“Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness”

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Abstract

With improved treatment and increased survivorship for young people facing life-threatening illnesses, many conditions, such as cancer and chronic kidney disease have now been re-conceptualised as chronic illnesses. Accordingly, research and clinical priorities have been required to shift towards managing the short, mid and long-term psychosocial implications of chronic disease experienced during adolescence and young adulthood.

While the stress of facing a chronic illness for many young people is experienced as a significant hardship, a growing body of research recognises that highly aversive life events, may not be uniformly concerned with negative outcomes, but may instead be viewed as opportunities for growth and positive transformation, 'Adversarial Growth'. One novel intervention that has seen initial and promising results in recuperating the psychosocial effects of chronic illness, and facilitating Adversarial Growth is Adventure Therapy.

This research study adopted a mixed-method, quasi-experimental, and longitudinal study design to investigate and explore the impact of an Adventure Therapy intervention in the promotion of personal growth in the face of adversity, as well as changes in participants' sense of belonging, self-concept, and sense of mastery. The study adopted an interrupted time series design with self-report measures for the intervention and control condition (N = 92) completed at multiple time points (pre-intervention; post-intervention; 3-month and 6-month follow-up) for Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy. A 'priority-sequence model' of mixed methods, used qualitative approaches to elicit personal experiences and rationales for making sense of positive transformation following involvement in the intervention.

Beyond a model of resilience and recovery, findings support research for Adversarial Growth, which argues that highly aversive life events may not be uniformly associated with

maladjustment but instead may be opportunities for personal growth, benefit-finding and thriving. Accordingly, this study found that participants attending the Adventure Therapy intervention had statistically significant improvements in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy, with large effect sizes pre-post intervention. A longitudinal effect, over three months was also found for Adversarial Growth, with the experimental design demonstrating a significant interaction between group and time for Adversarial Growth and other psychosocial dependent variables. Further findings provide initial evidence to suggest that Adversarial Growth for this sample did not occur over time, as a natural process of recovery, but instead only occurred when facilitated by the researched Adventure Therapy intervention. Mixed-method findings also provide complementary evidence for participants' experiences of change and positive transformation, as well as insight into some of the possible rationales for change.

With United Kingdom policy guidelines acknowledging the limits of current service provision to support the psychosocial effects of chronic illness, this research provides initial evidence to claim that Adventure Therapy, as a psychotherapy, may provide young adults with the right conditions in which to achieve personal growth, and thrive 'outside of the clinic'. Theoretical and clinical implications are discussed, as well as strengths and limits of the present study.

1. Introduction

1.1 Chapter Introduction

This chapter contains a critical summary of literature into experiences of chronic illness during adolescence and young adulthood, and the potential impact of long-term ill-health upon particular psychosocial challenges that are faced during this developmental period. This chapter also explores the contention that highly aversive life events, such as chronic illness, may not be uniformly concerned with negative outcomes, but may instead be viewed as opportunities for growth. In exploring potential support and psychological interventions available, this chapter includes a systematic review of the literature and conducts a Narrative Synthesis for an emerging and novel intervention, that of 'Adventure Therapy' with this population of interest.

1.2 Chronic Health Conditions for Children and Young People

Epidemiological studies suggest that as much as ten to twenty percent of children and adolescents in Europe and North America have a chronic illness (Wallander & Varni, 1998). Chronic illness can be seen as an umbrella term for a variety of illness that effect a person over a course of time. Likely to be cyclical in some nature, with periods of more severe ill-health, such conditions not only affect the physical health of the young person, but also how they face the world, and find their place in it (Barskova & Oesterreich, 2009; Sav, King, Whitty, & Kendall, 2015). The most common chronic illness is Asthma in Europe and North America (Asthma UK, 2018), followed by Epilepsy (Young Epilepsy, 2018) and Type 1 Diabetes (Diabetes UK, 2015). However, two highly prevalent conditions which have significant psychosocial impacts are Chronic Kidney Disease (Kidney Research UK, 2018) and Cancer (Cancer Research UK., 2018).

1.3 Chronic Kidney Disease

One chronic illness that acutely affects the lives of children and young people is Chronic Kidney Disease (CKD). With a variety of aetiologies, from birth defects and hereditary diseases, to nephritic syndromes, systemic diseases, infections and traumas, children and young people with CKD are likely to have experienced a diverse range of medical difficulties (at a variety of ages) resulting in their chronic illness (National Institute of Diabetes and Digestive and Kidney Diseases, 2010).

With significant reduction in kidney function, CKD can lead to kidney failure, otherwise known as end-stage renal disease (ESRD), the last and most severe stage of the disease. At this point the organs are unable to perform vital tasks such as removing wastes and maintaining overall fluid balance, requiring dialysis and eventual kidney transplant. Consequently, CKD and ESRD present as a major concern for the health and well being of the individual in question (Kidney Research UK, 2018).

It is estimated that around 3 million individuals are living with a diagnosis of CKD in the United Kingdom (Kindey Care UK, 2018). With regard to acute renal failure, children, adolescents and young adults are estimated to constitute less than 5 per cent of the ESKD population, and their 10-year survival rate is estimated to range between 70 to 85 per cent (Ferris, Gipson, Kimmel, & Eggers, 2006; Saran et al., 2018). Despite these figures and significant improvements in treatment and mortality rates for children, adolescents and young adults experiencing CKD and ESRD, mortality rates remain 30 times higher than their healthy peers (Ferris et al., 2006; Ferris, Miles, & Seamon, 2016).

1.4 Cancer

Along with a trend of increasing incidence of cancer diagnosis for adolescent and young adults, so too has the survival rates increased for those experiencing cancer (National

Cancer Institute, 2018; R. L. Siegel, Miller, & Jemal, 2017). Thus, the outlook for youth facing cancer has greatly improved over the past fifty years. While in 1975, just over 50 per cent of children and adolescents diagnosed with cancer would survive five years, the five year survival rate among children and adolescents has dramatically increased (84 per cent and 83 per cent) respectively (National Cancer Institute, 2018; R. L. Siegel et al., 2017).

Within the United Kingdom, research has found a thirty-three per cent increase in incidence rates, since the early 1990s, for those aged 24 years and under (Cancer Research UK., 2018). When considering trends over time, it has also been found that those aged 0-24 years have experienced the greatest decrease in mortality rates since the early 1970s. Despite the significant increase in incidence, evidence also suggests that adolescents and young adults (15-40 years) have the highest rates of survivorship of any age group within the United Kingdom (Cancer Research UK., 2018).

Whilst cancer remains the leading cause for disease-related death among adolescent and young adults (15-24 years), there are clear trends towards survivorship, with the number of adolescent and young adult survivors dramatically rising within the past few decades (Taylor, Pearce, Gibson, Fern, & Whelan, 2013). For instance, the 5-year survival rates for bone and soft tissue sarcomas has increased from 0-15 per cent to 60-80 per cent within the last quarter century (Bacci & Lari, 2001). With childhood and adolescent survivorship rates now estimated at 70 – 80 per cent, depending on specific diagnosis, there now exist many adolescent and young adults who live *with* cancer, rather than die from it (Phipps, 2005; Zeltzer, Recklitis, & Buchbinder, 2009). Consequently, many individuals struggle through a cyclic cancer experience of diagnosis, treatment, remission and possible relapse (Conrad & Altmaier, 2009). These changes in mortality rates have, thus, shifted how cancer is understood within research and practice, to being conceptualised as a chronic disease (Phillips & Currow, 2010).

1.5 Psychosocial Impact of Chronic Illness in Young People

With advances in understanding and treatment of chronic illnesses, the survival rates are increasing across United Kingdom and North America, however, treatment and follow-up can often be lengthy, with both CKD and cancer arguably better understood as a chronic, rather than fatal illnesses (National institute for Health and Clinical Excellence, 2014; Phillips & Currow, 2010). As a result, the impact of these conditions for young people needs to be understood beyond an acute physical health concern, and it becomes seminal to understand the psychosocial impact of experiencing a chronic illness during an important time of development (Eiser & Kuperberg, 2007).

Adolescents and young adults, represent a unique population not only due to the nature of the malignancies, but also their developmental stage (Stevens et al., 2004). As such, many researchers and practitioners argue for this age group to receive special attention and for their needs to be distinguished from that of other chronic health survivors (Warner et al., 2016). This can be seen in the establishment of the 'Adolescent and Young Adult Oncology Progress Review Group', and working groups within the National Cancer Institute in 2012 towards better understanding of the evidence, and to identify gaps and research priorities for the coming years (AYAO PRG., 2006; Warner et al., 2016). Despite calls for more specific understanding, there exists a common trend within literature to combine adolescent and young adult literature, with either paediatric or older adult population in psychosocial research (Husson et al., 2017). Given that this age group represents specific psychosocial milestones and development, such as increased autonomy from parental figures, exploration of social identity, formation and experience of romantic and sexual relationships; this review will focus on the psychosocial issues characterised by this specific population, independent of other ages (Fern et al., 2013; Walker, Martins, Aldiss, Gibson, & Taylor, 2016).

1.6 Defining Adolescent and Young Adulthood

In order to understand the psychosocial impacts of chronic illness for adolescents and young adults, it is first important to distinguish the defining parameters of this population. A major challenge in the field of adolescent and young adult (AYA) research remains the inconsistencies in a concrete definition of the age range. There also exists alternative terms to categorize this population, such as 'Teenagers and Young Adults' (Kim, White, & Patterson, 2016).

Agreement upon a lower bound for the start of adolescence has been problematical. In taking a chronological view of development, 'age' as defined in years, does not allow for individual differences and the heterogeneous psychosocial lives of children emerging adolescence. Whether one takes a biological view of development, and defines adolescence as bodily and hormonal changes towards puberty; or whether one takes a social view of development and defines adolescence by a number of psychosocial milestones, deciding upon a specific age to be representative of heterogeneous experience becomes an impossible task (Treadgold & Kuperberg, 2010). When looking at the literature, the lowest bound for adolescence has been defined as 11 years old, perhaps taking a biological view of developmental changes (Taylor et al., 2013). Of interest to psychosocial research, however, the social 'tasks' one performs vary greatly between that of an 11-year-old to that of an 18-year-old. However, both problematically have been defined within a single life stage, 'adolescence'.

In consideration of the upper bound of young adulthood, there again exist inconsistencies in definition, with literature classifying the end of young adulthood at 29 years (Taylor et al., 2013), up to 40 years (Warner et al., 2016). In consideration of a bio-psycho-social model of development, it again becomes difficult to homogenise individual

differences in development and classify the 'end' of young adulthood with a single chronological marker.

Whilst recognising the difficulties in classifying the age range of adolescence and young adulthood, and in so doing characterising what is 'normative' for this age group, and by inference what is 'atypical' for this population, there has been some consensus among the chronic health literature (Warner et al., 2016). In consideration of biological, social and psychological domains, adolescence and young adulthood has most commonly been defined as individuals aged between 15 and 39 years whilst experiencing their chronic health concern (Bleyer, 2002; Warner et al., 2016). Accordingly, adolescent and young adult care has emerged as a distinct speciality within healthcare systems in some countries, taking these age parameters as the defining characters of the discipline (Barr, 2011; Coccia, Altman, Bhatia, et al., 2012). This is largely a response to the perceived shared challenges of this cohort, both with respect to combating disease and the types of psychosocial challenges they face (Taylor et al., 2013). As Love and Sabiston (2011, p. 278) write, "While the age group of those classified as AYAs is often inconsistent, the general consensus is that those aged 15 through to 39 years have unique needs, concerns, and treatments compared with the more represented pediatric or adult… populations". Thus, for the purposes of this study, adolescence and young adulthood will be used to characterize those aged between 15 and 39 years inclusive. However, the author is highly aware of the ethics involved in defining a population and the implications of defining 'who belongs'. In providing classification, there will be those who are left out, and those whose voices will not 'count' within this review. Although it continues to prove challenging to define this population, efforts have been made to provide an inclusive classification, whilst attempting to maintain a sense of homogeneity.

1.7 Psychosocial Impacts of Cancer and Chronic Kidney Disease

Given the necessity to improve treatment and survivorship of life-threatening illness, the majority of oncology and renal research that has been carried out has been epidemiological in nature, and disease related (Balen, Fielding, & Lewis, 1996; Ferris et al., 2016). However, with improvements in treatment and increased survivorship for young people, research and clinical attention is required to shift towards the various short, mid and long-term implications of chronic disease diagnosis and treatment (Winter, Muller, Hoffmann, Boos, & Rosenbaum, 2010). Accordingly, the last decade has seen a shift towards non-epidemiological research emphasis and priorities, and an increase in the psychosocial impact of experiencing chronic health issues during adolescence and young adulthood (Taylor et al., 2013).

Adolescence and young adulthood are transitional stages in life, commonly characterised by a number of psychosocial challenges such as identity exploration and development (with regard to sex, gender, occupation, culture, politics), autonomy, rebellion, greater association with peers than parents and family, exploration of romantic and sexual relationships, and risk-taking (Husson et al., 2017). Accordingly, adolescence is understood as the transitional period from childhood to adulthood, and is largely associated with identity and role confusion. This is a period in which individuals search for and create a sense of self and identity, a task which is commonly achieved through intense exploration of relationships, roles, beliefs and values (Erikson, Paul, Heider, & Gardner, 1959). Further, young adulthood is a time to explore notions of intimacy and isolation, and is commonly a time in which individuals seek to form intimate, loving relationships with others (Erikson et al., 1959). Accordingly, adolescence and young adulthood can be understood as a period of life characterised by transformation, with psychosocial developments affecting a person's self-concept, affective and cognitive states, inter-psychic world and their interactions with others

(Abrams, Hazen, & Penson, 2007; Evan & Zeltzer, 2006). However, this period of transformation and the typical challenges therein become significantly more difficult when a person is facing life-threatening illness and chronicity of disease (D'Agostino & Edelstein, 2013; A. R. Rosenberg, Yi-Frazier, Wharton, Gordon, & Jones, 2014). Thus, in facing diagnosis and treatment of a life-limiting disease, such as cancer or renal failure, during a time in which individuals are in the midst of transforming their lives, presents AYAs with a unique set of psychosocial challenges (Evan & Zeltzer, 2006).

Developing Autonomy. With regard to the development of autonomy and necessary separation from attachment figures, experiences of chronic illness can significantly obstruct such individuation. Reliant upon parents, family and caregivers to take them to hospital appointments, or nurse them during difficult moments of ill-health, AYAs are confronted with the paradox of increased dependence at a time when many would like to pursue independence. Such frustrations are likely to be further compounded by a sense of guilt in harbouring resentment to those who they are dependent on and feel thankful for (Sawyer, Duncan, & Drew, 2007). At a time when individuals are likely to be gaining driving licenses, staying out late and risk-taking, youth with chronic illness often report difficulty in gaining autonomy from parents. Similarly, parents often report increased concern for their child, which can lead to heightened trepidation in allowing their child to engage in developmentally normative experiences (Abrams et al., 2007). Thus, in what has been characterized as an "adolescent & young adult paradox", individuals that are unwell, are dependent upon others at a time when developmentally normative processes foster independence and autonomy (Kent et al., 2012, p. 271).

