body in the processes of growth.

There is a definite possibility that the women had become more aware of their physical selves due to the participation in an exercise intervention, which required an element of sporadic monitoring by professionals and could have therefore impacted on their perceptions of the body in the process of PTG. These issues are discussed within the following chapter as well as a reflection upon the use of IPA and potential limitations to the overall study.

Here, the body was perceived to be one of seven main themes heavily influential on the process of growth as well as a portal for PTG outcomes. Future research could extend the rich exploratative data reported within this chapter to participants within the general population (male and female); differing illnesses and physical traumas to determine possible links between the experience of PTG and the body outside of an organised exercise intervention. In addition, future research should concentrate on the potential influence of the body and health related constructs on PTG, perhaps including these in up-dated versions of assessments since "none of the current scales of growth assess the dimension of positive health habits and lifestyle change" (Park & Helgeson,2006; Park & Lechner,2006, p. 53). Further reflections and suggestions for research development are discussed in detail within Chapter Eight.

CHAPTER EIGHT

GENERAL DISCUSSION

8. Review

As research has previously suggested, the effects of trauma are not isolated to either the body or the mind and can induce long term negative physical and psychological symptoms long after the event has occurred (Epel et al., 1998; Rothschild, 2000). However, succumbing to trauma (PTSD) is not nearly as common as resilience/recovery and growth (Cordova, 2008; Lepore & Revenson, 2006; Rothschild, 2000). In addition, the endurance of trauma can prepare the self for future adversity in the form of stress inoculation, hardiness and toughness (Carver, 1998; Kobasa et al., 1985; Tedeschi et al., 1998).

The chapters presented within this thesis were based upon the philosophical underpinnings of the positive psychology movement which advocates a shift from a negative to positive preoccupation with psychological phenomenon (Seligman et al., 2004). Previously disregarded as illusions or cognitive dissonance (Ford et al., 2008; Taylor & Brown, 1988), this thesis set out to explore the experience of positive changes from adversity, while the synthesis reviewed the qualitative literature on the nature of PTG following physical illness.

8.1 Systematic review

The systematic review was conducted to see if any past research has identified similar processes and outcomes that have not yet been acknowledged within the PTG research to date. Despite 57 qualitative studies being identified, the majority of these were not aimed at researching PTG or employing purely qualitative methods. The four key themes to emerge were: 'reappraisal of life and priorities', 'trauma equals the development of self', 'existential re-evaluation' and 'a new awareness of the body', with the latter theme not adequately addressed within the main PTG literature.

There are several strengths of the review stemming from the extensive literature search across various disciplines which had not yet been collated to date. The synthesis suggests, once again, that there are unique elements to illness related PTG and a need for additional good qualitative research into the processes and outcomes of physical illness related trauma. The review also highlights the need for more qualitative syntheses which give the other side of the story a chance to be systematically reviewed and reported within the current literature. As demonstrated here, by only following quantitative meta-analyses, the theme of the 'new awareness of the body' would have been overshadowed by statistical prevalence and not represented as a highly important outcome following physical illness related trauma.

Weaknesses of the review are the potential issues with the quality of the papers that were included since most of the papers were either not focused on PTG specifically or utilised 'poor quality' qualitative methods for data collection. Future reviews could use more stringent guidelines for inclusion criteria, thereby eliminating potentially contaminating data into the review. For example, the Researcher could have employed the adapted critical appraisal skills program (CASP) (Campbell et al. 2003) which has been used to assess appropriateness of studies in the inclusion of the meta-synthesis. Specifically, there are two main screening questions, 'Does this paper report on findings from qualitative research and did the work involve both qualitative methods and data collection and analysis?' And 'Is this research relevant to the synthesis topic' (p.674). If the studies pass these initial questions, the papers are each subjected to further stringent review (theoretical perspectives, key concepts, quality of paper, methods used, etc.) to determine their inclusion or exclusion [please see Campbell et al. (2003) for full assessment criteria]. Despite these suggestions, there is at the present time, no agreed upon approach for appraising qualitative papers for inclusion in metasynthesis. Furthermore, exclusion of studies on the basis of 'poor quality' could be overlooking important additions to the review (Dixon-Woods et al., 2005).

Another potential limitation of the thesis was that the systematic review was completed after the researcher's initial fieldwork. Since nothing like this work existed, it was difficult to obtain qualitative research on the topic area. Ideally, this piece of work should have been done prior to the fieldwork; however the researcher did not have information regarding the existence of this type of analysis. Overall, the contemporary, quantitative research within the domain of PTG gives very little reference to what has come before it (specifically qualitative) either in the psychological, sociological, anthropological humanistic or narrative domains.

8.2 Main study

In connection to the pre-existing literature, the women's experience of PTG reported similar elements of the growth process and outcomes, such as "perceived changes in self (becoming stronger, more confident); developing closer relationships with family, friends, neighbours, fellow trauma survivors and even strangers; changing life philosophy and increased existential awareness; changed priorities and enhanced spiritual beliefs" (Tedeschi & Calhoun, 1995, p. 456). However, three of the seven themes, which have been identified, extensively analysed and reported within this thesis, have not yet been addressed by the current PTG literature.

Chapter Five's results demonstrated differing temporal cognitive processes from the general models of PTG and suggest that the timeline from trauma to growth may be quicker than has been previously proposed. Specifically, the women's instantaneous and conscious decision to move forward and to control their thought processes contradicts the current literature, highlighting the need for further research into the temporal sequences of trauma, cognitive processing and growth. In addition, the results suggest that there is more work needed on deciphering the nature of the repetitive thought and when/how they can be used for the facilitation of growth. The women displayed controllable and brief negative thoughts that were future focused (worry) on fear of re-occurrence and not the traditional depressive definitions or connotations of rumination (Watkins et al., 2005). Adaptive repetitive thinking (gain insight, positive change) in the form of reflection was exhibited by the women, however, unlike Tedeschi and Calhoun's (2006) suggestion that it is intrusive and automatic, reflection was conscious and deliberate.

One explanation for the women's lack of depressive rumination and engagement in reflection (thus leading to growth) is that they initiated reflective processing using the Cold Model of self-regulation (Metcalfe & Mischel, 1999), which allowed the women to reflect upon their trauma, without intense affect, in an abstract and informational way. Survivors who use a self-distanced self-perspective can reflect upon their negative experience and emotions in an ego-decentred fashion, or focus on cool features which allows for reduction in negative affect. Kross, Ayduk and Mischel (2005) found that that people who exhibited a 'why' focus on emotions with a self-distanced perspective were able to step back and take a reflective cool processing stance, thus working through their negative experiences without reliving the experience with intense negative affect. They argue that this type of processing of negative events is not emotional avoidance or intellectualisation as their participants were specifically asked to think about and focus on their negative experience. They also believe this differs from rumination due to the fact that "the emotions are processed, but without activating excessive negative affect" (p.714).

Finally, the theme of irony and the cancer myth bring into question what actually constitutes a traumatic event. Many of the models do not clearly define their interpretation of a traumatic event. They tend to state that in order to decipher if the event has been traumatic, it must have created a sense of life before and after the event (Tedeschi & Calhoun, 2006). They also propose that there is a threshold of cognitive disruption in each individual which will determine whether or not the event is seismic enough to be considered traumatic. Similar to this, Janoff-Bulman (1992) states that a traumatic event is one that shatters our sense of safety and security and tests our inner worlds. In connection to the study, the women did recall the diagnosis as a huge shock to their narrative as well as their inner worlds; however, it was not a devastating shattering of a former self. This would explain the quick turn around of cognitive processing from shocked and sad to get-up and go. As mentioned previously, the evidence relates more so to the theory of ego shock which posits that the person is temporarily shocked by the trauma and therefore able to rebuild themselves and grow in a much faster process than the other two theories suggest.

Suggestions for future research are clarification of cognitive processing by conducting a larger scale study composed of rumination and PTG to decipher the nature of trauma survivor's thoughts (maladaptive repetitive thought vs. adaptive repetitive thought) and their temporal sequences. This thesis is not denying that the women had negative thoughts, however, these thoughts were brief, controllable and the growth process seemed to commence instantaneously.

Chapter Six demonstrated the success of a group based physical activity intervention in the facilitation of PTG. In comparison to traditional group therapy, the class provided similar to and in some ways superior components in the facilitation of growth, offering the women a safe environment, positive support system, opportunity to transfer new skills and heightened health awareness/behaviours. The evidence of adaptation of new health behaviours is a positive contribution to the PTG literature and again highlights the unique physically beneficial outcomes of an illness related trauma.

The women used the class as a forum to discuss fears and worries, resolve issues and connect with other patients as well as a form of approach and avoidance oriented (active, problem focused, distraction in the immediate aftermath of diagnosis) styles of processing; all of which have been long reported as facilitators in the process of growth (Lechner et al, 2008; Cadell, Regehr & Hemsworth, 2003; Tedeschi & Calhoun, 2006; Weiss, 2004). However, upon reflection of these results, it is not clear to what extent it was the social experience of the class or the exercise itself that was contributing to the experience of PTG.

Up until the early 2000's, research had overlooked the class environment as a potential influence on the psychological benefits following group exercise participation. This may have been due to the fact that both group and home-based exercise programmes were found, and continue to, deliver the same beneficial physical, psychological and psychosocial results (e.g. exercise capacity, body weight and composition, flexibility, fatigue, nausea, physical wellbeing, satisfaction with life and overall quality of life) (Courneya, 2003). A caveat of this however, is that exercise adherence appears to be greater for the group based activity participation, thus suggesting the importance of the group environment may be that it provides the motivation to keep exercising, which in turn has multiple benefits. The following is a reflection of these two sides and evidence to support each side of the argument.

8.2.1 Somatopsychic influence

Unlike traditional group based therapies, which are focused on emotional expression and disclosure, these women were getting additional mental and physical benefits from the participation in exercise. Research has shown that positive emotions such as (optimism and resilience) can be manipulated by activities or interventions that elicit positive affect (Salovey, Rothman, Detweiler, & Steward, 2000). Assuming this is true, and in agreement with the powerful effect of exercise on positive affect, it is possible that it was the actual physiological effect on the body that contributed to this growth from adversity.