Identity Exploration. In consideration of identity exploration and formation, many AYAs with a chronic illness experience affective difficulties in their sense of self-concept (Abrams et al., 2007; Evan & Zeltzer, 2006). With repeated hospitalisations, time spent away

from school and peers, and immuno-deficiencies requiring conformity and risk-aversion, many AYAs are provided with less opportunity to explore their place in the world beyond notions of illness (Epstein, 2004; Ferris et al., 2016). Often labelled as the "Cancer Kid", or defined by their illness to peers, notions of sickness and disease may understandably be internalised and AYAs may develop a self-concept largely characterised by their disease and physical ill-health (Slavin, 2015, p. 17). As such, many AYAs shared their desire to be treated "just like a normal kid" through treatment and survivorship (Bessell, 2001, p. 354)

Peer Relationships. AYAs who experience chronic illness are also likely to face additional challenges with peer relations (Stam, Grootenhuis, & Last, 2005). With repeated hospitalizations, intermittent or long periods away from school and/or work, and fears of disclosure, one notable challenge for AYAs is social isolation from important peer relationships and delays in exploration of intimate, sexual relationships (Al Omari & Wynaden, 2014; C. L. Park, Bharadwaj, & Blank, 2011). For instance, patients with advance renal failure can be seriously limited in their activities while on haemodialysis or peritoneal dialysis (Leumann, Mueller, & Leumann, 2011). A significant body of research discusses the problems of (re)integrating with physically health peers and the difficulties AYAs face with peers who do not know how to react to a friend with significant illness (Palmer et al., 2000). Further compounding this issue, may be anticipatory anxiety for social encounters with healthy peers, leading AYAs with chronic illness to distance themselves and withdraw in expectation of peer discomfort (Beckwitt, 2014). This withdrawal and social isolation, may well lead individuals to internalise that they are different from their peers and may not be accepted due to their physical differences, resulting in a cycle of mutual avoidance.

Sexual Identity and Romantic Relationships. Adolescence and young adulthood is also a developmental period to explore one's sexual identity and engage in romantic relationships. AYAs with chronic illness are likely to be presented with additional challenges

such as discomfort with body image, time away from peers and less opportunity for relationship development (Goossens, 2015; Zebrack, Casillas, Nohr, Adams, & Zeltzer, 2004). Long-term treatment may also disrupt sexual functioning due to invasive treatment, such as the removal of testicle with testicular cancer, changes in hormone levels, and reduced sexual desire and arousability due to such issues, mental health and/or medication side-effects (Schover, 1994; Stinson, 2015). Consequently, even after health issues are managed and stable, resulting in the opportunity for more interactions with others, social and emotional challenges may continue to exist and present difficulties for peer and sexual relationship development for youth facing chronic experiences of ill-health (Gillard & Watts, 2013).

Confrontation with Mortality. Another major challenge, one that distinctly separates this population from their 'healthy' peers, is that of premature confrontation with death (Freyer, 2004). For many, adolescence and young adulthood is a time for risk-taking, pushing the boundaries and a diminished awareness of the consequences of one's actions. It is a time to metaphorically jump without looking, and a period in which individuals are provided with the opportunity to engage in new and exciting experiences for the first time with increasingly autonomy from parents, as well as financial and legal agency (Steinberg, 2008). As a result, many argue that it is virtually normative for adolescence to find delinquent behaviours appealing, to hasten social maturation and to engage in risky, and antisocial behaviours (Moffitt, 1993, 2003; Roisman et al., 2010). Such behaviours often require a certain disregard for one's mortality. However, AYAs facing a chronic illness are highly likely to have been confronted with the very real possibility of death at an early age (Moura, Costa Junior, Silva, Reichert, & Collet, 2015; Souza & Melo, 2018). Even after kidney replacement or being told one is in complete remission, there appears to be ongoing adjustment difficulties related to an earlier confrontation with death. As another young

women writes about her and her friends' experience of cancer in Keim-Malpass and Steeves (2012):

> "A friend [with cancer] sent me an email a few months back, asking for advice. She had prepared herself for death, was comfortable with its immanence, had presumably tied up all those loose ends with one's self. And then, a second chance, balloons and bouquets and be off your merry healthy way! What the f___ do I do now? The transition between death and the "second life" we've been given is massively confusing and distressing, almost as much as the task of readying oneself for death" (p.377).

Summary of Psychosocial Challenges. Thus, the typical challenges of adolescence and young adulthood are compounded by experiences of ill-health, which commonly result in a circumstantial paradox (Taylor et al., 2013). When wishing to gain autonomy, individuals are required to be more independent. When wishing to take risks, act rebellious, and challenge the so-called 'norms', individuals are confronted with a narrative for conformity and risk-aversion, within a discourse of managing disease. When wishing to spend more time with peers, individuals are required to spend more time away from social settings due to hospitalizations and management of health. When wishing to engage in sexual relationships and find romantic partners, individuals are confronted with the challenges of isolation, social withdrawal and psychosexual issues. And during a time when many take risks and push the boundaries of what may be deemed 'safe', with little regard for the consequence of their actions, adolescents and young adults facing a chronic illness are likely to have confronted and be highly cognizant of their own mortality.

As a result, many youth with chronic illness are also at high risk for anxiety and depression (Cavusoglu, 2001; King & Porter, 2016; Kogon et al., 2013), reduced health

quality of life (Barr, 2011; D'Agostino & Edelstein, 2013; Epstein, Stinson, & Stevens, 2005; Gerson et al., 2010), negative self-concept (Hokkanen, Eriksson, Outi, & Sanna, 2004), preoccupations with ill-health and fertility (Langeveld, Grootenhuis, Voute, De Haan, & Van Den Bos, 2004), low self-esteem and difficulties with identity development (Evan & Zeltzer, 2006), and elevated risk for self-harm and attempted suicide (Barnes, Eisenberg, & Resnick, 2010).

1.8 Adversarial Growth

The stress of facing a life-threatening illness for many young people is experienced as a significant hardship (Hobbs & Sexson, 1993). However, a growing body of research recognizes that highly aversive life events, such as life-threatening illness, may not be uniformly concerned with negative outcomes, but may instead be viewed as opportunities for growth (Connerty & Knott, 2013; Shand, Cowlishaw, Brooker, Burney, & Ricciardelli, 2015).

Research into this phenomenon is conceptualised under the term ‘Adversarial Growth’ (Linley & Joseph, 2004, p. 11). Adversarial Growth is an umbrella term referring to positive transformation following adversity, and is also conceptualised as ‘post-traumatic growth’ (Tedeschi & Calhoun, 1996) ‘stress- related growth’ (Park, Cohen, & Murch, 1996), ‘thriving’ (Carver, 1998), and ‘benefit-finding’ (Affleck & Tennen, 1996; Tennen & Affleck, 1999). However, “these terms are often used inter-changeably, given that the central assumption underlying them is uniform: that is, they all refer to positive changes in the aftermath of trauma and adversity” (Bostock, Sheikh, & Barton, 2009, p. 282).

Adversarial Growth asserts the paradoxical hypothesis that highly challenging life events can foster positive psychological change (Jayawickreme & Blackie, 2014). As Odo and Potter (2009, p. 27) assert it seems apparent that “in spite of the losses, the sadness, the

anger, and the confusion, young adult survivorship is potentially a period of significant growth, possibility, and hope". It is largely understood as an individual's cognitive re-evaluation of aversive life events, and Joseph et al. (2012) contend that it is manifested in 6 domains; self-acceptance, autonomy, purpose in life, relationships, sense of mastery, and personal growth.

Accordingly, research into experiences of chronic illness have shifted away from an exclusive focus on aversive experiences (Helgeson, Reynolds, & Tomich, 2006). There has been increasing research interest into positive responses to the experience of health related adversity, with the assertion that certain areas of life may improve for people (Dunn, Campbell, Penn, Dwyer, & Chambers, 2009). Proposals have been made that individuals are capable of growing from their experience, thriving, and even surpassing levels of functioning that existed before the aversive event, such as diagnosis and experience of treatment for a life-threatening illness (Calhoun, Tedeschi, Cann, & Hanks, 2010). Thus, a growing number of studies suggest that AYAs who have experiencing life-threatening chronic health conditions, may experience and report positive impacts as a result of their confrontation with ill-health such as perceived growth and benefits in a variety of domains (Bello & McIntire, 1995; Zebrack, 2009; Zebrack, Chesler, & Kaplan, 2009). However, it is important to note that by what means and under what conditions Adversarial Growth is achieved remains unclear (Dunn et al., 2009).

Moreover, the potential health-related benefits of fostering Adversarial Growth are vast, such as improved health-management (Luszczynska, Sarkar, & Knoll, 2007), improved immuno-competence (Dunigan, Carr, & Steel, 2007), and greater acceptance and optimism (Harper et al., 2007; Linley & Joseph, 2004). Consequently there have been calls for research to review innovative intervention modalities that not only recuperate the psychosocial effects

of significant ill-health and treatment, but also provide opportunities for growth (Arpawong et al., 2016; Darbyshire, Oster, & Henning, 2006).

1.9 Psychosocial Support for Adolescents and Young Adults with Chronic Illness

Despite the challenges and concerns for AYAs facing chronic illness and the potential for growth under the right conditions, many feel that they do not receive support to address the psychosocial complexities of experiencing a chronic health issue. A study by Zebrack, Chesler, and Penn (2007) contends that over 50 per cent (n = 879) of young adult survivors of cancer, communicated that their support needs had been unmet by service provision.

With regard to United Kingdom policy and treatment guidelines, there exist minimal recommendations in how best to manage the psychosocial stressors of the disease (National Institute for Health and Care Excellence, 2014). While guidelines recommend that "Healthcare professionals working with people with CKD should take account of the psychological aspects of coping with the condition and offer access to appropriate support – for example, support groups, counselling or a specialist nurse", there are no recommendations or analysis of evidence to endorse the most appropriate types of psychological intervention (National Institute for Health and Care Excellence, 2014, p. 217). Furthermore, the current guideline does not make a distinction for treatment recommendations by age group or life stage. Accordingly, guidelines do not help to answer which psychological intervention may be the most appropriate treatment to manage the psychosocial difficulties of facing CKD during childhood, adolescence and young adulthood.

With regard to cancer, policy and treatment guidelines have been written that specifically address the concerns of children and young people in the United Kingdom (National Institute for Health and Care Excellence, 2005). The guidelines also specifically address 'Psychosocial Care', acknowledging that psychological and multi-agency services have an important role to play along all stages of the patient pathway from diagnosis, to

treatment to survivorship, addressing the psychosocial consequences of a long-term physical health difficulty. In analysis of the current evidence, the guidelines identifies two systematic reviews, with the conclusion that "the evidence for the best model of psychosocial service provision is poor" (National Institute for Health and Care Excellence, 2005, p. 75). Moreover, inter-disciplinary professionals, as well as parents/carers of young people identify that psychology service input and support represents a significant area of unmet need. The guidelines acknowledge that the provision of psychological and social support has relied heavily on the voluntary sector, and that while the provision of NHS psychology services remains limited, they endorse that use is made of existing voluntary organisations and that access to these should be encouraged and facilitated (National Institute for Health and Care Excellence, 2005).

Given that over half of AYA state that their psychological and social support needs have been unmet, and that National Health Service is increasingly restricted in funding, there have been calls to explore more innovative psychosocial interventions provided by the third-sector (National Institute for Health and Care Excellence, 2005). As Epstein (2004, p. 105) writes "Cancer touches every aspect of the adolescents' lives. The current culture of the health care system is focussed on curing the cancer but has failed to address the issues related to person behind the cancer". Consequently, one of the major challenges in the care of AYAs facing chronic illness is to ameliorate the aversive psychological and social effects of disease and treatment, and to find ways to facilitate adversarial growth (Stevens et al., 2004). Thus, in designing interventions for this population, social, cognitive, emotional and psychological issues should be considered, to repair and transform into growth much of what may have been lost, delayed or challenged through experiencing chronic illness (Epstein, 2004).

There have been calls for intervention modalities that provide comprehensive and age-appropriate support that address the unique needs of individuals experiencing disease and

health-related adversity at this seminal life stage (D'Agostino & Edelstein, 2013). As Shapiro (2001, p. 5) writes in support of providing opportunities for positive transformation, that "As therapists, we must be careful to view our clients as complex beings functioning on all levels of sensing, thinking, feeling, acting, and believing. And we must not be satisfied with simply removing their suffering. Our clients deserve more than that. They deserve the ability to love, to bond, to excel, and if they choose, to find the desire to serve others".

1.10 Adventure Therapy

One novel intervention that has seen initial and promising results in recuperating the psychosocial effects of significant ill-health is 'Adventure Therapy' (Gass, Gillis, & Russell, 2012; Rosenberg, Lange, Zebrack, Moulton, & Kosslyn, 2014; Stevens et al., 2004). Adventure Therapy has been defined as "the prescriptive use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinaesthetically engage clients on cognitive, affective, and behavioural levels". Several studies have also demonstrated the effectiveness of Adventure Therapies in facilitating Adversarial Growth for female survivors of breast cancer aged 40 years and over (Burke & Sabiston, 2012; Dunn et al., 2009; McDonough, Sabiston, & Ullrich-French, 2011). However, an initial search of literature resulted in a scarcity of papers examining such claims within adolescent and young adult chronic health populations.

1.10.1 What is in a name?

A myriad of terms have been used to characterize the principles of this innovative modality. 'Adventure Therapy' (Autry, 2001; Gass, 1995), 'Wilderness Therapy' (Russell & Phillips-Miller, 2002), 'Adventure-Based Therapy' (DeHart Richardson, 1998) 'Adventure Family Therapy' (Gass, 1995) 'Adventure counselling' (Stitch, 1983), 'Experiential Education' (Warren, Sakofs, & Hunt, 1995), and 'Bush Adventure Therapy' (Bluebond-Langner, Perkel, Goertzel, Nelson, & McGeary, 1989) are some but not an exhaustive list of

titles used to characterise interventions (Wasserburger, 2012). Whilst efforts have been made to distinguish these approaches, such as the differences between 'Wilderness' and 'Adventure' Therapy practices, for instance in the differentiation of 'prescriptive' adventure experiences, camp arrangements and extent of contact with nature, this task is complicated by the dynamic nature of interventions and need for careful adaptation and dynamic response to meet client needs.

1.10.2 'Adventure Therapy' an inclusive definition

With such diverse practices, the treatment fidelity of Adventure Therapy can be called into question if one circumscribes to a particular definition and applies a set of restrictive requirements. Interventions appear diverse in their physical location, use of natural/urban spaces, social context, use of 'adventure' experiences, engagement with wider systems, staffing background and qualification, and therapeutic intentions (e.g. preventative in their approach or as applied for treatment) (IATC, 2018). Given the specific needs of different populations, each programme is likely to be different and requiring careful adaptation. Accordingly, this study has looked to the International Adventure Therapy Committee to embrace the necessary heterogeneity of interventions that characterise this field (IATC, 2018; Itin, 1997).

1.10.3 Principles of Adventure Therapy: An International Perspective

Therapeutic Intentions. Adventure Therapy is consensually agreed to be "used therapeutically to benefit people who are *in recovery* of some nature (emotional, physical or psychological)" (Brocklebank, 1993, p. 1). In their aim and approach, Adventure Therapy interventions are by their name and effort, therapeutic in intention. Whether working with at-risk populations (Autry, 2001), in community mental-health settings (Tucker, Javorski,

Tracy, & Beale, 2013) or with adjudicated youth (Gass, 1995), their aim to foster an environment where change may occur intra- and inter-personally.

Programmed Activities. With regard to the 'adventure' components of the intervention, the plurality of approaches and orientation to 'adventure' are acknowledged in conceptualisation of an inclusive definition of Adventure Therapy (IATC, 2018). Whether prescriptive in their approach, for instance through the application of adventure experiences such as rock-climbing, abseiling, kayaking or challenge-course, or whether interventions foster an environmental milieu of 'adventure' through novel experiences, such as immersion in natural spaces, interventions appear to share an element of actual or perceived risk-taking (Stevens et al., 2004).

Experiential Learning. The experiential or adventure experiences differ from more traditional therapies conducted within clinical settings, such as cognitive or psychotherapeutic traditions, in their approach to introspection and change (IATC, 2018). Whilst 'talking' remains the primary activity in talking therapies, adventure experiences focus on direct, corporeal and phenomenological orientations to change, with experientially-based learning the primary activity for change (Gerstein, 1996). Along with direct experience, one of the most common tools of Adventure Therapy cited is the use of metaphoric association (Elad, Yagil, Cohen, & Meller, 2003). Participants are encouraged to consider how they may transfer accomplishments and coping strategies made within the intervention to their everyday lives upon return. Thus, through "mastery and performance-based success", participants are provided with opportunities to transfer accomplishment and feelings of self-worth to wider psychosocial challenges in their everyday life (Stevens et al., 2004, p. 279).

Social Contexts. With regard to the social context of Adventure Therapy interventions, the majority refer to small-group settings, with group dynamics playing an important role in creating a therapeutic and supportive community (Balen et al., 1996; Rosenberg et al., 2014; Stevens et al., 2004). A number of summer-camps have been created to address the psychosocial needs of children and young people facing cancer, particularly in North America (Woods, Mayes, Bartley, Fedele, & Ryan, 2013). These programmes commonly are large in size with tens, if not hundreds of participants of mixed ages. Again, diverse in their practice, while some prescriptively using adventure experiences, there appears to be a qualitative difference between summer camps whose main aim is to provide recreation and respite, rather than Adventure interventions, with emphasis on challenge in small-group settings (IATC, 2018).

Staffing. Staffed by multi-disciplinary teams, Adventure Therapy interventions utilise a diverse range of mental health professionals, adventure activity instructors, cultural leaders and experts by experience. Internationally, Adventure Therapy practices have been found to work across the spectrum of health and social care, from prevention, to early intervention, to treatment, and continuing care.

1.11 Adventure Therapy Research for AYAs with Experiences of Chronic Illness

There exists a paucity of research, however, examining the effects of Adventure Therapy interventions for adolescent and young adults with experiences of chronic illness. With a scarcity of evidence, and diverse research interests and methodological approaches to examining the intervention, this thesis sought to synthesize the emerging body of literature through the use of a narrative synthesis. This approach would also help ensure a systematic approach to identifying available literature.

Systematic Literature Review: Narrative Synthesis

1.12 Literature Review Aim

The aim of the narrative synthesis was to examine the effectiveness of Adventure Therapy interventions on improving psychosocial health outcomes and facilitating positive transformation for adolescents and young adults who have experienced a chronic illness. The synthesis also aimed to explore participant experiences of change as a result of attending an Adventure Therapy intervention.

1.13 Literature Review Question:

What is the effectiveness of Adventure Therapy interventions on improving psychosocial health outcomes for adolescents and young adults who have experienced a chronic illness, and how do participants describe resultant changes?

1.14 Literature Search Process

Given the nascent stage of research in this field, it was thought that a systematic review of both qualitative and quantitative research would be best suited to capture the exploratory nature of the review question. A systematic search of existing, peer- and non peer-reviewed literature was carried out between December 2018 to January 2019. Potentially relevant articles were identified through a systematic search of six electronic databases: CINAHL, E-Journals, MEDLINE, PsycARTICLES, PsycINFO and SPORTDiscus. There were no date restrictions placed on year of publication of papers. Initial searches included the term “psychosocial” with various spellings, synonyms and truncations, however, these additional search terms yielded too few papers, with the result that known relevant papers were found not too be included in the search strategy. Initial searches also included the terms “growth” and “challeng*” however, this yielded a large amount of unrelated material, associated with tumor development and challenges within medical procedures. Therefore, these terms were not included in the final search. Terms for

“adventure”, “wilderness”, “outdoor”, and “nature” therapies were included, to find potentially relevant interventions. In addition to using search terms for “chronic”, “illness” and “disease”, the most common chronic illness conditions for adolescent and young adult populations were used within the search strategy to capture the extent of research within the field (Hagell, Shah, & Coleman, 2017).

The search strategy had three components, with all concepts combined via the AND operator. Within each component, several keywords and controlled vocabulary terms were included, combined via the OR operator (see Table 1). A manual search of literature involved snowballing strategies, reviewing grey literature through reference lists and involved searching Adventure Therapy interventions online and through the International Adventure Therapy Committee for conducted research.

Table 1. Search strategy used in current literature review.

Search	Query	Items found
#1	young or "young adult*" or AYA or youth or “emerging adult*” or child* or adolescen* or pediatric or paediatric or survivor*	9,364,613
#2	"adventure therap*" or "outdoor therap*" or "nature therap*" or "wilderness therap*" or adventure or outdoor or wilderness or ecotherapy or “green exercise”	121,304
#3	chronic or illness or disease or sickness or renal or kidney or Esrd or “end stage renal disease” or asthma or respira* or diabetes or epilep* or arthrit* or cancer or oncology or neoplasm or tumour or tumor or malignan* or leukemia or leukaemia or lymphoma or melanoma or metastasis or sarcoma	19,408,849
#4	Search #1) AND #2) AND #3)	4,952

1.15 Inclusion Criteria

To meet inclusion criteria, articles were required to investigate a Wilderness or Adventure Therapy intervention for young adults who have experienced chronic ill-health. The search included peer- and non peer-reviewed journal articles, with no restrictions on date or country of origin. However, papers were required to be written in English. Whilst inconsistencies remain in a concrete definition of the age range for AYA (Treadgold & Kuperberg, 2010), this literature search proposed an inclusive range, with studies meeting criteria if the specified population included young people within the range of 15 to 39 years, and if findings were discussed in relation to childhood, adolescent or young adulthood survivorship field of literature (Coccia, Altman, & Bhatia, 2012; Warner et al., 2016). Given the emerging state of literature in the field, this review also included unpublished studies, such as unpublished theses and magazine articles provided they met inclusion criteria.

1. Papers related to adolescents and young adult populations (Ages 15-39 inclusive).
2. Papers related to adolescents and young adults who have experienced a chronic illness during childhood and/or adolescence.
3. Papers investigating an Adventure Therapy intervention, within a small-group wilderness setting.
4. Papers using quantitative or qualitative methodological inquiry to examine the effectiveness of Adventure Therapy interventions on improving psychosocial health outcomes, and/or explore participant experiences of psychosocial change as a result of attending an Adventure Therapy intervention.
5. Papers related to ‘green’ or land-based adventure interventions.
6. Papers based on studies conducted worldwide.
7. Papers written in English language.

1.16 Exclusion Criteria

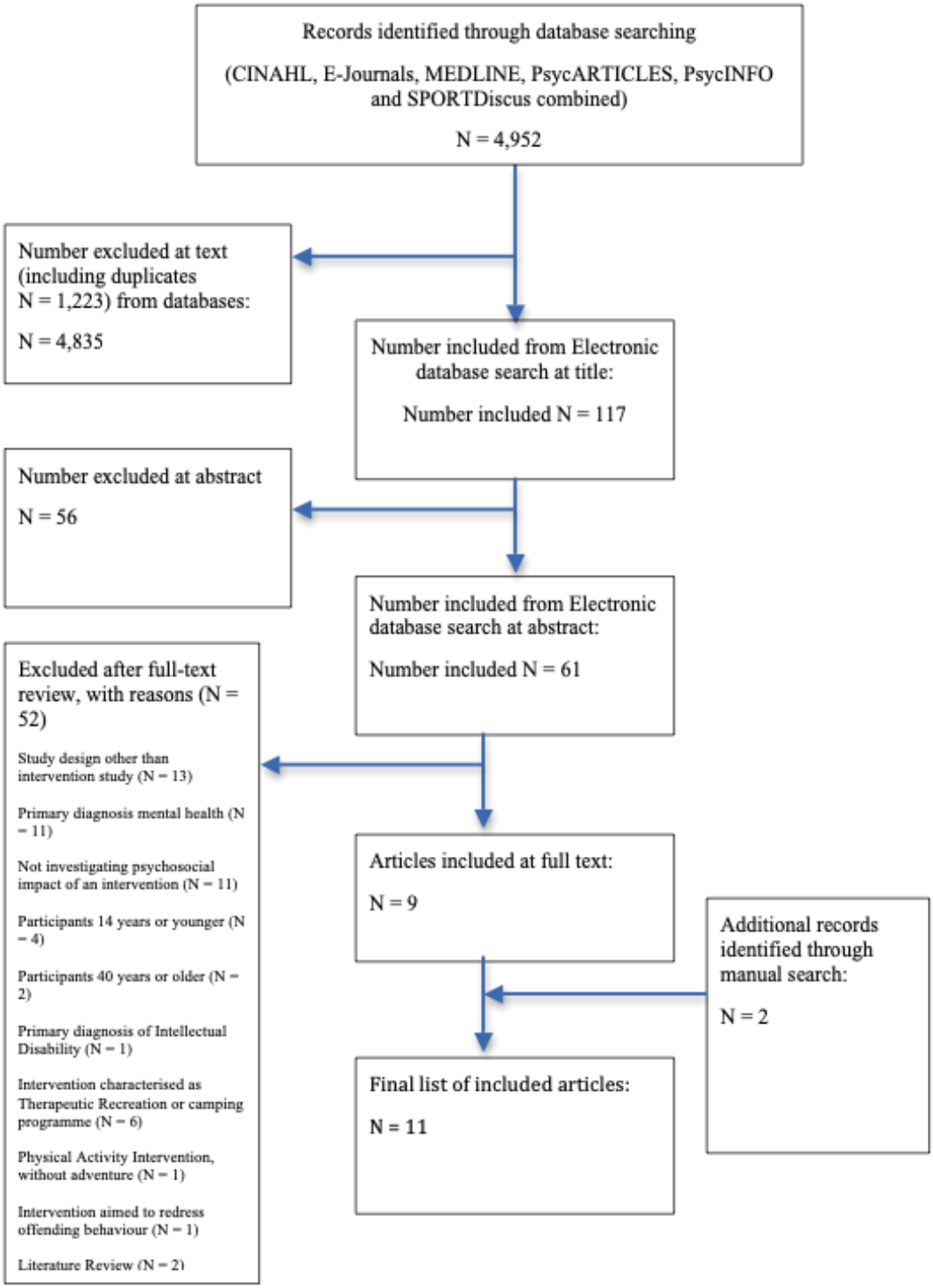
1. Papers related to child population, with a mean age of participants 14 years or younger.
2. Papers related to adult populations, with a mean age of participants 40 years and over.
3. Papers investigating camps or therapeutic recreation interventions, without a component of Adventure experience.

4. Papers that do not examine or explore the psychosocial impact of the specified intervention.
5. Papers related to physical exercise interventions, without a component of Adventure experience.
6. Papers not directly examining or exploring an intervention.
7. Papers using a population with a primary diagnosis of mental health condition e.g. Schizophrenia, PTSD, with absence of physical health chronic illness during childhood or adolescence or at time of intervention.
8. Papers reporting on an intervention with primary focus of addressing offending behaviour of sample population.
9. Papers using a population with diagnoses of Intellectual Disability.
10. Papers using a population with a primary diagnosis of obesity, with the focus of intervention on weight loss.
11. Papers synthesising multiple studies.
12. Papers written in a foreign language.

1.17 Search outcome

The database search identified (N = 4,952) papers. Duplicates were excluded (N = 1,223). The titles of the remaining 3,729 papers were screened to determine relevance, with 3,612 papers excluded. This high rate of exclusion was largely due to papers examining the relationship between outdoor environments, and the aetiology and prevalence of chronic illnesses. After reading abstracts, 56 papers were excluded as they did not meet the specified criteria. The remaining 61 full text papers were read in accordance with the inclusion and exclusion criteria, resulting in 9 studies included which explicitly met the criteria. Two further papers were identified through a manual search of grey literature. Eleven papers were selected in total for the literature review. Six papers were qualitative in design, 3 were quantitative, and 2 mixed-methods. The rationale for papers being excluded at full-text, as well as a full description of the selection process can be seen in Figure 1.

Figure 1. Selection process of studies.



1.18 Narrative Synthesis

A Narrative Synthesis was deemed appropriate to answer the above research question, as it was deemed to suit the small, emerging evidence-base of this new field and would allow inclusion of both qualitative and quantitative research designs exploring Adventure Therapy interventions for this specific population (Popay et al., 2006).

1.19 Quality appraisal

Included studies remained diverse in their quality of methodology and reporting. Papers using qualitative research methods (N = 6) were appraised using the Critical Appraisal Skills Programme (CASP) tool (Critical Appraisal Skills Programme, 2018). Articles using quantitative research methods (N = 3) were appraised using the Downs and Black (1998) checklist for the assessment of the methodological quality of both randomized and non-randomized studies. Papers with mixed-methodologies were appraised using both systematic tools (N = 2). The assessment of study quality was appraised by one investigator, with the appraisal tool(s) providing systematic guidelines with which to appraise papers. The quality of qualitative papers was rated a weak, moderate or strong. The quality of quantitative papers was rated as poor, fair, good or excellent (Table 2).

1.20 Data abstraction and synthesis

1.20.1 Quantitative Synthesis

The five quantitative papers examine a wide variety of psychosocial factors, including social support, self-esteem, body-image, self-compassion, locus of control, and distress symptomology amongst others. Three of the papers solely examine changes pre-post intervention, and two further examine changes at follow-up intervals. One paper adopts an experimental research design, utilising a wait-list for a control comparison. Given the diversity of measures, designs, and clinical heterogeneity, a narrative approach to synthesis was deemed most suitable (Popay et al., 2006). Textual and tabulation based approaches were

used to synthesis these findings. A summary of the included studies can be seen in Table Two, and a summary of quantitative results in Table Three.

1.20.2 Qualitative Synthesis

A three-staged 'Thematic Synthesis' was conducted, as detailed by Thomas and Harden (2008), to synthesise the qualitative papers within this narrative synthesis. In an effort to ensure transparency, and adhere to COREQ guideline for qualitative research rigour, the epistemological assumptions of the synthesis are made explicit (Tong, Sainsbury, & Craig, 2007). The analytic framework adopted semantic and essential principles, using a data-driven inductive approach in the formation of codes (Braun & Clarke, 2006; Wilkinson, 2008).

Stage One. Extracting and Coding Text. The entire result sections from qualitative studies, and qualitative result sections of mixed-method papers were exported to NVIVO-10 software. This material, which included quotes, thematic content and author interpretations, was then coded inductively to capture the meaning and content of each sentence.

Stage Two. Developing Descriptive Themes. Codes were assessed for similarities and differences in order to group into clusters of meaning.

Stage Three. Generating Analytical Themes. This process required 'going beyond' the content of original studies that emerged in the inductive analysis, and examining the descriptive themes that emerged from the inductive analysis to answer the review question that had been temporarily put aside. Analytic themes were distinguished by content that explored psychosocial outcomes as a result of attending an Adventure Therapy intervention, and by content that explored the processes of change underlying psychosocial improvements. In an effort to stay close to the narrative of papers and minimize the unassailable 'gap' in understanding that is inherent in abstracting themes, the title of themes were created from content found within result sections.

Table 2. Summary of the included studies

Authors & Country	Design	Aims	Participants	Diagnoses	Data collection methods	Quality appraisal rating
Alt, L.M. (2009) United States & Costa Rica	Qualitative	To explore the experiences of young adults with Type 1 Diabetes participating in an outdoor adventure trip.	N=10, 70.00% female, 30.00% male, Mean age = 29.40, *S.D.* = 7.62	Type 1 Diabetes	Semi-structured interviews	Strong[a]
Elad et al. (2003) Israel & Greece	Qualitative	To explore participant accounts of concerns and coping strategies among a group of young adult survivors of cancer participating in an 8-day adventure Jeep trip.	N=17, 58.82% female, 25.29% male, 20-29 years	Hematopoetic Malignancies (n=5) Musculoskeletal cancers (n=9), Breast cancer (n=2) Metastatic thyroid carninoma (n=1)	Video-taped ethnography & interviews	Weak[a]
Hersokowitz, R.D. (1990) United States	Quantitative	To study the impact of an Outward Bound intervention on diabetes adjustment, locus of control, and self-esteem for adolescents and young adults with Type 1 Diabetes.	N = 8, intervention, 15-10 years,	Type 1 Diabetes Co-morbid difficulties including Ashtma, Addison's disease, Hypothyroidism, Obesity, depression, diabetic complications such as retinopathy, hypertension, proteinuria, recurrent hypoglycaemia, recurrent hospitalization for ketoacidosis.	Questionnaires & observation	Poor[b]

Table 2. Summary of the included studies (contd.)