Cordova (2008) posits that facilitation of growth can be achieved through the reduction of high physiological arousal which is an "obstacle to expressing emotions, problem solving and considering topics that may further exacerbate anxiety" (p.195). To overcome this, Cordova suggests that the introduction of physically positive exercises such as muscle relaxation, diaphragmatic breathing, mindfulness, meditation etc. is beneficial as they "can increase their sense of control over their bodies and enhance the ability to observe, tolerate and at times regulate their thoughts and emotional reactions" (p. 195). In addition, Rothschild (2000) states that individuals with greater muscle tone can deal with greater hyper-arousal (a side effect of trauma) due to the connection of muscle tone, exercise and self-esteem. While Rothschild (2000) explicitly advocates gentle and calming exercises, and not intense aerobic activity in the reduction of arousal, her theory may still apply as the physical activity programme was conducted at a very low intensity due to the fact that the women had all recently undergone surgery. The women all stated that the low intensity of the class helped them gain confidence and enjoy the classes, which, according to Rothschild is imperative in attaining body awareness and recovery.

Interestingly, research has suggested that resilience, a close relative of PTG, can be learned, or built upon through physiological manipulation (Tugade et al., 2004b). Lechner et al. (2008) proposed that the initiation of relaxation training can have a calming influence on patient's ability to open up their repertoire of thinking strategies and express their emotions (akin to broaden and build theory of resilience). Therefore it is possible that the general physical and psychological well being exhibited through the participation in exercise could have had the same broadening effects on thinking and opened the women's eyes to the positive side of cancer.

Given that breathing, mindfulness, meditation and relaxation can reduce high arousal, the Researcher still believes that engaging in moderate physical activity is important for future research to focus on. First of all, the connotations surrounding activity participation are a huge confidence boost to patients, since activity is perceived to be an activity for the 'healthy'. As described within the theme 'body is still alive', these women felt that activity participation challenged their bodies and demonstrated that they were still capable of 'normal activities', which may not have been the case for simple breathing exercises and meditation.

Another argument for the importance of exercise, and not simply arousal lowering activities, surrounds the value of exercise during menopause. Most of the women were of menopausal age, and for those that were not, chemotherapy kick-started their menopausal process. Exercise participation has been argued to counteract the hormonal imbalance caused by reduction in production of progesterone and estrogens, and protecting the brain from cognitive decline (Ratey, 2008). Furthermore, scientists are arguing that exercise mimics the supposed benefits (alleviation of physical symptoms) of hormone replacement therapy (HRT) which has been liked to breast cancer, stroke and increased incidence of heart attacks (Ratey, 2008).

At the present time, there are various treatment plans for dealing with the body and mind following trauma (meditation, relaxation, yoga, T'ai chi, etc.) (Monti, Sufian & Peterson, 2008). Yoga, in particular, has historically been a beneficial addition to both healthy and, more recently, clinical populations. Restorative yoga (RY), defined as "a gentle type of yoga that has been descried as 'active relaxation'" (Danhauer, et al., 2008, p.47), can be implemented as an adjunct treatment plan for patients with cancer. Danhauer et al. (2008) reported significant improvements in levels of depression, negative affect, anxiety and overall quality of life among women with ovarian or breast cancer who had completed a 10 week restorative yoga intervention. The participants cited that their main motivation for continuation was the group component of the RY class, however they felt that the class could have been improved with 'more strenuous activity' (p. 54), a key component of the Mutrie et al. (2007) study.

8.2.2 The class environment

There is plenty support for the argument that it was the group environment that was a significant facilitator of growth (Lechner, Stoelb & Antoni, 2008). Cordova's (2008) review of facilitation of PTG within cancer patients posits that there are eight ways of fostering PTG. The activity programme environment seemed to have elements of these facilitation processes which may shed light on why the class was so important in the experience of PTG. The class provided an environment which encouraged disclosure and communication, however, as an added bonus, disclosure was available at the participant's own pace and on their own terms. In addition, by acting as role models for each other, they were able to tell their own story, which in turn could have enhanced facilitation of growth. Weiss' (2004) findings (that women who had access to others with breast cancer that had experienced PTG had higher benefit finding scores) seem to be reiterated in the women's engagement in both upward and downward social comparison. Although none of the women explicitly mentioned that proximity to someone who had experienced growth had facilitated their own growth, they did mention that by seeing others, who were successfully finishing their treatment gave them hope and goals to aim for. In addition, proximity to women who were far worse off than them, forced them to re-evaluate their position and become more thankful for what they had.

The class also gave them a forum in which they could discuss fears and worries which could have lead to the processing of emotions and creation of new ideas and strategies. The largest benefit of the class was that it provided women with a social support network that they may not have been able to access through their daily life. This could be due to not wanting to burden family with fears, not wanting to talk negatively in case of it becoming true, or lack of social support in general (Lechner et al., 2008a).

One excellent comparison example of the benefits of group exercise training is the well known dragon boat races for breast cancer survivors. This type of activity participation differs from structured exercise intervention programmes in that the dragon boat racing includes elements of competition (boats competing against other boats). Dragon boats can hold up to 22 people and provide survivors with a safe and social method of sport participation. Sabiston et al. (2007) suggest that future exercise interventions for breast cancer survivors should capitalise on the key characteristics of dragon boat racing including "enhanced meaning and purpose, confidence, self-esteem, sense of control, and social interactions" (Sabiston et al., 2007, p. 420). It may well be the competitive element to this form of group activity that provides a stronger bond between the women as they are not only fighting to win their battle against cancer, but to win some medals as well. At present however, the Dragon boat studies have not yet considered the physiological influence on the women's positive experiences of group activity participation.

Recently, the use of online cancer support groups among minority populations has been found to facilitate the growth process (Changrani et al., 2008). Again, these groups reach isolated populations, offering them support and information that they would not have received otherwise. These findings are interesting as they support the argument for the group environment as the main contributor to these ten women's experience of growth, however, in the Changrani et al. (2008) study, the 'group' situation was 'virtual' suggesting that actual physical contact with others may not be the important variable in the growth process. Perhaps future research could facilitate an online cancer support exercise group, thereby combining both the group and exercise elements, while reaching even further isolated populations. This would also be a cheaper option for facilitation in which the NHS could easily offer and administer to all newly diagnosed cancer or indeed cardiac, HIV and other chronic illness patients.

Nevertheless, it seems that there was interplay of the beneficial physical and psychological effects of the exercise itself and the emotional/psychological benefits of the class environment on the process of PTG.

8.3 Reflections and suggestions for future research

In order to generalise the findings of the use of an exercise intervention on the facilitation of growth, as well as unravel the conundrum, a larger randomised controlled trial could be carried out, employing the use of the control group in psychometric testing in order to ascertain whether or not women within the control group a) grew from their trauma as well and b) changed their health habits without the aid of the intervention. In conclusion, the experience of PTG for these ten women exhibited highly neglected areas of PTG, deviations from the current models and offers suggestions for future research into the alteration of theory and assessment.

Chapter Seven addressed the existential, corporeal issues of trauma involving continuous attack of the body on the self as well as an inability to escape this mortality salient environment. This evidence highlights a distinct existential difference between the trauma type and the process by which a person recovers and eventually grows. The key issue with breast cancer is that the reminder of one's death (mortality salient environment) is always present in the form of lost hair/sickness, etc. during chemotherapy as well as scars and missing breasts post-treatment. These women are never post-trauma and bear the reminder of their brush with death upon their physical self. Survivors of sexual assault, bereavement or natural disasters can rebuild their lives towards growth, however in a completely different method; the reminders of the event are not etched upon their body which they must face each and every time he/she views their body.

Future research should continue to look at the two questions pertinent to the development in understanding mortality salience's role in PTG, which are whether or not events that induce high mortality salience induce higher amounts of growth as well as whether or not the reported growth differs across mortality salient environments (Tedeschi & Calhoun, 2006). In response to the first question, the results of this thesis can not determine the linear relationship between growth and mortality salience. However, with regards to whether or not the reported growth differs across mortality salient environments, there was evidence to suggest that high mortality salient situations (body trauma, e.g. cancer) forces constant reflection upon the body, therefore inducing a heightened appreciation and awareness of the physical self, which is a unique and unaddressed PTG outcome. Future research should focus upon and recognise growth, from a mortality salient perspective, as well as deciphering any further differences in the type and amount of growth between the differing illnesses.

8.3.1 Improving the model

With regards to the bigger picture in PTG, there appears to be a place or gap in the models of growth for the inclusion of the body/exercise in the facilitation of growth (Fig.1) as it seems impossible to retain a model so fixated on rumination and cognition without an acknowledgment of the physical side to trauma and transformation. Ideally, the model could include a 'self' component within the challenges section as the diagnosis will inevitably challenge trauma survivor's sense of physical, psychological, emotional and social-self. In addition, since there are three levels of cognitive progression towards PTG, the model could include equal levels of physical progression, commencing with destruction of the physical self, acceptance of and reconnection to the new physical self and enhanced physical functioning due to trauma. Furthermore, the model could include somatopsychic elements (activity) as part of the facilitators of growth instead of just focusing on the psycho-social contributors of self disclosure and socio-cultural influences.