Authors & Country	Design	Aims	Participants	Diagnoses	Data collection methods	Quality appraisal rating
Kessel et al. (1985) United States	Mixed-Method	To investigate changes in locus of control, self-image, family environment and family dynamics for adolescents with chronic illness, physical disability or able-bodied attending Adventure Etc. wilderness/urban Outward Bound experience.	N=37, 48.65% female 51.35% male, Mean age = 15.23	Cancer diagnoses, Cystic Fibrosis, Diabetes, Muscular Dystrophy, Arthritis, Heart Disease, Seizures, Hearing Impairment, Chemical Dependency, Depression, Scoliosis, Cerebral Vascular Accident	Questionnaires Semi-structured interviews	Weak[a] Fair[b]
Rosenberg et al. (2014) United States	Quantitative	To investigate the effects of an 6-day outdoor adventure program on a range of psychological characteristics of young adult cancer survivors.	N=199, 82.91% female 17.09% male, Mean age WL = 29.3 Mean age P1 = 31.1 Mean age P2 = 31.3	Details of cancer diagnoses not provided	Questionnaires	Good[b]
Slavin, M. (2015) United Kingdom	Qualitative	To explore the psychosocial impacts of an adventure programme for young adult survivors of cancer	N=7, 57.14% female, 42.86% male, 18-24 years; mean age = 21.8 years	Brain tumours (n=2) Testciular cancer (n=2) Chronic Myeloid Leukaemia (n=2), Rhabdonyosarcoma (n=1).	Semi-structured interviews	Strong[a]
Stevens et al. (2004) Canada	Qualitative	To describe adolescents' with cancer experience of a 10-day Adventure Therapy expedition to the Arctic Circle from a health related quality of life perspective.	N=11 adolescents, N = 5 health professionals, 54.55% female adolescent, 45.46% male adolescent Adolescent Mean age = 17, Range = 15-18 years.	Leukemia (n=4) Hodgkins disease (n=3), Non-Hodgkins Lymphoma (n=3) Brain tumour (n=1)	Unstructured Interviews	Moderate[a] .

*WL = wait-list control group; P1 = first outdoor adventure programme, P2 = second outdoor adventure programme

Table 2. Summary of the included studies (contd.)

Authors & Country	Design	Aims	Participants	Diagnoses	Data collection methods	Quality appraisal rating
Wagner, A. (2014) United States	Qualitative	To assess the outcomes of participation in a 1-week, *First Descents* outdoor adventure programme for AYA cancer patients and survivors.	N=70, 68.57% female, 44.29% male, Mean age = 31.2 years, median age = 29.	Cancer 63% in remission	Structured Interview	Weak[a]
Wingler, D. (2013) United States	Qualitative	To understand the Adventure-based Therapy experience for adolescent cancer survivors through the lens of the professional administering the intervention.	N=2	Cancer	Semi-structured Interviews	Weak[a]
Wynn et al. (2012) New Zealand	Mixed-Method	To evaluate the impact of an Adventure Therapy eight-day wilderness intervention for adolescent survivors of childhood cancer.	N=5, 60.00% female, 40.00% male, Ages 17 – 21 years	Cancer, including "late effects" health issues; obesity, restricted mobility, memory and cognitive impairment, balance, vision, hearing problems, hormonal deficiencies and nocturnal enuresis.	Questionnaires Semi-structured Interviews Participant Journals	Weak[a] Poor[b]

Table 2. Summary of the included studies (contd.)

Authors & Country	Design	Aims	Participants	Diagnoses	Data collection methods	Quality appraisal rating
Zebrack et al. (2017) United States	Quantitative	To examine whether participation in a 1-week, *First Descents*, outdoor adventure program resulted in improvements in psychological distress, self-efficacy and/or social support for AYA cancer patients.	N=304, 81.9% female, 16.1% male, 37.2% aged 18-29, 55.3% aged 30-39, 5.6% aged 40 years[a]	Solid tumor/soft tissue (59.2%), Hematological (29.3%), Brain tumor/ Central Nervous System (6.9%)	Questionnaires	Good[b]

[a] = These participants were 39-40 years when they applied and turned 40-41 years by time of data collection

[a] = Papers appraised using the Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist

[b] = Papers appraised using Downs & Black (1998) Checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions.

1.21 Results

1.21.1 Study Characteristics and Quality

A summary of the included studies characteristics and critical appraisal ratings can be seen in Table 2. Critical appraisal ratings provide an overall rating of each study's quality, and provide a method in which to qualify the validity of findings.

Particularly strong qualitative methodologies were rated for Alt (2009) and Slavin (2015). Convenience sampling methods were appropriate and well justified, given the novel interventions, and intervention details were explained in-depth. They demonstrate transparency in the analytic process, with clarity in the derivation of themes. The researchers' roles are considered and attempts are made to provide transparency in unassailable biases for the stages of data collection, analysis and presentation. Quotes are provided in context of individual interviews and are sufficiently presented to support findings. The credibility of the papers is further strengthened through the use of triangulation methods, such as peer-review strategies for thematic analysis procedures (Slavin, 2015), and member-checking to ensure respondent validation in the final production of themes (Alt, 2009; Slavin, 2015). Both papers provide novel insight and understanding for Adventure interventions with young adult cancer survivors in a British healthcare context and Type-1 Diabetics within the United States of America. While providing strong methodological inquiry and new understandings within an emerging research field, findings are based on small sample sizes, in specific intervention modalities, which may mean that data saturation is not reached.

Papers by Rosenberg et al. (2014) and Zebrack, Kwak, and Sundstrom (2017) were appraised as particularly 'good' quantitative methods. Using well-validated and reliable measures, research procedures, methods of analysis and results are clearly described. The interventions being evaluated were also clearly described in depth, with both positive and

adverse effects detailed and taken into consideration. Both papers were also sufficiently powered to detect clinically important effects, with Rosenberg et al. (2014) using a wait-list comparison group and Zebrack et al. (2017) examining longitudinal data (one-month follow-up). However, both papers can be critiqued due to a lack of randomization and blinding.

Qualitative research articles by Elad et al. (2003), Wagner (2014), Wingler (2015) Wynn, Frost, and Pawson (2012), were appraised as methodologically weak. With regard to research design and data collection, Elad et al. (2003) was rated as particularly weak in their retrospective analysis of an edited documentary film. Of these four papers, only Wagner (2014) adopted methods to appraise credibility of their analysis. However, their use of means-end theory (Goldenberg, Klenosky, McAvoy, & Holman, 2002) and analytic procedures appeared in conflict with the ontological foundations of qualitative research. Research questions by Wingler (2015) would also be better addressed by exploring participant experience, instead two short interviews (a total of 1 hour 43 minutes) are conducted with professionals three years after involvement with the Adventure intervention. Elad et al. (2003), Wingler (2015) and Wynn et al. (2012) are further critiqued by the limited description of analytic procedures, with all four papers providing minimal data (in the form of quotes) to support the abstracted themes. Despite notable methodological weaknesses, these papers provide further exploration into a novel research area, and providing a starting point for further, more rigorous enquiry.

Quantitative papers by Herskowitz (1990) and Wynn et al. (2012) were appraised as methodologically poor due to a lack of transparency in the reporting of participant recruitment and demographics, analytic procedures, and limited declaration of results. These pilot studies were further critiqued by small sample sizes (n = 6), and (n = 5) respectively, and by use of non-standardized measures (Wynn et al., 2012).

The remaining papers were appraised to have 'moderate' qualitative (Stevens et al., 2004) and 'fair' quantitative (Kessell, Resnick, & Blum, 1985) methodologies, with key strengths noted for their transparency in recruitment strategies and participant demographics; clarity in the description of adopted interventions; clarity in analysis procedures; and clear demonstration of results. However, the methodology by Stevens et al. (2004) is limited by the papers' retrospective analysis of 25 hours of unedited documentary interviews, with thematic analysis secondary to the original purpose of filming, and as such, no consideration or control over the nature, frequency or structure of interviews. Kessell et al. (1985) internal validity comes under scrutiny due to their lack of control group, however, intervention programmes are attended by participants with chronic health conditions, as well as 'healthy' peers, which provides a design with which the authors provide comparative analysis.

1.21.2 Effectiveness of Adventure Therapy Interventions

A summary of results can be seen in Table three.

Reduction in discomfort and distress. Results demonstrate statistically significant reductions in scores for depression and depressive feelings ($p < .001$), discomfort ($p < .01$) and somatic anxiety symptoms ($p < .05$) compared with a wait-list control group at intervention completion (Rosenberg et al., 2014). However, Rosenberg et al. (2014) did not find significant reductions in anxious feeling or aggression scores.

Improved Self-Concept. Results demonstrate statistically significant improvements in self-compassion, $F(1, 154) = 14.9$, $p < .001$, and self-esteem, $F(1, 154) = 8.5$, $p < .01$, compared with a wait-list control group at intervention completion (Rosenberg et al., 2014). Findings also demonstrate psychosocial adjustment with statistically significant improvement in body-image appraisals post-intervention for two studies (Kessell et al., 1985; Rosenberg et al., 2014). However, body-image improvement scores appear mediated by whether

participants reported their lives to be adversely affected by medical treatment (Rosenberg et al., 2014), and non-significant pre-post findings were found for one cohort within Kessell et al. (1985) .

Social Support. Social support scores were significantly greater post-intervention, compared with pre-intervention scores ($p < 0.001$) for Zebrack et al. (2017) however, scores decreased from post-trip to follow-up. Thus, the overall rate of change in support over time was only marginally significant ($\beta = 0.064$, $p < 0.053$). Relationship difficulties were also explored in the assessment of family conflict pre- and post-intervention (Kessell et al., 1985). Their paper found a significant decline in family conflict for participants with chronic illness ($p < 0.048$), however, this finding was not replicated, with non-significant results found for the following years' cohort.

Self-Efficacy, Locus of Control and Resilience. One study demonstrates statistically significant improvement in self-efficacy scores post-intervention ($p < 0.001$) and at follow-up ($p < 0.001$) when compared to pre-intervention scores. Rate of change over time was statistically significant ($\beta = 2.361$, $p < 0.001$) (Zebrack et al., 2017). Such findings suggest that interventions increase individuals' belief in their capacity to influence circumstances in life. While these findings are supported by statistically significant improvements in locus of control scores for one cohort studied by Kessell et al. (1985), such results were not replicated when examining pre-post changes with the following years' cohort. While Herskowitz (1990) failed to demonstrate statistically significant change in locus of control scores in their study, this could well be due to being under-powered given their small sample size (n = 6). There is also initial evidence to suggest that an Adventure Therapy intervention may improve resilience, with evidence by Wynn et al. (2012) showing a trend in increased measures of resilience (N =5). These results remain preliminary, however, with no statistical data included in their results, and only a graph displaying a trend in pre-post scores.

Table 3. Summary of the Results for the Effectiveness of Adventure Therapy Interventions

Authors & Country	Design	Measure(s)	Results
Herskowitz R.D. (1990) United States	Quantitative Pilot. Experimental.	Achenbach Youth Self-Report Profile Nowicki-Strickland Measure of Locus of Control Diabetes Adjustment Scale Coopersmith Self-Esteem Inventory Patterson's 'A-Cope'	No significant differences within intervention group between baseline and follow-up (7-11 months). No significant differences between intervention and control group at follow up (7-11 months) for measures. The problem score of the Youth Self-Report decreased from a mean of 37 ± 6 to a mean of 22 ± 1 *(n* = 5, $p <$ 0.051, with no change in the control population over a similar period of time (39 ± 3 to 37 ± 3).
Kessel et al. (1985) United States	Mixed-Method Experimental	Offer Self-Image Questionnaire for Adolescents Nowicki-Strickland Measure of Locus of Control Moos Family Environment Scale	Significant increase in locus of control scores for chronic illness participants in 1980 programme studied ($p <$ 0.048), but not for 1981 programme ($p <$ 0.055) or with 'able-bodied' peers programmes in same years. Significant increase in body image appraisals (Offer Self-Image Questionnaire) for chronic illness participants in 1980 programme ($p <$ 0.023), however, changes were not significant in 1981 programme ($p <$ 0.055). For 'able-bodied' peers, non-significant changes in 1980 cohort ($p <$ 0.055, however, significant changes in 1981 programme ($p <$ 0.047). Significant decline in family conflict for chronic illness ($p <$ 0.048) in 1981 cohort but no change in 'able-bodied' peers. No significant change in either condition in 1980.
Wynn et al. (2012) New Zealand	Mixed-Method	Wagnild and Young's 14-item resilience scale	Scores for the resilience scale "show a trend in increased measures of resilience".

Table 3. Summary of the Results for the Effectiveness of Adventure Therapy Interventions (Continued)

Authors & Country	Design	Measure(s)	Results
Rosenberg et al. (2014) United States	Quantitative Experimental	Body Image Scale Self-Compassion Scale-Short Psychological Screening Inventory-2	Statistically significant difference in change scores ($p < 0.05$) between intervention and wait list at post-test (post minus baseline) for 10 variables of interest. After the intervention relative to wait-list, improved body image, self-compassion, self-esteem, and less discomfort, depression, alienation, fatigue/low energy, memory/concentration problems, and somatic anxiety symptoms. Unaffected were anger/aggression, anxious feelings and verbally, socially outgoing scores. Body image scores depended upon whether respondents reported their lives to be adversely affected by medical treatment $F(1, 154) = 6.07$, $p = .01$ No significant differences in the psychological variables at pre-test between participants attending the intervention for the first or second time.
Zebrack et al. (2017) United States	Quantitative	Patient Health Questionnaire-4 Cancer Behaviour Inventory-Brief Duke-UNC Functional Social Support Questionnaire	Distress symptoms were significantly fewer post-trip ($p < 0.001$) and at follow-up ($p = 0.009$) when compared with baseline. Rate of change over time was statistically significant ($\beta = -0.322$, $p < 0.001$). Self-efficacy scores were significantly greater post-trip ($p < 0.001$) and at follow-up ($p < 0.001$) when compared to pre-trip scores. Rate of change over time was statistically significant ($\beta = 2.361$, $p < 0.001$). Social support scores were significantly greater at post-trip ($p < 0.001$), however, scores decreases from post-trip to follow-up. Thus, the overall rate of change in support over time was only marginally significant ($\beta = 0.064$, $p < 0.053$).

Dose Effect. Rosenberg et al. (2014) did not find any significant differences in the degree of change from pre-test to post-test in the psychological variables of interest (13 measures) between those attending the intervention for the first or second time.

1.21.3 Synthesis of Qualitative Findings

A thematic synthesis resulted in three themes accounting for the psychosocial impact of an Adventure Therapy intervention, Theme 1: 'You Know What? I'm Doing OK', Theme 2: 'You Can Overcome Anything', Theme 3: 'Turned My Life Around'. Three themes accounted for the underlying processes of change, Theme 1: 'The Connection', Theme 2: 'Acceptance', Theme 3: 'Putting Things in Perspective'.

Theme One: 'You Know What? I'm Doing OK'. Papers commonly shared experiences of identity change whilst experiencing chronic health issues. Following involvement in Adventure Therapy interventions, narratives appear to cite a revised self-concept and one that is characterised by greater self-acceptance and self-compassion. As one participant shared, "I learned from many of the people on the trip that just being yourself with others can be better than trying to put on a face or a show for people" (Alt, 2009, p. 89). These changes appear to result from contact with a supportive group, as well as contact with nature, "I just felt like I could be more like myself in the forest more than when I'm at home. I kind of felt that being out in the open I did actually feel different than who I am at home" (Wynn et al., 2012, p. 29). Several narratives also cite the adventure and challenge component of the intervention, as central to this identity transformation. "Yeah, that bit like I say, actually pushing myself and hurting myself and realising that I'm not fragile anymore was definitely that 'eureka' moment for me... Now it's gotten to the point where I

don't identify as a cancer patient anymore" (Slavin, 2015, p. 17). Such experiences appear to engender changes to individual's self-concept and provide opportunities for new narratives of health and wellness to emerge.