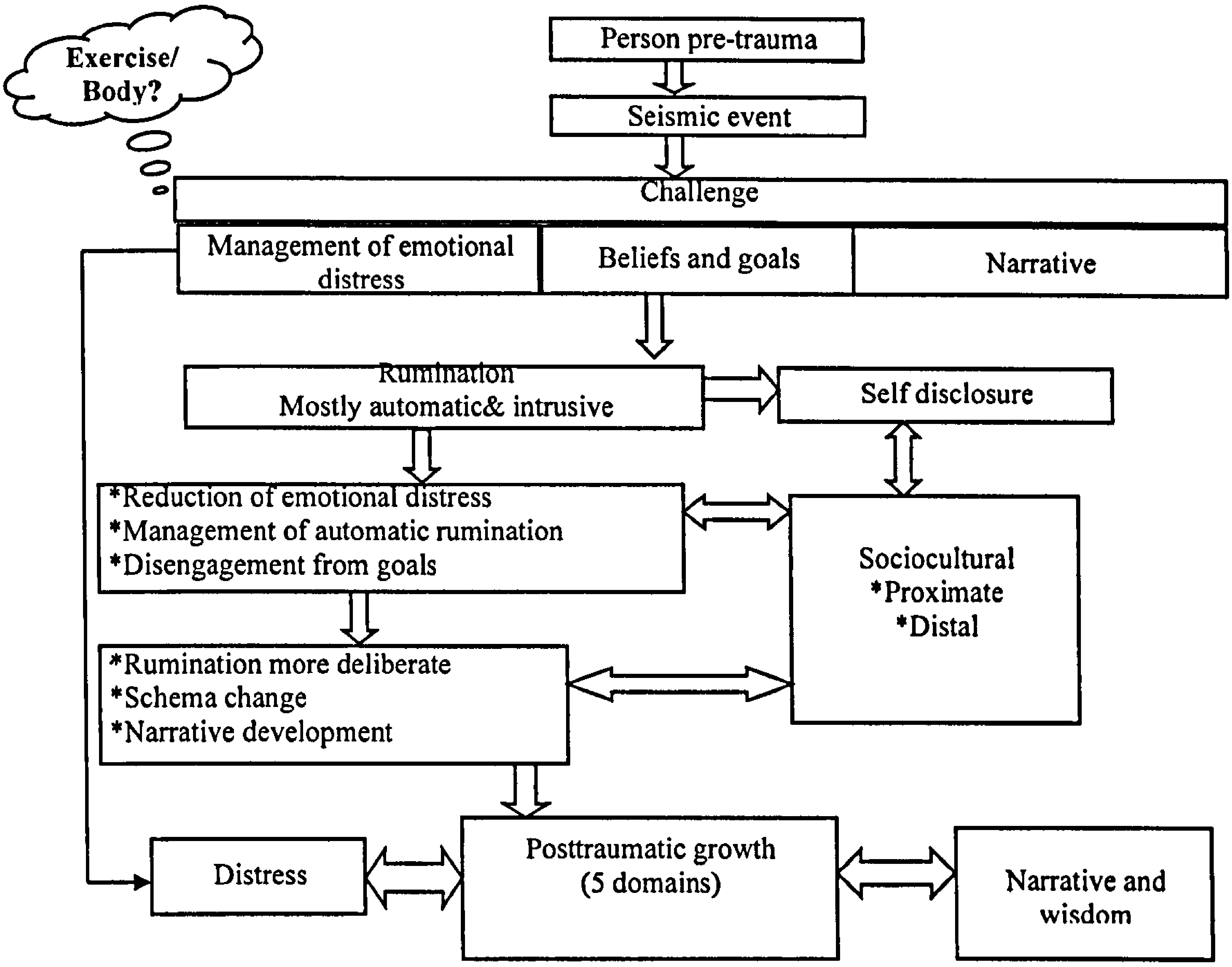

Figure 1. Transformational Model of growth by Tedeschi and Calhoun (2006)

Sabiston et al. (2007) proposed a reconfiguration of the PTG model for their participant's experience of cancer, to include physical elements of the process of growth (Fig.2). Specifically, they proposed that it was the social support within the intervention that initiated changes in physical self-perceptions. In addition, exercise participation lead to restructuring physical identity (as an athlete) which in turn positively affected their feelings of self-worth. The increased physical competency and strength reported is indicative of the concept of physical thriving, defined as "any physiological changes brought about as a result of facing stressors that leaves one with greater physiological resilience than he or she had before facing the adversity" (Epel et al., 1998, p. 303). Furthermore, Sabiston et al. (2007) reported that the rumination stages in the Tedeschi and Calhoun (2006) model did not match the reports and quotes from their participants.

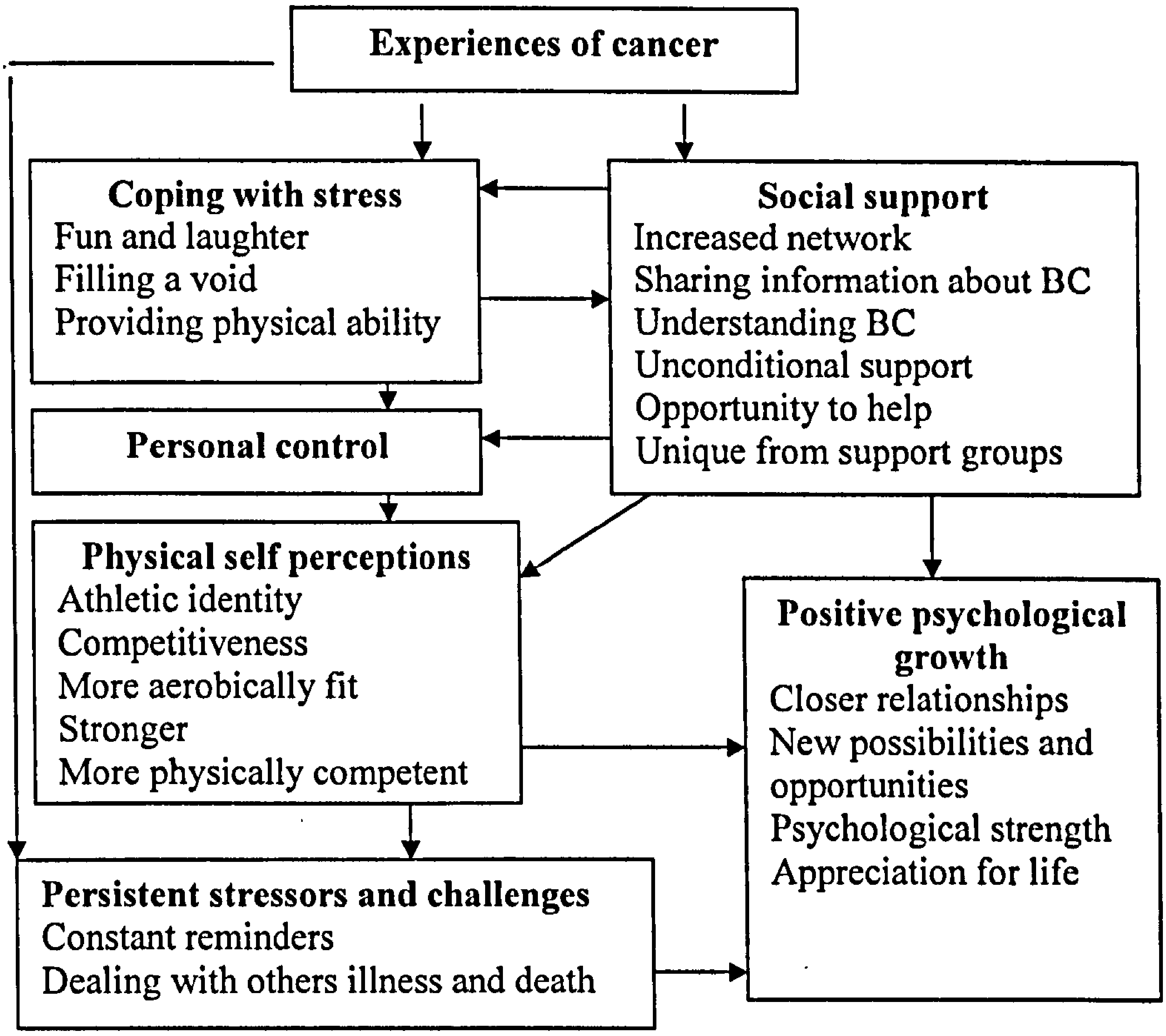

Figure 2. Revised model of positive psychological growth (Sabiston et al., 2007)

The findings of this thesis accord to Sabiston et al.'s model in several ways. First of all, their inclusion of physical self-perceptions as an additional component to the model and PTG process supports the Researcher's proposal for the adaptation of the Transformation Model. Specifically, this thesis explicitly illustrated, within Chapter Six and Seven, enhanced physical thriving, physical reconnection and differing cognitive processing that is inconstant with the current models of growth.

Secondly, Sabiston et al. (2007) reported that the rumination stages in the Tedeschi and Calhoun (2006) model did not match reports and quotes from their participants, further supporting the Researcher's findings within Chapter Five. Thirdly, their model emphasises social support/camaraderie within the exercise group as an important component to the process of growth. Like the Mutrie et al. (2007) study, dragon boat racing increased networking, sharing of information and understanding of breast cancer, unconditional support and the opportunity to help. Similarities of their model and this thesis continue into their section on how the dragon boat team enabled the women to cope with their stress. The ten women in this study found that the class 'filled a void' or a healthy distraction with fun and laughter as prominent themes. Fourthly, Sabiston et al. (2007) reported persistent stressors and challenges with constant reminders, mimicking the findings reported here under the sub-theme of cloud of re-occurrence.

The findings of this thesis do not conflict with the Sabiston et al. (2007) model, however they do add additional components and potential explanations for the phenomenon of growth following exercise participation. For example, the model does not include a holistic view of the experience of PTG, therefore missing key elements to the process e.g. cognitive processing, rumination, spirituality, existential re-evaluation, etc. Although the model specifically picks up on the dragon boat's influence, it is limited in describing the overall process as demonstrated in the map of PTG experience in Chapter Four. Furthermore, this thesis highlights the 'exercise versus class' conundrum that the revised Sabiston model does not acknowledge. Therefore, by including these elements that are not touched upon by Sabiston et al. (2007), the findings within this thesis advance the theoretical possibilities of both the physiological and psychological influence of physical activity participation on PTG.

8.3.2 Improving assessment tools

The findings from the systematic review and Chapters Five, Six and Seven suggest that there is a need for more recognition of health and the body within the current methods of assessment. As previously discussed, the tools of assessment are limited and omit any novel outcomes of growth that are not currently in the five domains of Tedeschi and Calhoun's (2006) model of growth. Manuel et al. (2007) found new and interesting PTG outcomes, as well as processes, within their population, however, like this research suggests, there is no acknowledgement or place for these findings within the existing questionnaires. The positivistic exclusivity Popper-hypothetico deductivism route is a dangerous path as this is a new phenomenon that needs tools allowing for freedom of exploration for further theory development. Thus, the Researcher suggests the potential revision of the main methods of assessment (PTGI, CIOQ) to include the addition of health/somatic categories as another element of growth due to the fact that the adoption of healthy lifestyle habits and a new awareness of the body has been found repeatedly (see qualitative synthesis) and not yet addressed by any of the methods of assessment (Park & Ai, 2006; Park & Lechner, 2006). For example, Kurtz, Wyatt, and Kurtz (1995) used components of the long term quality of life questionnaire (LTQL) by Ferrell (1992) which included health habits on a 10 item scale (e.g. since my cancer treatment I exercise more frequently; I eat more fruit and veg; etc.). Thus, by incorporating similar health implications into the PTGI, the extent to which health behaviours positively change following physical trauma may become more definitive.

8.4 Implication of the research

The results of this research have many applications within health sectors and clinical therapeutic environments. The following is a review of where the research can extend into practical applications as well as theoretical suggestions for future research.

8.4.1 Health promotion: Promoting the class

As a researcher, it appears that a lot of power lies within the doctors and nurses on the oncology ward with regards to accessing and giving information surrounding additional treatment options. As more and more people are diagnosed with cancer, there will be more and more requirement to implement and enhance their recovery process. Recommendations for policy makers would be to review the evidence surrounding the benefits of physical activity interventions (see section 6.2) following the diagnosis of breast cancer and offer this as an adjunct component to the treatment process. Since this thesis provides additional evidence to support the use of physical activity intervention programmes in the immediate aftermath of cancer diagnosis, pamphlets or information booklets could be created from the data collected to demonstrate the positive experience of the classes and growth from diagnoses. By creating these pamphlets, we could inform newly diagnosed patients, from first hand experience, that there is life after diagnoses and that potentially something good could come from trauma.

Furthermore, as Chapter Six demonstrated, interventions can access and benefit patients that are otherwise not identified by medical practitioners as warranting further attention (i.e. psychiatric disorders). By neglecting 'healthy' patients, such as these ten women, they might have missed out on opportunities to meet with others and discuss their experiences, thus facilitating the growth process (Cordova, 2008).

The optimal timeline in which to implement and promote participation within a group based therapy programme is still debatable. Findings from this thesis suggest that the optimal implementation of the intervention would be immediately following diagnosis as the evidence demonstrated the use of the physical activity programme as a healthy distraction and approach/avoidant coping mechanism during their treatment (saviour theme). This optimal timeline theory is supported by Cordova (2008) who states the most advantageous timeline for the introduction and participation of group based therapies is at the time when patients are about to undergo their treatment (Cordova, 2008).

Interestingly, since this class was not specifically designed for the development of PTG within this specific subset, the findings could have practical implications for other trauma survivors. Thus, exercise programmes could potentially be used to help other physical illness trauma such as cardiac, arthritis, Lupus, HIV as well as other forms of trauma, not just physical, such as bereavement, rape or abuse. Specifically, the exercise class would benefit people who find it incredibly difficult, or near impossible, to speak about their trauma and yet desire the company of a group support system. The class could act as a 'healthy distraction' from their grief, within a non-stigmatised and pressurised environment.

8.4.2 Clinical application of the body in trauma

The use of the body in trauma recovery has been recently explored and applied within the clinical discipline of body-psychotherapy. One of the key aims in treating the psychophysiology of trauma is creating 'body awareness' (Rothschild, 2000), which was a key repetitive theme throughout the thesis and systematic review. Rothschild (2000) states that the body can be used in trauma recovery as a resource and in conjunction with other treatment types (cognitive therapy, etc.), the use of somatic interventions can have a gross effect on the impact of trauma. Upon reflection, it seems plausible that the somatic preoccupation of the exercise intervention aided in the development of this body awareness and in avertedly functioned as a form of body-psychotherapy.

Interestingly, body awareness has inextricable links to the concept of body intelligence. Body intelligence is defined as "the capacity to learn experientially and solve problems on body awareness as a source of insight about health and well being per se" (Anderson, 2006, p. 358). People who are high in body intelligence (e.g. artists, athletes, scientists) tend to exhibit higher levels of well-being and overall wellness. This concept goes beyond basic sensations (thirst) to more complex sensations measuring energy body awareness, comfort body awareness and inner body awareness. Future research could explore this potential link between exercise interventions, body awareness, body intelligence and body-psychotherapy further in order to determine more definitive associations.

8.5 Determining the quality of this research

8.5.1 Qualitative quality

This thesis stands well in comparison to the suggested outlines of what constitutes good qualitative research. Throughout the study, there is sensitivity to context as the study links relevant, contemporary literature and theory with the text data. In addition, the Researcher acknowledges the micro and macro social/cultural systems in which these women were involved in (UK, Scotland, Glasgow, physical activity, breast cancer ward). There was a great deal of commitment to rigor as evidenced in the decision to stop the initial analysis and restart via a different method of extraction in order to systematically link the themes with their original data. By doing this, the Researcher doubled their engagement with the text. The Researcher was clear, explanatory, initiating transparency between the method of analysis and the data presented. In addition to this, the Researcher reported upon and demonstrated reflexivity. The research also ticks Yardley's (2000) final box for good qualitative research in that this type of rich and explorative data has great impact and importance on clinicians within therapeutic, hospital or intervention style environments.

Throughout the thesis, the Researcher has also attempted to adhere to specifications of quality research as proposed by Elliot et al. (1999). In Chapter

Three, before the analysis was revealed, the Researcher presented 'owning ones perspective' so as to inform the reader of what they might bring to the analysis. In addition, the Researcher provided a detailed section on situating the sample (appendix II) in order to help the readers further understand the women they are reading about and how their situation might have impacted on the phenomenon. There was great emphasis on grounding the data in the text and clearly expressing this within the chapters. The Researcher attempted to find rich and apparent illustration of the data (quotes) that clearly demonstrated the theme as well as provide coherence of the data by providing models of the data within Chapter Four.

In opposition of Elliot's fourth requirement, the use of a credibility check would not enhance the quality of this study (Flowers, 2006). This is not recommended for a number of reasons. First of all, by referring the original data back to the individual for correction, there is the risk of them feeling uneasy about what they have said and a desire to change their story in order to sound how they think they should sound (social response bias). This is especially true within studies that touch upon sensitive subject matter. This does not help the researcher discover their true experience if they have had the time to edit and socially bias their experience. Also, the fundamental component of IPA is the researchers interpretation, thus a credibility check is not really possible as you are providing a transcript which documents how the researcher interpreted their interpretation of the phenomenon, which will almost always clash with the participant.

Finally, the Researcher believes that they have achieved good qualitative research by truly reflecting the interpretive account of the participants' experience as an individual and as a whole, bringing the women's words and meaning to life via a detailed interpretation and connection with today's literature.

8.5.2 Limitations

There are several ways in which the thesis could have been enhanced. Overall, it would have been interesting to conduct a similar in-depth study into the experience of PTG with the other women from the control group. Although this would not have been for quantitative comparison, it may have shed further insight into the influence of the exercise class and physical activity itself on the PTG process. In addition, the researcher had access to participants within a palliative care physical activity programme. This unique sample would have been an incredible window into the experience of PTG during terminal illness as well as the potential role of an exercise programme in the facilitation of growth.

Furthermore, the study was created to look at the overall PTG process, with the intent to see if the participation in an exercise intervention facilitated the growth process emerged naturally. This was due to the fact that there was no evidence of such as link existing, only theoretical suggestion. It would have been beneficial, and is a suggestion for future research, to explicitly focus on the role/experience physical activity plays in the PTG process rather than looking at it as a by-product. Now that there is exploratory evidence of this link, future research could focus explicitly on the mechanisms between activity and PTG.

In addition, the Researcher could have further supported their findings on the limitation of the posttraumatic growth inventory (PTGI) (Tedeschi & Calhoun, 1998) to illness specific trauma by distributing the PTGI to the entire set of participants with an open ended question at the end asking for their thoughts on the scale and whether or not there were any elements of their growth experience that were not mentioned or recognised. Future research could employ this suggestion thereby obtaining first hand knowledge on the limits of the PTGI and potentially re-validate the questionnaire with a health component.

It must be acknowledged that since the study was composed of a homogenous subset it creates limitations to the classic form of 'generalisation'. The participants were all white females, one year post-completion of an exercise intervention. However, the influence of gender and time since diagnosis on the ability to experience PTG has produced non-significant results (Collins et al., 1990; Fromm et al., 1996; Stanton et al., 2006). Also, these women were part of a group that willingly signed up for the Mutrie at al. (2007) study, and were then subsequently allocated to the physical activity intervention. There is a definite possibility that the women from the Mutrie et al. control group could have experienced PTG with or without the element of physical activity. In addition, there could have been women within the exercise intervention group that did not experience PTG.

However, the results offer a form of naturalistic generalisation, "intuitive and empirically based on personal direct and vicarious experience" (Lincoln & Guba, 1985, p. 120). Thus, through the researcher narrative, we have been able to parallel actual experiences there by "feeding into the most fundamental processes of awareness and understanding" (Stake, 2005, p. 454).