Theme Two: 'You Can Overcome'. Papers report that Adventure Therapy interventions helped to foster greater confidence and self-belief in the possibility of further achievements. As one AYA reflected, "I have overcome. The next time I will have obstacles like this I would [be] less discouraged and say that I can make it" (Stevens et al., 2004, p. 282). In what Wagner (2014, p. 8) characterises as 'transference', "the ability to take home what happened in the wilderness", also commonly understood as 'metaphorical association', participants report greater confidence in their capability to achieve. As one participant shared, "I felt really confident because I knew that I could achieve something I'd never done before" (Wynn et al., 2012, p. 30). It would appear that the intervention helps individuals to acknowledge their capacity to overcome challenging situations and make connections to their ability to overcome experiences of ill-health. As one participant shares, "The whole week... gives you the confidence to say, 'if I've done that...what can I do in my personal life?" (Slavin, 2015, p. 20).

Theme Three: 'Turned My Life Around'. Papers commonly discuss the experience of the intervention(s) as a turning point in participants' lives. Narratives share experiences of (re)processing experiences of health-related adversity and integrating experienced hardship in a way that decreased distress and provided opportunities for growth and transformation. As one participant shared about their experience of an Adventure Therapy intervention, "I think it did help me resolve certain very private personal issues that I don't even think I knew I had" (Alt, 2009, p. 87). These small-group, natural settings appear to provide AYAs an opportunity with

which to (re)evaluate their experiences of adversity and make new meaning. As one participant reported, “Exposing myself to this open view of eternal mountains and valleys seems like minimizing my own mortality”, with the apparent consequence that ‘‘I have left my burden on the cliff top” (Elad et al., 2003, p. 204). This change in appraisal is also apparent in the words of one participant from (Slavin, 2015, p. 18):

> “I don't know where I'd be if I didn't go on that trip. I didn't let my mum know but... this only gets worse. My legs only get worse, my eyes only get worse, it's only gonna get worse. So, if it's not getting any better, what's the point in living... I think [the intervention] saved my life... I don't know if I'd be brave enough to take my own life but I certainly felt, like, at the time that I was questioning whether life was worth living... So, yeah I wrote here that if you want to know what impact [the intervention] makes, it potentially is life-saving is what I would say”.

Theme Four: ‘The Connection’. A strong theme that emerged from the synthesis was the importance of ‘the connection’ to others and the natural environment. Participant narratives commonly cite the significance of belonging and the sense of “togetherness” that Adventure Therapy interventions foster (Stevens et al., 2004, p. 281). With others of similar health experiences, AYAs report feeling that “You’re not alone” (Alt, 2009, p. 88). One aspect of ‘connection’ that appears particularly common is the significance of feeling understood by others with shared experience. As one participant from Alt (2009, p. 79) shares:

> “The fact that everybody around me knew or had an intimate knowledge of the experiences I was going through on a day to day basis. I normally feel like I have to explain it to somebody or rationalize about why behavior is a certain

> way. All those pressures of having to constantly explain yourself to other people was gone and that was a really positive, powerful experience."

Such 'connection' also appeared to be related to the natural setting in which interventions are conducted. There appears to be a shared narrative for the importance of time in natural settings and the way in which contact with nature and wilderness promotes a deeper connection to oneself and others and in turn provides opportunity for transformation. As one participant from Stevens et al. (2004, p. 281) recounts,

> "Nature awakens your senses so that you can connect deeply with yourself…"The adventure in the other end develops in people the love for each other, the need of each other, and the sense of collaboration... at the same time you realize that other people need and respect you, and that brings together your self-confidence, self-respect, and finally you realize you are important and you can make great things happen".

Theme Five: 'Acceptance'. Another process of change that appears common to participant experiences across a number of interventions is that of 'acceptance'. This theme relates to participants' revised understanding of their experiences of ill-health, such that one participant shared at the end of an Adventure Therapy intervention "Only today can I understand the events I have gone through" (Elad et al., 2003, p. 204). Papers also report the significance of self-acceptance and in coming to terms with changes as a result from their chronic health conditions, such as impairment in vestibular functioning. Accordingly, one participant shared the importance of "accepting that I am not normal, but can still do stuff" (Slavin, 2015, p. 22). Experiences of 'acceptance' also take that of an existential quality, with contact with nature providing participants with an opportunity to make meaning out of their

premature confrontation with death. As one participant shared attending the intervention helped them understand that "Death is merely a natural continuation of life" (Elad et al., 2003, p. 204). It would appear that attending an Adventure Therapy intervention provides an opportunity to engage with the adversities of having a chronic illness, and provides opportunities for processing and meaning-making that may lead to positive transformation and growth. As such, one participant shared "I think some things did surface [on the intervention] and get put away better. So that when I returned home with my family or my friends or my clients even, I'm maybe more at peace with myself or with my diabetes. I can't really define it, I just know it feels a bit different and it feels better" (Alt, 2009, p. 87).

Theme Six: 'Putting Things in Perspective'. Another process of change that appeared common to participant experiences was a shift in perspective. It would appear that the experiences of change are in part facilitated by a shift in appraisal of personal capabilities and identity, as well as greater appreciation for life. As one participant reports, "Sharing my experience with other survivors has allowed me to put things in perspective'' (Elad et al., 2003, p. 204). As one AYA considered in their reflection of why an Adventure Therapy intervention proved transformative, "Just thinking about things differently. Thinking 'OK, you can't do that but you can do this'. Basically, what I tell myself is 'You bump into a couple of things, but you'd done a sixty-foot abseil. So are you really that incapable? Are you really that disabled? No... I'm not" (Slavin, 2015, p. 19). Thus, it would appear that one important aspect of the process underlying meaningful change following an Adventure Therapy intervention is this enhanced ability to re-evaluate one's experience of ill-health and arrive at more positive appraisals of the self and

individual's future. As one participant succinctly reports, "Reality did not change–my own perspective over it has changed" (Elad et al., 2003, p. 204).

1.22 Discussion

The narrative synthesis reviewed findings from 11 studies exploring the effectiveness and experiences of psychosocial change resulting from participation in an Adventure Therapy intervention for AYAs who have lived with a chronic illness. The synthesis is explored in relation to the research question and clinical implications.

1.22.1 Effectiveness and Experiences of Change

The synthesis supports the assertion that attending an Adventure Therapy intervention may be helpful in managing the psychosocial difficulties that are confronted through experiences of chronic ill-health during childhood and adolescence. Issues that are evidenced to affect AYAs experiencing chronic health conditions, such as psychological distress, low self-esteem, identity disturbance and negative self-concept, social isolation, and reduced self-efficacy, have been demonstrated to improve within this narrative synthesis of Adventure Therapy interventions (Abrams et al., 2007; Evan & Zeltzer, 2006; Hokkanen et al., 2004).

This narrative synthesis found support for Adventure Therapy interventions as opportunities to process experiences of health-related adversity and to integrate experienced hardship in a way that decreases distress and provides opportunities for growth and transformation. Common narratives emerged from the thematic synthesis as 'Turned My Head Around', and an opportunity for meaning-making, in so doing reducing distress associated with experiences of significant ill-health. Such experiences are also supported by evidence that demonstrates the effectiveness of Adventure Therapy interventions in reducing scores for depression, depressive

feelings, discomfort and somatic anxiety symptoms compared with wait-list controls (Rosenberg et al., 2014). Such findings spark interest into whether Adventure Therapy interventions may transform aversive and distressing health experiences into opportunities for learning and growth.

Both qualitative and quantitative findings also support the hypothesis that Adventure Therapy may prove an effective intervention to facilitate change towards more positive appraisals of identity. Following involvement in Adventure Therapy interventions, the thematic synthesis revealed narratives for a revised self-concepts, characterised by greater self-acceptance and self-compassion. Such experiences appear to engender changes to individual's self-concept and provide opportunities for new narratives of health and wellness to emerge. These findings are further supported by statistically significant improvements in self-compassion, and compared with a wait-list control group at intervention completion (Rosenberg et al., 2014). Findings also demonstrate psychosocial adjustment with statistically significant improvement in body-image appraisals post-intervention for two studies (Kessell et al., 1985; Rosenberg et al., 2014). However, body-image improvement scores appear mediated by whether participants reported their lives to be adversely affected by medical treatment (Rosenberg et al., 2014).

The thematic synthesis also purports that Adventure Therapy interventions serve to foster greater self-confidence and self-belief in individuals' capacity to achieve and to overcome challenging situations. Such findings are also supported by results that demonstrate statistically significant increases in self-efficacy scores post-intervention and at follow-up when compared to pre-intervention scores (Zebrack et al., 2017), and increased locus of control scores post-trip (Kessell et al., 1985). These findings suggest that interventions increase individuals' belief in their capacity to

influence circumstances in life. This change appears particularly significant within AYA chronic health populations, where individuals commonly cite an external locus of control, and consequential distress in their lack of agency to affect their health and developmental trajectory (Barnett et al., 2016).

1.22.2 Narratives and Potential Processes of Change

In an effort to explore experiences of change, the narrative synthesis also comments on possible processes underlying meaningful change.

One such process that emerged from the synthesis was the importance of 'The Connection' to others and the natural environment. Papers commonly highlight the significance of being with others of similar health experience, and the sense of togetherness and belonging that spending time with experientially similar others fosters. Such connection appears to be particularly welcome to this population, for whom disconnection, alienation and social anxiety is known to be problematic (Al Omari & Wynaden, 2014; Hedström, 2004). Papers reference the importance of feeling understood and the non-judgemental atmosphere that these interventions facilitate. Such connection appears to be facilitated not only by the small-group setting but through contact and immersion in the natural world. This deep connection to oneself, others and one's surroundings appears particularly restorative and transformative within the literature, with a large body of evidence supporting the evolutionary psychological benefits to health, well being and sociality through contact with green space (Barton, Griffin, & Pretty, 2011; Barton & Pretty, 2010; Burls, 2007; Davidson et al., 2001). Such assertions are also supported by quantitative findings that demonstrate statistically significant decrease in alienation scores,

decreased in family conflict, and increases in social support scores at post-trip and one-month follow-up (Rosenberg et al., 2014; Zebrack et al., 2017).

Another possible process that emerged from the synthesis was the importance of facilitating 'acceptance'. The synthesis highlights the significance of self-acceptance and in coming to terms with changes as a result from their chronic health conditions in facilitating transformation and psychosocial change post-trip. Papers highlight the opportunity for this intervention to facilitate engagement with the adversities of having a chronic illness (both through narrative and kinaesthetic methods), and to process these experiences in such a way as to reduce consequential distress. Experiences of 'acceptance' also took the form of existentialism, with the intervention providing participants with an opportunity to make meaning out of their adversity and premature confrontation with death. Results also demonstrate statistically significant improvements in self-compassion scores, compared with a wait-list control group at intervention completion (Rosenberg et al., 2014).

One other possible process that emerged from the synthesis was the importance of 'putting things in perspective' in participants' process of change. It would appear that psychosocial changes may be in part facilitated by a shift in appraisal of personal experiences and capabilities. Thus, participants' reference the opportunity to re-evaluate one's experience of ill-health and capability through the Adventure Therapy intervention, which may be a key process in facilitating AYAs to arrive at more positive appraisals of their self and their future.

1.22.3 Critical Appraisal

In reviewing the current evidence-base, it is important to note that a comprehensive literature review failed to find papers that provided strong critical

commentary on Adventure Therapy practices or overtly discussed the limits of the intervention. Several studies made efforts to be transparent in providing non-significant findings for reductions in anxious feelings or aggression scores (Rosenberg et al., 2014), no improvement in body-image scores or family conflict for one cohort (Kessell et al., 1985), and no changes in locus of control scores pre-post intervention (Herskowitz, 1990; Kessell et al., 1985). With the literature field in its nascent stages of development, this review calls attention to the lack of critical appraisal within the current literature and proposes the importance of future papers to explore and examine areas for improvement, as well as the potential for harm.

1.22.4 Clinical Implications

This Narrative Synthesis supports the contention that Adventure Therapy interventions may prove effective in redressing the psychosocial impact of experiencing a chronic health condition during childhood and adolescence. In particular, this type of intervention appears to facilitate change in a number of areas, such as enhanced self-esteem, self-compassion, body-image appraisal, internal locus of control, social support and less distress, discomfort and alienation (Kessell et al., 1985; Rosenberg et al., 2014; Zebrack et al., 2017). The synthesis also suggests that such interventions may also help to transform aversive and distressing health experiences into opportunities for learning, transformation and potentially growth (Alt, 2009; Slavin, 2015). While several studies have demonstrated the effectiveness of Adventure Therapy in facilitating Adversarial Growth for female survivors of breast cancer aged 40 years and over (Burke & Sabiston, 2012; Dunn et al., 2009; McDonough et al., 2011), no such study has investigated claims for Adversarial Growth within young adult chronic health populations. Accordingly, preliminary

findings into the transformative quality of Adventure Therapy intervention for this population require systematic and further inquiry.

This narrative synthesis draws together the emerging literature of AYAs accounts from Canada, Israel, New Zealand, United Kingdom and USA. Among diverse cultures and settings of practice, results indicate initial and promising evidence base for managing the psychosocial impact of a chronic health issues through development. That being said, these claims are to be recognised as preliminary, with calls for future research to substantiate initial claims within a British healthcare context. Despite increasing popularity of Adventure Therapy programmes in the United States and Canada for young adult survivors of life-threatening illness, there exists a scarcity of interventions and conducted research within a British healthcare context (Martiniuk, 2003).

With Zebrack et al. (2007) contending that over 50 per cent (n = 879) of young adult survivors of chronic health conditions report that their support needs had been unmet by service provision, clinical health practitioners are ever increasingly aware of the need for comprehensive rehabilitation modalities, which are impactful, cost-effective and accessible**.** Third Sector Adventure Therapy interventions may provide such choice outside of clinic-based intervention. It is essential, however, that psychological therapies undergo rigorous scrutinization before integration into clinical practice (Kazdin & Kendall, 1998). In an effort to temper enthusiasm, further research is recommended within this field to investigate initial claims that Adventure Therapy interventions may prove effective in facilitating positive psychosocial transformation (Kazdin, 2005; Naglieri & LeBuffe, 2005). Within a British healthcare context, this narrative synthesis purports the need for methodologically rigorous examination of initial claims made. Any future examination should assess changes

over time, including follow-up information, and should adopt an experimental research design, to examine whether improvements in psychosocial outcomes are due to the effect of intervention or natural recovery over time. In particular, this synthesis asserts the need for examination of claims that a British Adventure Therapy intervention may effectively facilitate Adversarial Growth, improvements in self-concept, improvements in self-efficacy, and improvements in social support. The synthesis also contends that any inquiry should explore the subjective experiences of participants, and to identify their experiences of meaningful change following completion of an Adventure therapy intervention.

1.22.5 Limitations

This study acknowledges the limitation of drawing conclusions from an emerging and methodologically-problematic evidence-base. Many of the papers were appraised to be weak or poor following methodological quality appraisal, and as such, findings need to be cautiously interpreted.

Furthermore, this Narrative Synthesis acknowledges the limitations of synthesising a diverse body of literature. While necessary at the present time due to the scarcity of research papers, this paper recognises that synthesis and resulting discussion are drawn from heterogeneous intervention programmes and a population experiencing diverse health conditions, with wide-ranging courses of treatment, and varied psychosocial impacts and severity, not to mention a heterogeneity of research designs and interests examined.

While efforts have been made to be transparent in the process of synthesis, such analysis requires interpretation, abstraction and reproduction. Within the Thematic Synthesis procedures, the process of coding, abstracting themes and

presenting findings, will likely say as much about the researcher as the topic being researched. As such, this analysis is limited in its use of one researcher and the credibility of findings should be approached with caution.

1.22.6 Conclusions

The evidence base for Adventure Therapy interventions remains in its infancy for adolescents and young adults who have lived with a chronic illness. This narrative synthesis of peer- and non-peer review papers revealed less than a dozen relevant sources exploring the impact of such interventions on experiences of psychosocial change. While findings from the synthesis should be recognised as preliminary and the evidence base in its emerging stage, early indications suggest that Adventure Therapy interventions may prove successful in addressing many of the psychosocial difficulties faced by experiences of chronic illness, and may enhance self-esteem, self-compassion, body-image appraisal, internal locus of control, social support and reduce distress, discomfort and alienation (Kessell et al., 1985; Rosenberg et al., 2014; Zebrack et al., 2017). Moreover, papers provide initial evidence that Adventure Therapy may not only help recuperate psychosocial losses, but may also facilitate a process of growth following adversity (Alt, 2009; Slavin, 2015). Beyond a model of recovery, and return to baseline, such findings provide initial support for the hypothesis that participation in an Adventure Therapy intervention may help enable individuals to make meaning from their aversive health experiences, and grow from their adversity, perhaps, even surpassing levels of functioning that existed before confrontation with a life-threatening illness. This review serves as a starting point for further enquiry and calls for more methodologically-rigorous research to examine experiences of growth, psychosocial change, and processes underlying positive transformation.

1.23 Aims & Objectives

This study will investigate claims that an Adventure Therapy intervention may prove an effective psychosocial intervention for young adult survivors of life-threatening illness and assess changes in Adversarial Growth, self-esteem, self-efficacy, and sense of belonging, as well as potential processes of change following involvement in a 5-day Adventure Therapy intervention.

Hypotheses:

1) Participation will foster gains in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores at programme completion.
2) Gains in scores for Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores will be maintained at 3- and 6-month follow-up.
3) There will be a significant difference in gains in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores between intervention and control groups post-intervention and at 3-month follow-up.

To further understand changes in Adversarial Growth, qualitative approaches will seek to:

4) Explore participant experiences of psychosocial change as a result of attending the intervention.
5) Explore participant opinions for their reasoning on why positive transformation may have occurred.

2. Methodology

2.1 Chapter Overview

This chapter will provide details of methodological decision-making within the context of my philosophical position. Following a critical discussion of epistemology, this chapter provides rationale and discussion of mixed-method design, intervention context, participant recruitment, and data collection methods, procedures and analysis. In an effort to make the axiological assumptions explicit, this section also addresses the researcher's positionality and relevant background. Further, issues of methodological rigour and ethical considerations are discussed.

2.2 Philosophical Position

Research Framework. Philosophers and theorists of research methods have articulated several paradigms, also referred to as philosophical assumptions or worldviews, and have considered their implications for the nature of reality and the pursuit of knowledge attainment (Plano Clark & Ivankova, 2016). Examples of these philosophies include positivism, social constructionism and critical realism, to name a few. These paradigms are distinguished by ontological, epistemological, and axiological assumptions (Neuman, 2011). Ontological assumptions question the nature of social reality. Epistemological assumptions question the study of knowledge, and how we can generate knowledge. Axiological assumptions question the role of values in this pursuit of knowledge.

Positivism. A positivist epistemology asserts a realist ontology and contends that there exists a single reality that can be investigated (Crotty, 1998). Knowledge about reality is therefore obtained through independent observation and analysis. Following the Baconian 'scientific method', positivism approaches research from a deductive, etic, 'top-down' process, using current theory and knowledge to further

elucidate the nature of reality. It prioritizes empiricism and that which is observable and measurable. Positivist 'logic' as articulated by Comte asserts a value-free inquiry in order to understand an essential truth about the nature of reality (Bourdeau, 2018).

Within the field of psychological research and practice, it has been argued that a realist ontology and positivist epistemology has gained a "superior, or even monopolistic status" (Javanović, 2010, p. 311). However, this Kantian notion of the transcendental standpoint to research denies the role of subjectivity, context and notions such as culture. In striving for objectivity, positivistic inquiry leaves no room for subjectivity and asserts an essentialist understanding of the world, where "proper knowledge maps or mirrors the actualities of the real world" (Gergen, 1985, p. 269). For example, 'Adversarial Growth' as understood from an exogenic perspective, would be conceptualized as a model that maps accurately onto the reality of human experience. This 'reification of language' can be argued to overlook the constructed nature of psychological concepts and denies the individuality of experience as well as the notion of a self placed within a sphere of social discourse (Rorty, 1993).

Social Constructionism. In contrast, the social constructionist movement assumes that individuals construct their own reality, and as a consequence, there exist multiple realities (Lincoln & Guba, 1982). As knowledge is understood to be constructed by individuals, research inquiry must therefore be co-constructed with individuals. As such, the researcher's values and reflexivity cannot be separated from the process of research itself (Plano Clark & Ivankova, 2016).

Social constructionism asserts that knowledge acquisition is the process of social interchange and in so doing highlights its ontological differences from a positivist approach. Knowledge is not assumed to be an accurate reflection of the

world but instead purports "radical doubt in the taken-for-granted world" (Gergen, 1985, p. 267). It supports an inherently contextual approach to knowledge, one that follows an inductive, emic, 'bottom-up' inquiry. Accordingly, it is principally concerned with explicating the process by which people come to account for their sense of the world. In this way, social constructionism challenges the concept of knowledge as individual mental representation, and instead knowledge is seen as something people do together. In what can be seen as a sociorationalist position, the locus of knowledge and rationality, lies within the social aggregate. Within the study of health-related adversity and novel interventions, social constructionism would propose inquiry into the multiple constructed realities of this experience. It would question the taken-for-granted notion of extent concepts, as measured through standardized questionnaires, and propose an inductive, co-constructed methodology.

Knowledge through experience. As I first considered how best to situate this study, I was struck by the paradox of Scholasticus' resolution, *not to venture into water until he had learned to swim* (Merrifield, 1995). In this way, it seemed that to know before I know, in other words an a priori selection of philosophical orientation, was as absurd as Scholasticus' resolution. In order to know, I must venture into the water. In other words, in order to acknowledge my philosophical position, I must attend the intervention, embed myself within the context and come to know through experience, rather than through an a priori resolution. In this way, I was also confronted with my own deep-held epistemological assumptions; that knowledge is acquired through experience. In so doing, it provided an early indication that I likely did not align entirely with notions of realism but instead a philosophy that acknowledged the lived and embodied construction of knowledge. Perhaps, this also

indicated my own axiological assumptions and highlighted the importance for recognizing the role that values play in knowledge attainment.

In attending the intervention for three programmes, the multiplicity of positions taken was highlighted. Not only a researcher, I also experienced and was experienced by others as a staff-member, a programme participant, and a peer. These multiple roles and realities appeared to change dynamically related to context and situation. In this way, ontological assumptions about the nature of reality became apparent. It highlighted not only the multiplicity of realities, but also the plurality of perspectives. In order to know, I would have to venture into the waters from all of its shores, from multiple perspectives, and in so doing, triangulate a sense of truth or reality. It also made me curious to consider the individual as Foucault (1980) writes, as an effect of power, a social subject discursively produced by "relations of power" (Foucault, 1988, p. 118). Just as young people facing life-threatening illness have described their subjugated position, with a 'sick' identity, it would seem that my position was created through relations of power, at times a novice in a high-risk outdoor environment, at other times 'the expert' in a position of knowledge. It uncovered a taken-for-granted inter-subjectivity and highlighted the powerful role that relationships – be that parent/child, health staff/young person, outdoor instructor/attendee – have in performing power relations. Importantly for the population in question, I considered how these power relations were internalized and came to represent their own sense of self i.e. one who is sick and must depend on others, or one who comes to hold a different position within the group and internalizes a sense of mastery and power.

Philosophical orientation. Kushner (2002, p. 252) argues that "Method is like a glove which needs the human hand to give it shape and meaning". It is of seminal

importance to consider ontology, epistemology, and axiology to provide meaning, value and context, and to situate questions asked. However, while some researchers advocate for an a priori selection of epistemology, this research study asserts the need to embed oneself within the research context to reflect upon the intersection of the researcher's assumptions about the nature of reality (ontology), their philosophy on the nature of knowledge building (epistemology), and the socio-political-cultural context in which the research is to occur. Through attending the intervention and reflecting upon my inter-subjectivity, it became evident that epistemology was not an entirely a priori affair, but one itself, that is brought to life through the process and one that is contextually dependent.

Critical Realism. In recognizing the contextual and inter-subjective nature of epistemology, it became evident that within this research study, knowledge about reality was understood to be constructed from a researcher's particular perspective. It was further evident that the researcher's values and ontology were embedded within the process of knowledge acquisition. However, rather than ascribe to the assumption that there is "no truth through method", this study sought to explore and understand an impression of reality (Gergen, 1985, p. 272). Accordingly, this study asserts a philosophical position of 'critical realism' to position, shape, and hold together methodological inquiry and investigation.

A single and universal definition of critical realism is no easy task. There have been many scholars that critical realists draw upon and there is no single framework, set of assumptions or methodology that unifies these writings into a single definition (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998; Bhaksar, 1993; Lopez & Potter, 2001). However, critical realism as taken within this study, can be said to combine constructionist and realist positions in way that recognizes the importance of

discourse as well as that of material practices (Sims-Schouten, Riley, & Willig, 2007). The 'material' is provided with ontological status that is separate to, but inherently related to, discursive practices. In this way it posits that there exists non-discursive 'real' material structures in the world that exist independently of our understanding of them (Bhaksar, 1975). It recognizes human immunology, diseases such as cancer, as well as the physical reality of the natural and urban world as extant 'out there' phenomena. Accordingly, "critical realism recognizes that social practices are concept-dependent; but contrary to the hermeneutical tradition in social science, they are not exhausted by their conceptual aspect. They always have a material dimension" (Bhaksar, 1989, p. 4). Critical realism asserts to 'reclaim reality' from the radical doubt of constructionism, whilst prioritizing the discursive nature of experience, in that meaning is made *in interaction* with the world (Bhaksar, 1989; Willig, 1999).

From a critical realist perspective, this study acknowledges the important material dimensions for young adults who have experienced significant ill-health. A critical realist approach of their experiences of an Adventure Therapy intervention would therefore require researchers to investigate factors that include corporeality, physical spaces and intervention environments. These factors are understood as having extra-discursive ontology. This contextualizing of participants' experience can be taken as an ethical position, in that analysis of participant experience without an understanding of their material existence, such as their physical illness, treatment and surrounding social structures, would not give due justice to their lived experience (Sims-Schouten et al., 2007).

While this study asserts an investigation of an independent reality, it does so cautiously, and acknowledges the imperfect nature of methodological inquiry (Alvesson & Skőldberg, 2009). It asserts that in this claim 'to know' one must

acknowledge the inherent uncertainty in a methodological inquiry that acknowledges knowledge as something that rests within both a physical and relational world. It acknowledges both emic and etic processes that are inherent in meaning making and in this way highlights the role of mixed-methods to provide both inductive and deductive approaches to investigate understandings of the world.

Mixed Methodology. A critical realist position recognizes the limitations of methodological inquiry, in that we can never come to know with absolute certainty (Bhaksar, Esbjörn-Hargens, Hedlund, & Hartwig, 2016). With this in mind, a mixed-methodology design sought to use emic and etic approaches to address the 'representational dilemma' of embracing solely quantitative postpositivist or qualitative interpretive-constructionist representations (Massé, 2000; Parsons & Wakeley, 1991). Thus, the selection of mixed-methodology was an intended reflection of critical realist perspectives, in its aim to mirror the ontological importance of realist and interpretive-constructionist assumptions in the process of meaning making (Willig, 1999). To return to a prior analogy, this mixed-methodology seeks to venture into the waters of knowledge from multiple shores, and invites a 'paradigm of tolerance', acknowledging the respective limits of quantitative and qualitative research methods (Massé, 2000, p. 420).

In selecting a mixed-method research design, this paper recognized the methodological and ontological issues raised regarding methodological complementarity and ontological incommensurability (Massé, 2000). With regard to paradigmatic differences, this study acknowledges the ontological and epistemological differences inherent within qualitative and quantitative research. Rather than seek to research convergence in findings, a mixed-methodology was selected as an approach to provide complementarity in different research methods

(Morgan, 1993). While mixing paradigms has been cited as indeed "a risky business", careful consideration of this study's philosophical stance, i.e. that of Critical Realism, and careful application of methodological procedures are intended to help negotiate technical and epistemological differences of combining qualitative and quantitative research methods (Morgan, 1993, p. 363).

Thus, the research adopted a 'Priority-Sequence Model' of mixed-methods, applying follow-up qualitative methods to a largely quantitative study (Morgan, 1993). Under this Priority-Sequence Model "the qualitative methods typically provide interpretive resources of understanding the results from the quantitative research" (Morgan, 1993, pp. 369-370). The aim of such a design is to bring different strengths together within the same research study, and rather than seek convergence in findings, this approach seeks to prioritize complementarity, and accordingly use the strengths of one method to enhance the findings from another (Morgan, 1993).

2.3 Design

The present research adopted a mixed-method, experimental and longitudinal study design to investigate and explore the impact of an Adventure Therapy in the promotion of Adversarial Growth, as well as for Social Connectedness, Self-Esteem and Self-Efficacy.

Quantitative approaches adopted a quasi-experimental design, implementing a non-randomized controlled trial. The study adopted an interrupted time series design with self-report measures for the intervention and control condition completed at multiple time points (pre-intervention; post-intervention; 3-month and 6-month follow-up). Qualitative approaches sought to elicit personal experiences and

rationales for making sense of positive transformation following involvement in the intervention.

2.4 Intervention Context

The Adventure Therapy intervention is carried out by a charity that works with young people facing life changing injury or illness in areas of outstanding natural beauty in the United Kingdom. The 5-day residential outdoor activity programme aims to help participants regain confidence and self-esteem through various outdoor activities such as climbing, kayaking, gorge scrambling and hill walking. Activities are carefully adapted to the capabilities of the group and run with a high support-staff ratio from outdoor professionals, healthcare support workers and programme ambassadors. The week is run with small groups of young adults 18- 30 years old, strongly emphasising capability, self-esteem and the opportunity to achieve personal growth. Classroom activities also provide psycho-education and a space to reflect on metaphorical association, transferring accomplishments from outdoor activities to other psychosocial domains. The majority of young adults who attend the intervention are recruited thought Youth Support Coordinators through cancer and renal hospitals and charities, with some individuals self-referred. While each week is adapted to the needs of intervention participants, a sample Programme Structure can be seen in Table 4.

Table 4. Adventure Therapy Intervention Structure (Example)

Day	Content and Activities
1	After arrival of all participants, the group participates in problem-solving games, the emphasis being on teamwork and getting to know one another. Week Brief: Young people share hopes and fears for week ahead. Teamwork exercises also allow staff to assess level of mobility and confidence within group. Classroom Activity: The first evening asks participants to reflect on their current circumstance through the metaphorical symbolism of 'Climbing the Mountain'. Values for the week are co-created. Emphasis on notion of 'the team' as well as individual autonomy "challenge by choice" through adapting each activity. Activity 1: Evening Canoe. Young people in canoes of 3-4 people canoe in lake. Further team-building and individuals allowed to push their level of risk, such as swimming in lake, jumping off canoes.
2	Classroom Activity: Day 2 begins with a talk introducing the intervention. Basic psycho-education on anxiety and coping skills discussed. Activity 2: Coasteering. An activity where young people swim along a craggy coastline, scramble up cliffs and jump into the sea. Evening: Unstructured time.
3	Classroom Activity: Founder of the intervention shares her experiences of injury with young people. Opportunity for discussion.