8.6 Considerations of the study

8.6.1 Sample

There are a few considerations with regard to the demographic characteristics of the sample interviewed. As discussed within the method section, these women were highly educated, active and religious white females from the West of Scotland, who self-selected themselves as having experienced PTG. They were also primed to speak about the physical activity programme by the information sheet title (see appendix I) and the fact that they were contacted via the original research team. Although this was never explicitly asked, they all did speak about the programme in their experience of PTG. The Researcher would argue, however, that the women spoke freely about all aspects of their experience and only spoke of the programme in detail when it was salient for them.

The following is an evaluation of the sample in connection to characteristics or facilitators of growth, however, as reviewed in section 1..3.3, these characteristics have had mixed results with regards to the facilitation of PTG (Cordova, 2008).

To commence, these women reflected a higher level of academic achievement than the overall data set average. This creates several issues: First of all, the women may have been more aware of the physical benefits of exercise already and therefore self selected themselves based on the anticipated positive results from the programme. The links between education levels and PTG are inconsistent within the current literature, however a small, but significant, correlation between subjective wellbeing and education has been reported (Diener et al.1999).

These women were also fairly active (6 months) before their cancer diagnosis and, in relation to the rest of the data set, were above average in activity participation. Therefore, the participation in an exercise intervention may have seemed natural to them as it was already a part of their daily routine. This may impact on the ability to generalise the findings to women who were not physically active previous to diagnoses. Perhaps it was the re-integration of their normal physical routine that contributed to their growth process? Despite this, there were women in the group of ten that had never exercised, gone to a gym, ran a 10k, etc., hence the class gave the women the opportunity to engage in these activities.

The majority of the ten women were religious previous to the diagnosis, however, not to the extent to which they perceived themselves to be at present. They came from mainly Catholic upbringings with one Evangelical Christian. This is interesting as research has proposed the people who are more religious have a greater likelihood of achieving PTG (Urcuyo et al., 2005). However, most of the Catholic women identified themselves as lapsed Catholics, and had only started to regain faith and religious affinity since the diagnosis. Therefore, it is unclear whether this was used as a coping mechanism or if it was a growth outcome itself.

Females have been found to exhibit greater amounts of PTG and this could be due to their natural tendency to disclose information, which has been found to aid in the facilitation of growth (Bellizzi, 2004). However, according to current research, the women actually had two characteristics that should have lessened the likelihood of achieving PTG. Non-white populations tend to exhibit higher levels of PTG and benefit finding (Lechner et al., 2008a), thus the fact that they were all white should have theoretically decreased the chances of their ability to attain PTG. In addition, these women were all middle aged to old age pensioners, who again have been found to exhibit less PTG and benefit finding than younger trauma survivors due to a suspected tolerance of stressful situations (Bower et al., 1998; Carpenter, 1999; Kurtz et al., 1995; Lechner et al., 2003; Manne et al., 2004; Widows et al., 2005).

The severity of their disease and treatment ranged from lumpectomy to mastectomy, radiotherapy, chemotherapy and a combination of both. Again, the majority of the research proposes that the greater the severity of the disease, the greater the likelihood of PTG. This is questionable however, as the trauma needs to be significant enough to traumatise the person, yet not too catastrophic as to overwhelm them (Lechner et al., 2008a). Thus, it would be perceivable that the woman who had a lumpectomy would not have been as traumatised and therefore not exhibit as much growth as the women who had radiotherapy, chemotherapy and a mastectomy. This is still an issue that needs to be addressed within the literature.

These women were also interviewed at the same time, one year post-diagnosis and treatment, as they were participating in one year follow-up to the original study. The majority of the PTG research states that there must be a sufficient amount of time since the diagnosis in order for the person to reflect and find benefits of their trauma. Thus, one year has been lauded as the optimal time to interview patients on their experience of growth (Cordova, Cunningham et al., 2001). Perhaps if the ten women had been interviewed immediately after their diagnosis, their experience of growth would have been minimal or non-existent. In addition, if the Researcher had interviewed the women two years after their diagnosis, perhaps their experience wouldn't have been as salient as it was one year on.

8.6.2 Tyranny of positive thinking

Despite the explosion and support for positive psychology, there have been criticisms of the switch in focus. Held (2004) maintains that there are three negative sides to the positive psychology movement: its separatist ideals, negativity towards all things negative and reality problems. The dangerous message according to Held (2004), is that "positivity is good and good for you; negativity is bad and bad for you" (p.12). Following trauma, it could be daunting for the survivor to feel that not only do they have to recover but they are expected to grow from the trauma. There can be a great deal of pressure upon the person to stay positive and therefore, they feel bad when they naturally feel sad or down. In addition, when they know that others are able to find great things from their adversity, they might wonder what is wrong with them, instead of allowing themselves time to recover and grow in a natural process. Held (2002) coined this phenomena the 'tyranny of positive attitude' and failure to achieve a positive outlook can result in additional feelings of guilt and depression adding to their already fragile state (Held, 2004). However in response to Held's (2004) critique it must be noted that within the PTG literature, the focus is not to advocate suffering as a situation worth striving for, but rather to examine the phenomenon in which suffering and grief can co-exist with enlightenment and growth. Linley and Joseph (2004) suggest that these two entities, suffering and growth are independent of each other and that society must not assume that highly traumatized people are not capable of growing at the same time.

Group therapies have been regarded as perpetrators of this tyranny of positive thinking (Holland & Lewis, 2001, as cited in Lechner et al., 2008). The fact that the exercise class was not designed for growth could have been an advantage. It was unique and in ways superior to general social support groups as the group was not focused on thinking. Instead, the aim of the group was to act positively or participate in positive behaviours and could therefore be considered less tyrannical. Overall, the class gave the women the option of naturally choosing to discuss their growth or not providing the optimal environment in which to facilitate growth, "good therapy is often client driven and works within the patient's framework" (Lechner et al., 2008, p. 225). So in response to Lechner et al.'s (2008) report on the dangers of a prescribed benefit finding based therapy, the exercise class seems to allow a natural progression or discovery of PTG and the option with which to discuss their discovery within an active, positive behaviour focused environment.

Tedeschi & Calhoun (2008) have suggested guidelines for practitioners in encouraging the achievement of growth, without falling prey to the tyranny of positive thinking. First of all, it is imperative that clinicians are aware of the fact that growth following trauma is not universal. This immediately allows the clinician to not feel pressurised to look for or enforce growth upon their patient; the experience of growth is not necessarily the only indication of a good intervention. The clinician must also focus on becoming the clients 'expert companion' and recognise that they, themselves may learn a lot from their clients traumatic experiences. Primarily, Tedeschi and Calhoun stress that the clinician must not engage in direct attempts to foster growth, however, they must be aware of and listen out for 'growth themes'. Psychological terminology must be kept to a bare minimum, with the clinician picking out and reiterating growth themes using the clients own words.

As stressed throughout the thesis, clinicians must make the clients aware that growth does not mean that they can't experience distress at the same time and, more importantly, that growth is a reflection of the struggle with, and not a direct outcome, of the events themselves. Overall, Tedeschi and Calhoun recommend that if the patient is acknowledging the trauma and has no signs of delusions, then the clinicians are free to go with the clients understanding (positive illusions or not).

8.7 Conclusion

In conclusion, the thesis has presented evidence of novel themes and unique methods of the process of posttraumatic growth. Ultimately, the study reminds patients, practitioners and psychologists of the potential for enlightenment following devastating, traumatic events. By encouraging and fostering environments in which the person can grow naturally, there is the potential for enhanced psychological and physical thriving.

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APPENDIX I: PARTICIPANT INFORMATION PACKAGE

Understanding the experience of positive life changes:
Can physical activity help?

You are invited to participate in a research study. The following information will introduce the research area and tell you what this study will involve. Please feel free to question anything, on or off the sheet, that is not clear and note that you have the option to accept or reject participation. In addition, you are free to withdraw from the new study at any point in time.

Following trauma and adversity, such as that experienced on being diagnosed with cancer, some people report positive benefits and enhanced well-being from their negative life event. These areas of enhancement can include: perceived changes in self, (people feel stronger, and more self assured, etc...); a changed sense of relationships with others (closer relationships are formed, empathy towards others, etc...); and a changed philosophy in life (strengthened belief system, living in the present, finding meaning in the event and in life, etc...). However, we know little about these positive changes and why some people experience them. The aim of this study is to find out more about this.

If you believe that you have experienced positive life changes since your diagnosis, and would like to participate, please keep this information sheet and contact the researcher to arrange an interview time that is convenient for you. At that meeting you will be able to ask any further questions and if you decide to participate you will be asked to sign an informed consent form. You will then be asked to participate in an interview lasting approximately one hour. This will be taped. There will be no follow-up interview. Again, you are free to withdraw at any time during the study.

All information that you provide over the course of the interview will remain confidential. The results of the study will be used towards the completion of a PhD thesis. In addition, the results will be submitted to a psychological journal for publication. For information on when and where you can obtain a copy of the published results, please contact the researcher. Once again, you will not be identified in the published material.

For further information, please contact the researcher, Kate Hefferon, at 0141 548 2007 or cait_heff@hotmail.com. In addition, you can contact the senior supervisors, Nanette Mutrie and Madeleine Grealy, via email at nanette.mutrie@strath.ac.uk and m.grealy@strath.ac.uk.

Thank you
Kate Hefferon

Contact Numbers

Name: ______________________

Home: ______________________

Work: ______________________

Mobile: ______________________

Email: ______________________

University of Strathclyde
Study Number: 1
Participant no.: 1

CONSENT FORM

Title of Project: Understanding the experience of positive life changes: Can physical activity help?

Name of Researcher: Kate Hefferon

Please initial box

1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐
3. I agree to take part in the above study and consent to the use of audio recording. ☐

Name of Participant	Date	Signature
Name of Researcher	Date	Signature

1 for participant; 1 for researcher.