	Activity 3: Rock Climbing
	Evening: Ambassador Presentation.
4	Classroom Activity: Vision board exercise. Identifying and setting values and goals in short, medium and long term.
	Activity 4: Hike. Emphasis on walking together as a group.
	Evening: Unstructured Time
5	Classroom Activity: Reflections and Looking Ahead. Revisit hope and fears from Day 1.
	Goals. Young people asked to identify first step towards their goals and post their week's achievement on a Facebook page in one week's time.
	Valuing others. An array of cards with pictures and words, which represented personal qualities are spread across the room. People are invited to select cards, which represent positive qualities they see in others. Cards are shared with the person who holds the quality they value, and people are invited to feedback to the group as a whole about cards received, and their own reflections on the exercise.
	Award Ceremony: Day 5 ends with a reflective activity and award ceremony. The group re-visit 'Climbing the Mountain' metaphor. Looking back, the facilitators present awards for individual growth and looking ahead, ask participants to reflect on what their next step is to continue moving up their mountain. Slideshow of week is presented to young people. The intervention concludes in the early-afternoon.

2.5 Participants & Recruitment

Intervention participants were recruited through eight Adventure Therapy programmes that run July – September 2017, and July-September 2018. On each programme there were up to (n = 16) attendees. All programme attendees were invited to take part in the research, and it was made clear that their choice to/not take part would not affect their participation in the intervention. All individuals were required to be over eighteen years of age and to have received a diagnosis of chronic illness during childhood and/or adolescence. Participants were required to be in recovery of some nature, however, given the diversity of illness journeys the concept of recovery was left consciously open to individual interpretation.

The focus group was conducted at a 'refresher' weekend for the intervention, and participants were recruited through those attending that were interested to share their views.

For the control comparison group, details of the study were shared through Youth Support Coordinators at various cancer and renal charities. Following consent of organizations, details of the study were further shared on social media platforms for over a dozen organisations. The majority of these platforms were created as online support networks and centres of information and advice about specific conditions, and treatment. Participants were required to be aged 18-39 years; to have experience(d) cancer or kidney disease during childhood or adolescence; to be based in the United Kingdom, and to have not experienced an adventure intervention as part of their treatment.

Participants were offered the incentive of a £50 Amazon voucher. Participants from the intervention and control groups who completed questionnaires across all

time points were entered into a prize draw. One young person was selected at random to receive the voucher.

2.6 Materials

Measures were selected in collaboration with the Adventure Therapy intervention director and in accordance with their research interests. The following measures were selected with consideration of the systematic review and in consideration of concepts requiring new or further investigation. Given initial evidence for positive transformation in the face of adversity, a measure of 'Adversarial Growth' was adopted. Given the evidence-based for the importance of (and lack of) peer-networks in adolescents and young adults facing chronic illness, a measure for 'sense of belonging' was adopted. Given the interventions' aims to enhance confidence, capability and self-esteem, two further measures were selected to investigate these changes. Thus, measures for 'Adversarial Growth' as well as relevant measures for 'social connectedness', 'self-esteem', and 'self-efficacy' were discussed and selected in collaboration with the intervention Director. The following measures were selected following careful consideration of different measures' conceptual differences, evidence-base and the relevance of individual item descriptions for this population.

In total, 4 standardized self-report measures were included in the questionnaire battery and are presented in detail below:

Assessment of Adversarial Growth. The Psychological Well-Being – Post-Traumatic Changes Questionnaire (PWB-PTCQ; Joseph et al., 2012). The measure is an 18 item self-report questionnaire that asks participants to rate how much they perceive themselves to have changed as a result of experiencing a highly aversive life

event (See Appendix A). The measure uses a five-point scale; 5 *Much more so now*, 4 *A bit more so now*; 3 *I feel the same about this as before*; 2 *A bit less so now*; 1 *Much less so now*. Thus, scores have a possible range of 18 to 90, with higher scores indicating greater positive change. The authors indicate that scores over 54, indicate the presence of positive change. The measure produces an overall score, as well as six domains of psychological well-being, namely; self-acceptance, autonomy, purpose in life, relationships, sense of mastery, and personal growth, which correspond with several of the key findings of Slavin (2015). Its advantages to other Adversarial Growth measures, such as The Post-Traumatic Growth Inventory (Tedeschi & Calhoun, 2004), are its greater integration of theory, and the potential for respondents to rate changes in both positive and negative directions. The scale has shown to have high internal consistency over time among general ($\alpha = .87$) and trauma populations ($\alpha = .95$), moderate convergent validity with existing posttraumatic growth measures ($r = .50\text{-}.56$ $p < .001$), incremental validity over and above existing measures of posttraumatic growth as a predictor of subjective well-being ($r = .41$, $p < .001$), negative association with posttraumatic stress clinical measures ($r = .\text{-}.44$, $p < .001$; IES-R), and discriminant validity with social desirability ($r = .16$, *ns*), (Joseph et al., 2012).

Assessment of Social Connectedness. The Social Connectedness Scale – Revised (Lee & Robbins, 1995). The scale assesses the extent to which people feel connected to others in their social environments. With the significance of group processes evidenced in Adventure-Therapy interventions (Balen et al., 1996; Rosenberg et al., 2014; Stevens et al., 2004) the scale is proposed to identify changes in social connectedness as a potential important outcome. The scale has 8-items, where responses range from 1 (strongly agree) to 6 (strongly disagree). Thus, scores

have a possible range of 8 to 48, with higher scores indicating greater connectedness to others (See Appendix B). The scale has high internal reliability (α = .91), and test-retest reliability .96, convergent validity with measures for loneliness (*r* = -.80), collective self-esteem (*r* = .39-.49), and social distress and avoidance (*r* = .57), and discriminant validity with interdependent self-construal (*r* = .15), and identity-based collective self-esteem (*r* = .07), (Lee & Robbins, 1995).

Assessment of Self-Esteem. The Rosenberg Self-Esteem Scale (M. Rosenberg, 1965). This 10-item scale measures global self-worth by assessing evaluations about the self. Accordingly, the scale is proposed to measure changes to 'self-esteem'. The 10-item scale is uni-dimensional and all items are scores using a 4-point Likert scale format, with answers ranging from 0 'Strongly Disagree' to 3 'Strongly Agree' (See Appendix C). Thus, scores have a possible range of 0 to 30, with higher scores indicating greater self-esteem. The scale has high internal consistency (α = .92), and test-retest reliability over a 2-week period, with correlations of .85 and .88. The measure is also shown to have good construct validity, and convergent validity with anxiety (*r* = -.64) and depression (*r* = -.54), (M. Rosenberg, 1979).

Assessment of Self-Efficacy. The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). The 10-item uni-dimensional scale measures a general sense of perceived self-efficacy and was designed to assess an individual's perceived ability to cope with daily tasks, as well as adaptation following aversive life events. Themes of capability and self-efficacy were evident in the systematic review. For that reason, the measure is proposed to capture potential changes to general self-efficacy for individuals who attend the Adventure Therapy intervention. Responses are scored on a 4-point Likert scale, with answers ranging from 1 'Not at all true', to 4 'Exactly

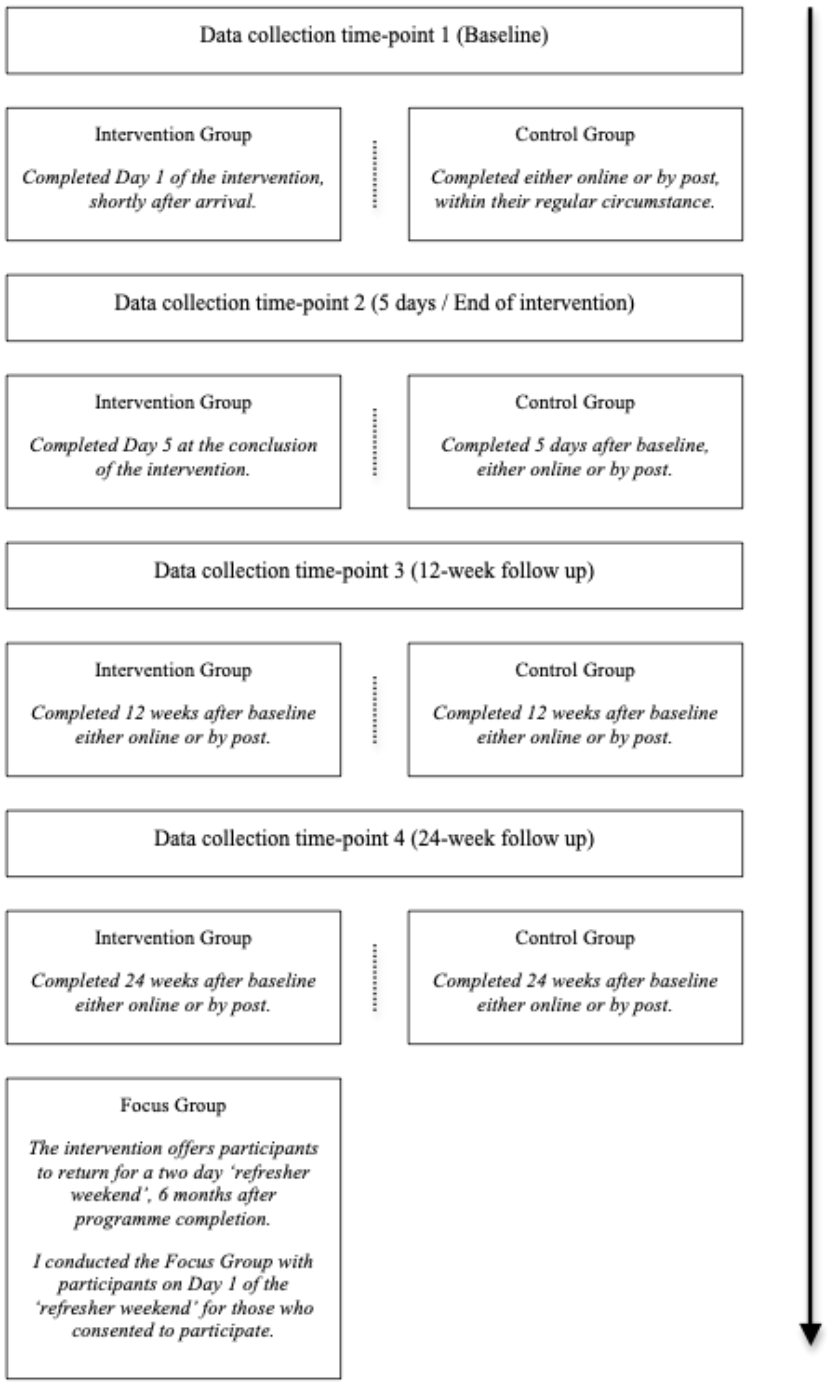
True'. Thus, scores have a possible range of 10 to 40, with higher scores indicating greater self-efficacy. (See Appendix D). The scale has good internal consistency, with samples from 25 nations indicating Cronbach's alphas ranging from .76 to .90, with the majority in the high .80s (Scholz, Dona, Sud, & Schwarzer, 2002). The measure is also demonstrated to have good retest-reliability (r = .67), (Schwarzer & Jerusalem, 1995). Criterion-related validity is documented in correlation studies, with positive coefficients found for optimism (r =.55), GPA, income and work satisfaction, and negative coefficients found for depression (r = -.52) and anxiety (r = -.60), (Schwarzer, Mueller, & Greenglass, 1999).

2.7 Research procedure

Quantitative Methods. Research participants in both the intervention and control groups were asked to complete the self-report measures at multiple time intervals; T1 pre-intervention, T2 post-intervention (5 days), T3 3-month follow up, T4 6-month follow up. Participants were invited to complete measures either online using Essex Qualtrics Software, https://essex.eu.qualtrics.com/jfe/form/SV_7P76lCl1ToFSNff or by free-post, so that no costs were incurred by participants. See Figure 2 for data collection procedures.

Intervention Group Data Collection Procedure. It was agreed with the Adventure Therapy intervention Director that prior notice of the research study may provide additional reservations about attendance and may negatively impact upon attendance figures. As a result, participants were informed about the potential to be involved in this study shortly after their arrival. Following arrival, room allocation and a team-building exercise, intervention attendees were informed about the study in

Figure 2. Data Collection Procedure



their arrival brief on day one of the intervention. Attendees that wished to take part in the research were provided with paper copies of participant information sheets, consent forms and assessment measures to complete by hand (time point 1). Participants completed measures (time point 2) again on day 5 of the intervention, shortly before the awards ceremony and end of intervention. The consent form asked participants to consent to and provide either an email or postal address so that measures could be sent at further time points. These addresses also served as a mechanism by which further time point measures could be matched to the relevant participant. Measures at 3-month follow-up (time point 3) and 6-month follow-up (time point 4) were sent to participants via email and online questionnaire using Essex Qualtrics Software, https://essex.eu.qualtrics.com/jfe/form/SV_7P76lCl1ToFSNff or sent via paper copies and free-post return mail depending upon participant's preference.

Control Group Data Collection Procedure. For the control comparison group, details of the study were shared through Youth Support Coordinators at various cancer and renal charities. These coordinators utilised a number of distribution methods to share awareness of the research study, such as printing posters (Appendix E) and using social media accounts associated with their locality. Following consent of organizations, details of the study were further shared on social media platforms for over a dozen organisations. The majority of these platforms were created as online support networks and centres of information and advice about specific conditions, and treatment. Interested participants were provided with the opportunity to complete questionnaires either online or by paper copy. Participants were invited to access the online measures via Essex Qualtrics Software, which required individuals to read the participant information sheet and complete a consent

form, followed by assessment measures (time point 1). The consent form asked participants to consent to and provide either an email or postal address so that measures could be sent at further time points. The principal researcher contacted participants by their chosen method of communication at time point two (5-days), three (3-month follow-up) and four (6-month follow-up), with online or paper measures to be completed, dependent upon participant's preference.

Qualitative Methods Procedures. Focus group research is a qualitative data collection method which "involves engaging a small number of people in an informal group discussion, 'focused' around a particular topic or set of issues" (Wilkinson, 2004, p. 177). Focus groups provide a medium by which data can be collected from multiple individuals simultaneously (Onwuegbuzie, Dickinson, & Leech, 2009). The social or group element of this method has found to be less threatening to many research participants, with a sense of belonging providing a sense of cohesiveness and safety to more readily share information (Peters, 1993; Vaughn, Schumm, & Singahub, 1996). Moreover, the inter-subjective nature of focus groups can yield data otherwise unavailable within individual interviews, such as information about difference, disagreement, and a discursive space to address multiple and competing perspectives about a topic (Krueger & Casey, 2000). Focus groups also appear to be particularly useful when working with vulnerable groups, providing a space in which individuals can contribute as much or as little as they wish about a sensitive topic (Wilkinson, 2008).

The focus group was designed following guidelines by Onwuegbuzie et al. (2009), lasting between one and two hours. The range of focus group size was a consideration of balancing participant numbers to encourage diversity in information, as well as a comfortable space in which individuals felt able to share their views,

experiences and opinions. Whilst this study acknowledged the added value of a moderator team for conducting focus groups, it was determined that recruiting an assistant moderator would not be ethically, financially and practically possible. Thus, the principal researcher was responsible for facilitating the focus group, taking notes and creating an environment that was conducive for group discussion (Krueger & Casey, 2000).

One focus group was run with intervention participants over six months after completion of intervention at a 'refresher' weekend. The focus group followed a semi-structured topic guide (Appendix F), with the purpose of exploring participant experiences of the intervention and beliefs for underlying beneficial or otherwise change. The focus group was audio-recorded using a dictaphone and transcribed verbatim. In an effort to address the active role of the researcher, it is important to consider that transcription is an act of interpretation and abstraction on the part of the researcher (Onwuegbuzie et al., 2009). As such, decisions about what to transcribe and how to represent what was discussed were driven by ontological, epistemological and axiological assumptions. In an effort to address the inter-subjective and ever-active dynamics of participants and researcher interaction, focus group discussions were transcribed in their entirety including conversational characters.

2.8 Data Analysis

Sample Size & Power Analysis. A systematic review of the literature was conducted to assess the application of assessment measures with similar intervention(s) and population group(s). Given the limited state of psychological research within the field of Adventure Therapy for young adult experiences of significant ill-health, the systematic review did not yield studies with suitable populations and measures to establish a hypothesized effect size for used measures,

namely; The Psychological Well-Being – Post-Traumatic Changes Questionnaire (PWB-PTCQ; Joseph et al., 2012); The Social Connectedness Scale – Revised (Lee & Robbins, 1995); The Rosenberg Self-Esteem Scale (M. Rosenberg, 1965); The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995).