APPENDIX II: SITUATING THE SAMPLE

Brenda

Brenda was a forty nine old woman with two children. She was the most energetic and exuberant participant throughout the study and our interaction was inspiring. She cried throughout the interview and, in turn, caused me to become emotional. Due to Brenda's talkative nature, this was the longest interview and therefore quite draining at the end. She had a strong sense of growth following the diagnosis, especially among her relationships with her husband and children. She felt that she had taken her old life for granted and had been given a new chance to change that. In addition, her praise of the physical activity programme was continuous and stemmed from the physical and emotional benefits within the class. Her feelings on death had changed considerably as well, as she had once regarded the diagnosis of cancer as a 'death in itself' and having faced and over come the diagnosis she no longer feared death. She was very in tune with her emotional and psychological feelings and felt a strong belief in her psychological power over the illness. She was indeed one of the happiest loveliest people I have ever had the fortune to meet.

Claire

Claire was a soft spoken, 52 year old women from the West of Scotland. Her main story to tell was simply that cancer is not the end of the world and that people need to be told that positive things can come from the diagnosis. In order to get her thoughts across, she even printed out her 'story' so as not to forget the wonderful things that emerged through having cancer. Claire had begun to reprioritise on what was important in her life such as money and friends, and in the process had lost fair-weather friends. In addition to the shock of diagnosis, Claire suffered greatly from the hair loss and it was a major issue in her recovery. The exercise programme gave her confidence, camaraderie and something to get up in the mornings. Claire's diagnosis also lost her fears of death and truly believed in the adage if you think positive you will be well.

Diane

Diane was a 48 year old mother of two girls whom felt that her experience with cancer had transformed her from a negative person into a more positive person overall. Through her experience, she had learned to relinquish control and slow down. Her priorities became her health and her family. This was a very short interview however she was cute lady. Religion and humour were very important components to Diane's recovery and she genuinely felt that she was a stronger person following her diagnosis. Unfortunately, Diane's sister was going through advanced breast cancer treatment at the time of our interview.

Elaine

Elaine was a 43 year old mother of two girls. Unfortunately, this interview was a little awkward as she started the session by mentioning that she was in a 'weird' and 'dark' place at the moment with regards to her husband/finance/sisters. However, she was able to discuss how her life was better for having the cancer as she believed it had made her more successful. Elaine found losing her hair to be very strange and she also found that she lost a lot of friends which surprised her. In addition, Elaine was very much against the negative media portrayal of cancer survivors as victims and sufferers and wished to prove that cancer wasn't as scary as the media portrayed it to be. The physical activity programme was perceived as a great focus and support system for her.

Florence

Florence was 43 years old. Her personality was quiet and a bit withdrawn. She was quite defiant in her manner as she seemed to want to portray a strong exterior. She was clear that her life was better now that she had been introduced to exercise, and that was all. She had participated in a 10k, which she attributed to the physical activity programme and cancer diagnosis and was adamant on getting people to know that exercise needs to be part of rehabilitation. However over the interview, it emerged that her relationship with her daughter had improved as well as her vicarious influence on self examination on people around her. She also was surprised at the support of neighbours and family friends, in addition to an increased relationship with god in the form of increased spiritual practices.

Gloria

Gloria was a 54 year old woman, with many years work experience in hospitals. She had a sharp, go get 'em attitude that was both amusing and intimidating at the same time. Gloria had had a previous near death experience before her diagnosis and found that the cancer diagnosis helped her to become a more 'rounded' person (self-actualised). She adamantly believed in the power of the mind/body connection and felt the exercise helped her overall well being. Gloria also believed that people have control over their own mortality. It seemed as if nothing scared her and she, also, was determined to tell people that their lives are in their own hands. Interestingly, Gloria felt that in order to live, you need to have suffered and that all trauma creates a positive outcome.

Helen

Helen was a 63 year old woman from the West of Scotland and a mother of two adopted children. This interview was high energy, emotional and hilarious at the same time. Helen was a self assured, highly devout evangelical Christian with an extreme belief in god and a master plan. She expressed multiple examples of black humour and felt that her diagnosis was a blessing. She had a very close relationship to her husband and her two children, one who was previously estranged. Overall, she found the exercise, her faith and family got her through this 'bump in the road', as well as her belief that each person must suffer in order to reach true actualisation.

Isabelle

Isabelle was a quiet and extremely shy lady, 60 years of age. She began the interview with telling me that she had recently been diagnosed with clinical depression but felt that she could still discuss her growth from cancer. She had extreme memory loss which made the interview a little difficult at times. Overall, she felt the diagnosis had highlighted to her the mind/body connection and felt she was now able to listen to her body.

Justine

Justine was a 56 year old mother of four, originally from Ireland, but had been living in Scotland for most of her adult life. She was a very talkative and lovely woman with nothing but good things to say about her diagnosis of cancer. She had issues with some of her friends who seemed to disappear when she needed them the most, however her relationship with her husband improved and she began to prioritise the 'little things' in life. She found that from her diagnosis she gained a lot of freedom- for example she was now able to fly to see her daughter who lived abroad, a feat she would not have done prior to the diagnosis. Justine had a large issue with the victim label that media and society puts upon cancer survivors.

Kirsty

Kirsty was a 63 year old friendly woman whom found that her relationships with her husband and friends had become improved since the diagnosis. She had no children, however, her husband had had a heart bypass a few years before her diagnosis and so she felt they had grown closer with each medical trauma. She also found the physical activity was a great way to achieve normality. She was quite devastated by her hair loss and found that the confidence she gained in the class helped her grow and remove her wig. She began to appreciate and reprioritise things in her life and felt that she no longer suffered fools gladly.

APPENDIX III: INTERVIEW SCHEDULE

Interview

1) ETHICS: Informed consent, confidentiality. Tapes will be destroyed 2 years post Phd completion. Transcripts might be seen by another colleague for validity checking, but names will remain confidential.
2) THERAPY: This is not a therapy session, but I can get them in contact with someone should they need a session after the interview
3) Interview usually lasts an hour but can last as long or short as they like. They can end at any time
4) No right or wrong answers
5) I'm interested in YOU and YOUR experiences
6) One sided chat
7) Please take your time
8) My questions will follow from YOUR answers
9) Some of my questions may sound stupid to you but this is because I'm trying to come to grips with how they understand things not how I do
10) Is there anything that is happening in your life that might affect how you are feeling today?'

Key Question:
What does finding positive benefits from your trauma mean to you?

Follow questions:
-Could you tell me more about...
-Why?
-How?
-Tell me what you were thinking?
-How did you feel?

Rules Throughout the interview:
-Following interesting avenues
-Be patient, embrace silence
-Use my differences to get more out of the answers: ex. Gender, age, nationality...I'm Canadian, so I don't know what that means, can you explain further?
-They watch you for cues, so watch out
-Do not interrupt
-Ask one question at a time
-actively listen
-avoid leading questions
-Ask for feedback about the interview at the end.

Checking for consent for specific questions:

Ex. You just said...[sensitive topic]...are you alright can you tell me more about that feeling?

Rhythm

-There will be condensed meanings, narratives and understandings... Therefore need to **reflect and** state that I would like to go back to each in turn...
-Re-state all that they said and then ask them to focus or go back to and explain one of those areas ...so can you tell me about...
-Generic to specific
-If they get off topic, remind them that this is about THEM and THEIR experiences and understandings

Issues that are likely to come up:

-meaning making
-benefit finding
-closer relationships family and friends
-values
-philosophy
-focusing on more important things
-spending more time with loved ones
-re-prioritising
-cancer
-exercise
-intervention
-social group
-optimism
-resilience
-psychological Hardiness

APPENDIX IV: INDEPENDENT AUDITING PACKAGE

Understanding the Experience of Post-Traumatic Growth Amongst Breast Cancer Patients

Dear Reviewer,

Thank you for your participation in enhancing the richness of my data through the process of independent auditing. Your input and ideas are very much appreciated. The following are quotes that were randomly and specifically chosen. There is a list of matching themes in no specific order. Please review the quotes and theme titles and match together where you deem appropriate. If you feel the quotes warrant alternative titles, please indicate this and your opinion will be greatly considered.

Thank you again,

Kate Hefferon

Titles

New health behaviour achievements
Cross Comparison
Expert vs. expert
Authentic self
Cloud-fear of reoccurrence
Cancers Ok
Fear of new body
Body and mind interaction
Transference of skills from exercise class to life
In limbo
New body
Hair and Identity
Choice to move on
Body as a barometer
Shock at positive support
Role models
Choice to ruminate
New Spiritual behaviour
Power of positive thoughts
Positive and negative medical interaction
Cocoon to butterfly
Face to face
Stuff it
Choice to live or die
Exercise class as a safe environment
Positive mental and physical benefits of exercise
Self Identity
2 Paths
New Health behaviours due to exercise class
Social support from exercise class

Quotes

1) I think if you dwell upon things...that's not going to help. And I think what that buzz gives you is...is a more positive feeling psychologically. You know, not just feeling strong and healthy, physically, but it does make you feel stronger. So I think, you have 2 paths. You either go up, or you go down. And I didn't want to go down.

2) Uh, I don't have a great deal of self-esteem. So therefore, uh, sometimes I think people don't like me as much as I like them.[ok] And all of a sudden with all the attention I was getting, with all the support I was getting, I
realized that all these people didn't feel-eh did in fact feel for me as I did feel for them. Which was very-very reassuring

3) Eh, well I suppose being in contact with all the professional people in the hospital. I should mention them, They were all fantastic. Every single one of them. I don't know, I suppose how they...they talked to you is very important. I'm sure they realise that, hats why they're professionals. I didn't have any negative experiences in hospital, or even in visiting the hospital afterwards. Um, I think, the NHS was absolutely marvellous!

4) It was gentle. I mean I wasn't running, don't get me wrong, I wasn't running, but was walking! So and that just helped me sleep better, I helped me, em, you know, if I was going through a kind of low period that it maybe lifted me?! [Did it?] Uh huh ya, I felt a wee (stutters) you know the way that it had done before when I was exercising. The way that it had felt, you know, you know, I was so...teary...Sometimes I'd feel quite tearful, you know. I found I was less tearful, and just, uh huh. And just felt better and you know, it just lifted me. [ok] And (stutters) Just felt wee bit better. (Pause)

5) You've used the word normal a few times. Can you just explain what that means to you?
P.10: Em, again, I suppose its having been through the system, as it were, I-I- don't like the word cancer patient. Or cancer victim. Victim actually quite annoys me. Em, you do see that in the media quite a lot [where have you seen that?] oh I've seen, uh huh , cancer victim, em, you see it in books, you know magazines. You see it in t-through all these media things, different articles about so and so is a cancer victim. And...that actually really annoys me because, even when I was getting my treatment, somebody had said something about that and I though t, do I look like a victim!? You know? I don't feel a victim! But...they were quite taken aback, 'oh right..' I actually don't like that sort of term, somebody was to turn around and say, oh you were a cancer victim. Because, I never actually felt like a victim. Never in my life. And I gen-I certainly didn't feel like a victim when I was going through my treatment. And again., I think I was all these kind of normal activities that helped to make you feel, no, you're not a victim.

6) I was really blessed. And that's all I can say to you. And that's the way I look at it...being a positive experience in my life.

7) Em, I'm a different person in the sense that I don't worry about stupid things that I use to worry about as though they were real worries. And after the diagnosis of cancer, you realise all those things that I worried about are just not worth worrying about. Your health, your family. There are issues out there that are worth worrying about. But not these stupid wee things.

8) I mean...there's an awful lot of people in an awful lot worse situations. [UH HUH] Em...you know, then we are. Then I am...at the minute. An awful lot of people. So your just to be thankful. So say I am thankful...I got the cancer when I did! [hmmm] To me that's a very positive thing, too...

9) I've always tried to keep fit, maybe not quite as much as I do now. Now I try and aim for something everyday [really?].

10) Em, But if you go down the depressed...and the people I know who are depressed about it, hardly ever go out, hardly ever do anything, and they're tired all the time...and that's years after treatment! [uh huh], they really just don't have much of a life! [uh huh]. And that's, I think that's very much up to.... The individual. You know, if you want to go down that road, em, you know, it will make it more difficult for yourself.

11) And another thing that happened to me, and I don't know if it has anything to do with it... I think it has... Was a lot of people got turned away at some point cause their immune system was too low, you know, their bloods were too low. You always went, I went to my GP the day before, you know, and they took your blood so you were up tot the hospital the next day and they have the results of the blood and they have everything...your platelets and your iron (pauses) whatever it was, was a certain level. It had to be a certain level [u huh] and if it wasn't at that level, or you were too low, you were below, you weren't able to cope with your chemo, basically and they couldn't give ya', so they would maybe leave you for a week. And I just thought, I don't want to do this cause its just going to prolong it, plus I was kinda frightened that, I don't want all these levels to be so low...I don't want to go there, you know?[yes] Because that means this is really knocking the stuff out of my body, you know[ya]. I don't like that. And it never, not once. And they had said it was unusual. Because we were going through, at that point, we were going through to, em.. winter, so there was colds, and flu's and there was all sorts about and my immune system was really, really low... and nothing. Never had a blip [really] in the six months. And I think, it was positive thoughts! Honestly!

12) I started to pray. I mean I'm not still a great prayer, but I-I now say prayers every night before I go to bed. Em, and in the morning. And I probably...I've got a bit more spirituality about me. Em...

13) But there's always a question...eh...you know, if this crops up again, is it gonna be more of the same of what I had. You know, more surgery, more treatment. And then will that be it? Or is it an on going thing that just, you know, picks away at you and finish you off. And yet, I know, that for some people that hasn't been the case.

[uh huh]. I just wish somebody would say, maybe they cant say, they probably can't say , you know, once your clear in five years ,forget it.

14) Um, but also, trying to explain to people and tell people, not just me, because lots of medical staff, lots of oncologists will agree with this, that your attitude can make and enormous difference to the outcome of your illness. If someone who is negative and crushed by it, is... much more likely to die from it than someone who has a positive...I don't necessarily mean an, an aggressive' oh ill beat this if it kills me' thing. But you know, with a positive outlook, you know. I say, with the outlook, I say to them 'oh we're all going to die anyway' So the whole point is, 'live every minute until you die', and you don't lie down and die while your still breathing and on your feet. And ill say...what's happened to me and that, you know, I'm not a walking miracle. I know lots and lots of other people who have come through terrible things, so there's no need, there's no need for you to lie down and be crushed by it. Unless you actually choose to. I-I suppose I sometimes do a bit of bullying as well. And say, 'sorry, your actually doing some of this to yourself'. Why? ' the way your behaving, your attitude' That kind of thing.

15) It's a useful guide to me for how my physical health is. [OK, how?] How long I can walk, and how far I can walk and, and how long it takes me. Because I still find myself, I have sort of peaks and troughs, physically. I'll have time where my energy level is just very way down. Em, and when that happens, well, I, I know right away the fact that I cant quite manage my hard walk in the time that I normally would. And I don't know particularly why they happen, its been linked with various physical things. Like once my...ES arm, by blood was way up, but there was no particular evidence of any immediate things, 'oh my god, what does this mean, is it back? Em, there wasn't any particular evidence of any severe infection, which would also put it up, em, it settled back down itself, over a period of three months, em, the doctor doesn't know why, but we sort of,(breathes out) you know, it happens and stuff. So, I do it, to keep a monitor on my health [ok], and, and if it was, and if my energy levels were dropping for too long, id be going back and getting some blood taken, you know, even if I wasn't due for a check up.

16) Em, so its having confidence, and the exercise classes helped to give you that confidence. That there's other people dong the same thing, you're not alone, there's loads of people all n the same boat and we're all having a laugh about it. That's , that's what it was about. And that's helped me get back to work. You see, the project I was, was on finished, em, right in the middle of the chemotherapy, and I didn't really feel like, em, I work with the WRBS, and we do the meals on wheels progr- we did the meals on wheels program in Glasgow, which had been running for 50 years, and it actually just finished last Easter, so that was a shame, but em, in a way it was quite nice to cause I got six months redundancy (laughs) so it was kinda nice to have a nice time and not bother. And em, I've started back now, and I don't know if, you know, as I say, I'm 54, if I had been depressed, I don't know if I'd have had the confidence, to start looking for a job again.[uh huh]. You know? I might have just said, cause I know other people who are on this or have had this treatment a few years before me, don't work and really don't do much and are very depressed! Em, but its given me the confidence to go back to work and doing another two mornings a week, doing the same thing, em, doping a wee job share with the guy I used to work with, which is just great! Em, its all worked out absolutely fine. I've just been very lucky. But I think the exercise classes, definitely, undoubtedly, helped, you know, to do that

17) You know, em, and, we did the wee 5 k run thing, during treatment. [OK] Which, you know, I would definitely encourage anybody to do as well. Its not a real run, its like a walk. It's just a wee walk.
Interviewer: Would you have done something like that before?
Participant 3: I wouldn't never have done that. I've never done anything like that before.

18) But I found, when you hair started to come back in, it was wonderful. That was , that was like springtime! That was like, you know, it was like seeing a plant starting to grow. You feel as if , 'oh well that's.. you know, it must be getting better, something's coming in, it, it' That was great! And then just ever look back from that, you know?

19) You'd have a chat and you'd say, you know, when, when did you have your treatment? Oh I had it yesterday, you know? Em, but they would be there, at the calls, with all the wigs and all the rest of it. And just, em, I suppose... you'd think we were bursting with energy (laughing). We weren't! But em...we all just got on with it. And I –I certainly found it a great help and support, em.

20) Can you explain why about why it would be a positive thing to have participated, and to be able to take off the wig and...
P.11: well I think its because em...your always, well I was certainly self conscious. As I said before...and em, when I went initially you know, as I said. And the first time I did the exercise, I thought oh no, the perspiration was (inaudible word) down me(laughs) and I thought, whoa this is terrible and I wasn't I –I couldn't...I couldn't get myself to take the wig off...in public...you know it was public, with girls I didn't know. And eh, then I thought, no the next time, I thought, this is ridiculous. We are all the same. No body's-its was in a, a private gym, no body is going to come in and see you. Nobody is going to be pointing fingers...(gasps) oh look at her, she's got no hair! Ums, so in that, I felt that was positive. Em, it gave me a step forward, um, to know that I could actually take my-my-my wig off and been seen in public. Albeit half a dozen.

21) Em, but it is a terrible experience to lose all your hair. And I, I know its stupid cause its to make you all better, but it's one of the side effects of the...you just want your femininity.

22) And I think that's really, really important, something like that. If you can actually meet with other people who are further along. That makes a big, big difference. Because it all, its one thing when a doctor or nurse or whatever saying, 'don't worry, it'll probably be alright, cause this can happen and that can happen,' and 'the chemo isn't so terribly bad, and the hair falling out and you know...' Whereas if its some one else sitting and saying 'well that was me six months ago' or ' that was me two years ago' or whatever, and look at me now! And yes it was shit while it was happening, but, you now, so what? So lots of things, and you'd do this... So I think, not just me, but anyone sharing their experiences when some one else is suffering, you know, just not necessarily and identical illness or condition, makes a big, big difference.

23) I was, quite concerned about losing my fitness too on the treatment. As I said, up till then I was a member of the gym, and I used to go tot the gym. And of course, you have...the surgery and you are so and, its like 'what can I do?' and you like absolutely terrified to do anything. So I said to one of the nurses, and shed asked, are you interested in the keep fit program and I thought, oh yes, uh uh, cause I had – stutters- I mean I was actually frightened to do anything, because, I thought I don't want to damage my arm, or you know, you've got you've had surgery on your breast and all the rest of it and your not sure what you can or cant do

24) Em, if we can, I don't know how you feel about the subject of death, can you explain your feeling or thoughts on that?
Participant 3: Ya, that doesn't bother me much now either, because I think it makes you realise. We are all going to die! [ok] Everybody... you know, It's as sure as you were born, your going to die, at some point. Em, and, eh, you know, whatever it may be, you know, cancer comes on very slowly. It may not be cancer. You know, I may die of something else. But because you've kind of faced that...I think it takes away the (pauses) scariness of it. You know? Its... you know you're...I actually think, 'well, you know, we are all going to die one way or- infact I was just saying that to a friend, who doesn't have cancer, and she was saying the same thing, 'you know, everybody, we're all going to go one way or the other, so, em'... You know, I think it kind of prepares you for the time.

25) But now and again I do worry, you know, what if this comes back? When did it come back in other people. And then I just think, ah, stuff it. But its not, I don't think about it every day! I don't. I think you move on with your life. I think you...I've certainly made changes.

26) See, I...it is a life threatening disease. It does mean it could come back. I know that. If it does come back, I think, I wouldn't be so upset, and I would know, well if I have to go through treatment again, I have to go through it again. That's all there is too it.

27) I had a.. I had, you know, a couple of days. I went to the doctors on the Monday, went for the biopsy if the afternoon. On the Wednesday, I was told. And, I found the lump on the Saturday, so.. I found the lump on the Saturday, went to the doctor on the Monday morning...and was diagnosed on the Wednesday. And between the Saturday(pauses) and the Wednesday, before I was told...I was so frightened [right], I was so frightened. It was like...oh, this is going to be cancer. Oh my god. Oh no... I was so worried. I couldn't eat, I couldn't sleep. And then when I was told on the Wednesday... I'm not saying wasn't shock...I was shocked, but...at that point, I had...I wasn't frightened. Its funny! Its really, really strange. I think it was like, not knowing was worse. Because I didn't know, really, when I didn't know, didn't know, what I had to deal with. And once I knew, I knew what I had to deal with. I knew what I had to face.

28) I...what I would, and I said earlier on that I wouldn't recommend that people go and look for...a diagnosis of cancer or some other certainly threatening illness, em, but I really, I suppose I've come to the conclusion that em, (pauses) that anyone having a nice, pleasant, good thing, always good things happening to them life, hasn't really had a life. [that's very interesting] They haven't had a life. They haven't lived. [why do you think that?] Because I think, I think...we all need to go through, whatever experiences, whether its physical health problems or its...um, financial, um...emotional, psychological. I think we need to do that, t-to grow, to develop into the kind of people that... we should, we could be.

29) Em, buts its nice to know that other people, you know, in the same situation as you maybe, you know, a couple of years before you were there, are still you know, healthy and they're still fine and they are still getting on with life. And its good for a lot of the classes finished, other people who maybe started the class afterwards, you know, it was quite good support for...like for the likes of me.

30) So they had to get me into menopause right away. But the chemo took care of that. Oh god I put on so much weight.[did you?] Oh, a stone. Couldn't stop eating (laughs) it was the drugs! It was the, em, em, steroids, you know? They give you a lot of steroids to you being sick. [yes, ya] and they just stimulate you appetite so much. The steroids immediately would make you puff, and you know the chemo, I think some of the chemo, the cocktail I was having. They make you a wee bit extra puffy, you know[ya]. But the steroids...they make you puffy and then they make you hungry and it was like...unbelievable. I mean people'd come said to me, I cannot believe, I was always like a picker, you know, I could never eat a full meal. And I'm like eating three courses and I'm thinking, oh I could go a mars bar!(laughs)...and so this didn't stop. And even on the Thursday...when I had my chemo...when I had the results...the, the, the after effects of the chemo, on the Thursday, as much as I felt absolutely ill, I was, I looked as if I had been in the sun for hours and I was totally burnt and red...and...oh...I didn't know where to put myself...I was starving!..

RESULTS OF INDEPENDENT AUDITING EXERCISE:

AI (1)

AI (1) managed to match seven (23.3%) of the quotes to the theme titles. Eleven (36.7%) of the quotes did not have identical titles, however, were deemed identical in theory (same thing).

AI (1) OWN THEME TITLES	RESEARCHERS ORIGINAL THEMES	RATIONALISATION
2 paths choice	2 paths =Choice to ruminate	X
Sudden awareness of positive support	Shock at positive support	Matched
Positive professional intervention	? Pos and neg medical interaction	Same thing
Positive mental & physical benefits of exercise	Positive mental & physical benefits of exercise=Body min interaction	SAME THING
Normal is not a victim	? Self ID	X
Being blessed	? Cancer ok	X
Worry in perspective	? Stuff it	Same thing
Downward social comparison	? Cross comparison	Same thing
New exercise targets	New health behaviours due to exercise targets	Matched
Awareness of alternative negative choice	2 paths (or) Choice to move on	Matched
Professional control versus personal fears	Cloud-fear of reoccurrence = POWER OF positive THOUGHTS	X
New spiritual behaviour	New spiritual behaviour	Matched
The continuing threat of cancer	? Cloud	Same thing
Optimistic outlook + positive self talk	Power of positive thoughts = CHOICE TO LIVE OR DIE	Same thing
Not knowing who/what is in control	? Body as Barometer	X
Exercise class facilitates targeted confidence	Transference of skills from exercise class to life (or) Social support from exercise class= NHB ACHIEVEMENT	X
Realisation of potential + acquired coping wisdom	Exercise class as a safe environment	?
Hair growth as wellbeing barometer	Hair as identity (or) Body as barometer=cocoon to butterfly	X
Group positive coping norm	Cross comparison= social support from exercise class	SAME THING
Social confidence, 'coming out'	Authentic self (or) Fear of new body (or) Hair as identity= Safe environment	X
Self identity paradox - a second trauma to cope with the first trauma	Self identity= Hair and identity	Same thing
Sufferer empathy vs. professional sympathy + Experiencing others' need to provide empathy	Expert vs. expert (or) Role models	Matched

Professional support for exercise + Not knowing physical capabilities	? Fear of New body	X
Scariness of death removed	? Face to face	Same thing
Stuff it and move on	Stuff it	Matched
Relapse = re-treatment inevitability	? choice to move on	X
Anxiety: uncertainty and knowledge	? In limbo	Same thing
Growth needs adversity	? Authentic self	Same thing
Peer comparisons	Cross comparison= Role models	Same thing
Treatment and body image	**? New Body**	X

The eleven unmatched themes are presented below along with a rationalisation for why the Researchers and IA's themes did not match. This was mainly de to the fact that they were all 2^{nd} order themes and not the finished product. AI (1) said the same thing, but using too many words, e.g. Sudden awareness of positive support=Shock at positive support; Peer comparisons: Role models; Positive professional intervention: positive and negative medical interaction.
One (3.3%) theme title did not fit.

AI (1) OWN THEME TITLES	**RESEARCHERS ORIGINAL THEMES**	**RATIONALISATION**
2 paths choice:	2 paths = Choice to ruminate	X-My wording was too similar
Normal is not a victim:	? Self ID	X –Victim is the ID
Being blessed:	? Cancer ok	X-She was talking about how cancer was a positive experience-ok
Professional control versus personal fears	Cloud-fear of reoccurrence = POWER OF positive THOUGHTS	X-Her immune-attributes it to her pos. thoughts
Not knowing who/what is in control	? Body as Barometer	X-Clearly her using body as a barometer
Exercise class facilitates targeted confidence	Transference of skills from exercise class to life (or) Social support from exercise class= NHB ACHIEVEMENT	X-Did the 5k- never did b4
Realisation of potential + acquired coping wisdom	Exercise class as a safe environment	X take wig off without embarrassment
Hair growth as wellbeing barometer	Hair as identity (or) Body as barometer=cocoon to butterfly	X-Didn't explain this so not obvious what theme consisted of
Professional support for exercise + Not knowing physical capabilities	? Fear of New body	X Scared to do anything
Relapse = re-treatment inevitability	? choice to move on	X If it comes back, that's all there is to it. Move on
Treatment and body image	? New Body	X-Weight gain, fatigue=new body

AI (2)

AI (2) lumped the 30 quotes into 13 themes. Of these, six (46.2%) were matched, three (23%) were deemed the same thing, and four (30.8%) were unmatched, due to lack of explanation. Overall AI(2) got the same idea of these themes, but called them different things. For example, AI (2) labelled the Researchers Mortality face-to-face quote 'acceptance of; fear of unknown reality'. The Researcher didn't explain what face to face meant- it was face to face with death. This was explained at the post meeting and AI (2) agreed with the Researcher.

AI (2) OWN THEME TITLES	RESEARCHERS ORIGINAL THEMES	RATIONALISATION
Power of positive thoughts	1, 11, 14	11
	1=Choice to ruminate	These are all quite similar so I understand why he grouped as such.
	14=Choice to live or die	
Cross comparison/Empathy/I am not alone	2=Shock at positive support, 22=expert vs expert	He lumped them all into one, whereas I needed to separate
Cross comparison/Exercise/I am not alone	29=Role models	Not alone' I guess is like role model
Positive medical intervention	3	MATCHED
Positive mental and physical benefits of exercise	4=Body mind interaction	Same thing- I merged these later
Self ID/personhood	5=Self ID, 6=cancer ok, 7=stuff it, 28=authentic self	Matched 5: the rest are to do with ID I guess I need to be more specific
Hair and ID	18=cocoon to butterfly, 19=social support, 20=safe environment, 21=hair and ID	18-needed to explain, 19 & 20 mention hair, but not main focus, Matched 21
Thank your lucky stars	8=cross comparison	Same thing- I merged these later
NHB achievements	9=nhb 17=	Matched
Need for information/education among Patients	10= 2 paths, 23=fear of new body	These are suited for my theme titles
New spiritual behaviour	12	Matched
Cloud/fear of re-occurrence	25=stuff it, 26=choice to move on	They both mention come back, but not in same contexts actual quote 13
Body as a barometer	15	Matched
Social support from exercise classes	16=transference of skill, 29=role models	my themes are more detailed
Mortality, acceptance of fear of unknown reality	27-fear of new body	Same thing- not explained
Side effects/weight gain	30-new body	He is just listing the new body