Accordingly, an a priori power analysis was computed using the computerized G*Power programme (Erdfelder, Faul, & Buchner, 1996), using a medium effect size Cohen's d = 0.5 (Cohen, 1988), power = .80, alpha = .05, in order to establish the minimum sample size necessary for the proposed methods of analysis. The current study therefore aimed to recruit at least N=27 participants for hypothesis one, N = 24 for hypothesis two, and N = 28 for hypothesis three.

Quantitative Analysis. Data collected for hypothesis 1 was analyzed using repeated-measures, dependent-means *t*-tests. Data collected for hypothesis 2 was analysed using a one-way repeated measures ANOVA. A two-way mixed ANOVA was used with hypothesis 3, with factor one (between) established as the intervention condition (intervention vs. control) and factor 2 (within) established as Time (4 time points).

Qualitative Analysis. While there exists extensive information on how to conduct focus groups, there exists a distinct lack of academic appraisal for what types of analysis would best suit focus group data (Wilkinson, 2004). Onwuegbuzie et al. (2009) assert the need for transparency in the reporting of focus group analysis, and the importance of addressing epistemology in the selection of analytic procedures.

In consideration of a critical realist epistemology, this research recognizes the limitations of methodological inquiry (Bhaksar et al., 2016). It acknowledges the necessity to triangulate a sense of reality through mixed-methods both through emic

and etic processes. In an attempt to mirror the ontological importance of realist and constructionist assumptions in the process of meaning making, this research has adopted inductive procedures of analysis for qualitative data to counterpoint deductive approaches used within quantitative analysis. Thus, in an effort to ensure transparency, the epistemological assumptions are made explicit in order to demonstrate the "often omitted *how*" researchers analyze their data within reporting (Braun & Clarke, 2006, p. 5; Tong et al., 2007). Accordingly, this research conducted an inductive six-step thematic analysis as detailed by Braun and Clarke (2006).

A common critique of thematic analysis is the lack of ontological, epistemological, and axiological consideration and transparency (Braun & Clarke, 2006). Thus, this repost has endeavoured to make transparent the theoretical orientation of the analytic process. Analysis adopted an essentialist epistemology, assuming a largely unidirectional relationship between meaning, experience and language (Braun & Clarke, 2006). Analysis procedures utilised semantic principles, where themes were identified at a surface level meaning of the data. An inductive, data-driven, approach to analysis was adopted without trying to augment the data to fit pre-existing theoretical framework (Braun & Clarke, 2006). However, the active role of the researcher is noted as a co-constructor of knowledge (Foster & Parker, 1995). While efforts to follow inductive procedures were set out, it is undeniable that the researchers' own pre-existing knowledge, values and inter-subjectivity are involved in the analysis of material and abstraction necessary in theme development. In addition to addressing the co-construction of knowledge, analytical efforts also focused on using participant' words and quotes in the creation of codes and themes. These efforts hope to both explicate the active role of the researcher in data analysis,

and minimize the 'analytic distance' of researcher abstraction from participant narrative.

The six-step systematic thematic analysis was adopted to provide "a rich and detailed, yet complex account of the data" (Braun & Clarke, 2006, p. 4). Stages of analysis include familiarisation with the data, code generation, theme creation, theme review, naming and defining of themes, and report production. For further details of the analytic method, see Braun and Clarke (2006).

After repeated readings and familiarization with the data set (phase one), the principal researcher identified interesting features of information or 'codes' (phase two). An inductive approach to coding was conducted in order to remain as close to the raw data as possible. These initial codes were input using NVIVO-10 software (Bazeley & Jackson, 2013).

Codes were then reviewed and grouped into larger constructs 'themes' based upon similarities of meaning and content (phase three). The process of theme development requires some level of abstraction into third-order interpretations (Wyatt, Harper, & Weatherhead, 2014). However, efforts to explicate the active role of the researcher in data analysis, as well as use participant' words and quotes in theme development hoped to minimize the 'analytic distance' of researcher abstraction from participant narrative. In a process of thematic review (phase four), each theme and its constituent codes and quotes, were appraised to assess the internal homogeneity of each theme and external heterogeneity between thematic constructs (Patton, 1990). Following review, themes were named and defined (phase five), with particularly illustrative quotes selected for the analysis section of this thesis, to

convince readers of the merit and validity of themes (Braun & Clarke, 2006). In phase six, results were written.

Methodological rigour. In an effort to address the validity of thematic analysis, a peer review process was utilized, where code frameworks, initial code formation and emergent themes were discussed with research supervisors to minimize researcher bias (Tong et al., 2007; Tracy, 2010). Transparency of analysis was further sought through presentation of thematic content in results, demonstrating thematic content and associated constituent codes.

Researcher Reflexivity. In an effort to address the axiology of this study, I recognize that my values, and inter-subjectivity are an integral and inseparable part of the research process. I acknowledge that my experiences, attitude, culture and altogether sense-of-self will influence the research process. Thus, I acknowledge that my interpretations are conducted from a particular positionality; that of a socio-cultural privileged position as a white, male, psychologist. Moreover, my previous experience working with Adventure Therapy interventions will undeniably shape the questions I pose and my interpretations of collected data. It is hoped that acknowledgement of my position, in addition to peer review processes may go some way towards the unassailable biases of conducting research.

2.9 Ethical Considerations

Ethical approval. Prior to research commencement, Ethical approval was sought and approved on 20th July 2017 by the University of Essex's School of Health and Social Care's Ethics Representative, on behalf of the Faculty Ethics Committee (Appendix G and H).

Informed consent. Given the potential for participants to be vulnerable (given their history of physical and likely psychosocial difficulties) participants entered the study voluntarily with informed consent. For participant information sheets see Appendices I – K. For consent forms, see Appendices L-N. For debriefing forms, see Appendices O and P. It was made clear to participants that their decision to take part in the research would not affect their experience of the intervention.

Risk of harm. Further, given the sensitive nature of topics to be researched, there was potential for measures and focus groups to cause distress. Efforts to minimize this distress included options to withdraw from the study at any stage and/or seek support from Adventure Therapy intervention staff and Youth Support Coordinators. If participants were to become distressed by completing questionnaires, they were encouraged to talk with a member of the support staff with whom they felt comfortable. During the intervention, the lead co-ordinator and several outdoor instructors were available to talk and seek reassurance from. Staff and attendees stayed together in a small hostel/cabin, and were together for most of the waking day. The high staff to attendee ratio, 1:6, also ensured that staff were present and available to approach attendees should they have noticed anyone appearing withdrawn. Additionally, several Youth Support Coordinators attended each programme with whom most participants had a pre-existing relationship. These support services were available throughout the week to provide emotional and practical support to intervention attendees. The Principal Researcher briefed staff supporting young people in the comparison group, to ensure that they emphasized in person, the opportunities for support, including direct contact with the Principal Researcher should questions or concerns arise. Within debriefing material, additional resources in the way of helplines were also provided should participants feel more comfortable

speaking to a third party. Furthermore, selection of measures took into account the length of time that will be taken to complete, requiring 5-15 minutes to complete. Moreover, the collaborative nature of the study ensured that the study design and results are of central interest to the charity and client group.

Anonymity and data storage. Participants were asked to provide their email address on completion of their first set of questionnaires (Time point 1). An anonymised ID was assigned, so that the data could be stored anonymously in a separate file to identifiable information. The email address ID was used to match questionnaires with an anonymised ID at subsequent data collection time points and was used to contact participants for follow-up questionnaire batteries. Participants who did not have access to email were provided the choice to complete questionnaires by post. In such cases, it was necessary to collect full address information.

All collected information has been kept strictly confidential for the purpose of this study. Only the principal researcher has access to participants' personal details. The thesis' supervisors had access to an anonymised data-set, where participants were assigned an anonymised ID code. In any reporting, it was ensured that individuals cannot be identified. In addition, participants were quoted in a way that is mindful of privacy, changing locations and specific personal details, such as place of work, to ensure anonymity in reporting.

All electronic information has been kept in a password-protected computer. Paper questionnaires were stored in a secure filing cabinet for the duration of the research study. The data collected will be reviewed every 5 years in line the British Psychological Society's data retention policy.

2.10 Dissemination of findings. This study also acknowledges that the updated World Medical Association Declaration of Helsinki has stressed the ethical duty to disseminate results of innovative interventions (World Medical Association, 2008). Accordingly, this study recognizes the ethical obligations to ensure dissemination of findings. Relevant academic journal(s), online platforms for the International Adventure Therapy Committee, and interested parties that have been in contact throughout the research process, will be contacted upon study completion with a view to dissemination of findings. This study will also ensure that findings are written in plain language for participants and made accessible. Consultation work is proposed to ensure that the findings of the proposed study are of direct relevance and use to the Adventure Therapy charity.

3. Results

3.1 Chapter Overview

This chapter presents descriptive statistics, and exploratory data analysis prior to analyses of quantitative (Hypothesis One - Three) and qualitative data (Hypothesis Four and Five).

Table 5: Socio-demographic Characteristics of Adventure Therapy and Control Group Conditions

	Intervention (N = 60)		**Control (N = 32)**	
	N	**% of group**	**N**	**% of group**
Gender				
Female	25	41.67	28	87.50
Male	32	53.33	5	15.63
Transgender Male	2	3.33	-	-
Ethnicity				
Asian British, Asian English, Asian Scottish or Asian Welsh	4	6.67	1	3.13
Black British, Black English, Black Scottish or Black Welsh	-	-	1	3.13
White British, White English, White Scottish or White Welsh	51	85.00	28	87.50
Asian Other	2	3.33	1	3.13
White other	3	5.00	1	3.13
Employment				
Working Paid	25	41.67	12	37.50
Working Self-Employed	3	5.00	2	6.25
Not Working (Temporary layoff from job)	6	10.00	-	-
Not Working (Looking for work)	4	6.67	2	6.25
Not Working (Disabled)	18	30.00	7	21.88
Not Working (Other)	2	3.33	9	28.13
Not Specified	2	3.33	-	-

3.2 Descriptive Statistics

In total, 92 participants took part in the quantitative element of this study. Of these, 60 were in the Adventure Therapy intervention and 32 in the control group. Tables five to nine report the socio-demographic data of the two groups.

3.2.1 Comparison of Adventure Therapy and Control Groups By Socio-Demographic Characteristics

Gender. The percentage of female and male participants were in relative equal proportion for the Adventure Therapy intervention (41.67 per cent vs. 53.33 per cent; Table 5). Two participants identified as transgender male. Within the control group, there was a much higher proportion of female than male participants (87.50 per cent vs. 15.63 per cent). A Chi-Squared Test was conducted to assess whether the proportions of gender were significantly different between the Adventure Therapy and control groups. Analysis showed that 1 cell had an expected count less than 5, so exact significance tests were selected for Pearson's chi-square. Analysis demonstrated that proportions of gender were significantly different between the Adventure Therapy and control group conditions, Fisher's Exact Test (2) = 15.86, $p < .0001$.

Ethnicity. There was no association between ethnicity and group. The percentage of different ethnicities were in relative equal proportions for both the intervention and control groups (Table 5). The majority of participants were self-identified as White British, White English, White Scottish or White Welsh (85.00 per cent vs. 85.60 per cent, respectively). Other ethnicities were in relative equal proportions for the intervention and control groups, namely Asian British, Asian Other, White Other.

Employment. The majority of intervention and control group participants were in paid employment whilst taking part in the study. Chi-Squared Test was conducted to assess whether the proportions of employment were significantly different between the Adventure Therapy and control groups. Analysis showed that 7 cells had an expected count less than 5, so exact significance tests were selected for Pearson's chi-square. Analysis demonstrated proportions of employment status were significantly different between the Adventure Therapy and control group conditions, Fisher's Exact Test (5) = 13.65, p = .01. A significantly higher proportion of control group participants identified as 'Not Working for other reasons' and fewer identified their status as 'Not Working, Disabled' (Table 5).

Table 6: Age of Participants, Age of onset and Diagnosis of chronic health condition

	Mean	***SE***	**Median**	***SD***	**Min**	**Max**
Intervention (N = 60)						
Age	22.67	.44	-	3.42	18.00	36.00
Age of Onset (N=58)	15.93	1.02	-	7.76	0.00	32.00
Control (N = 32)						
Age (N = 28)	-	-	23.00	5.20	18.00	39.00
Age of Onset (N = 28)	-	-	18.00	4.89	0.00	33.00

Age of Participants. There was no statistically significant difference in mean ages between intervention and control, with the control group age higher than intervention by a mean difference of M = 1.98 years, SE =1.08.

Age of Chronic Health Condition Onset. There was no statistically significant difference in mean age of onset between intervention and control, with

the control group age higher than intervention by a mean difference of M = 1.29 years, SE =1.34.

Table 7: Chronic Health Experiences and Current Health Circumstance

	Intervention (N = 60)		Control (N = 32)	
	N	**% of group**	**N**	**% of group**
Health Difficulty				
Cancer	37	61.67	19	59.38
Renal	22	36.67	13	40.63
Other (Cryptogenic Liver Chirosis and Hyperslenism)	1	1.67	-	-
Current Health				
Partial Remission*	5	8.33	8	25.00
Complete remission**	7	11.67	5	15.63
In Remission (Partial or complete not specified)	21	35.00	-	-
Dialysis awaiting transplant	6	10.00	1	3.13
Post-transplant (stable)	5	8.33	3	9.38
CKD following second transplant	-	-	1	3.13
Off-treatment	2	3.33	-	-
Stable	5	8.33	2	6.25
Good Health	4	6.67	2	6.25
Poor Health	2	3.33	3	9.38
Not specified	3	5.00	7	21.88

* Partial remission means that the signs and symptoms of cancer are reduced.
** In complete remission, all signs and symptoms of cancer have disappeared (NCI, 2019)

Health Conditions. There was no association between health condition and group. The proportion of participants with experiences of cancer and renal disease were in relative equal proportions for both the intervention and control groups, with approximately sixty per cent in each condition diagnosed with cancer and forty per cent in each condition diagnosed with renal disease (Table 7). A complete list of physical ill-health conditions by group is presented in Table 8.

Table 8: Health Conditions Experienced by Group

Cancer Type	**Intervention (%)**	**Control (%)**	**Renal Difficulty**	**Intervention (%)**	**Control (%)**	**Other Health Condition(s)**	**Intervention (%)**	**Control (%)**
Testicular Cancer	4 (4.21)	2 (2.11)	All-Ports Syndrome	1 (1.05)	-	Cryptogenic Liver Cirrhosis and Hypersplenism	1 (1.05)	-
Leukaemia*	5 (5.26)	3 (3.16)	Chronic Kidney Disease	18 (19.57)	8 (8.42)			
Sarcoma (Rhabdomyosarcoma)	2 (2.11)	1 (1.05)	End-Stage Renal Failure	1 (1.05)	2 (2.11)			
Osteosarcoma	3 (3.16)	2 (2.11)	Undiagnosed Kidney Cysts	-	1 (1.05)			
Hodgkin's Lymphoma	8 (8.42)	3 (3.16)	Polycystic kidney disease	-	1 (1.05)			
Non-Hodgkin's Lymphoma	2 (2.11)	1 (1.05)	Focal Segmental glomerulosclerosis	1 (1.05)	1 (1.05)			
Melanoma	1 (1.05)	1 (1.05)	IgA nephropathy	1 (1.05)	-			
Desmoid Fibromatosis	1 (1.05)	-				**Other Associated Health Conditions**		
Neuroblastoma	1 (1.05)	-				Li Fraumeni Syndrome (Genetic)	1 (1.05)	1 (1.05)
Brain Tumour	4 (4.21)	1 (1.05)				Autoimmune Disease	1 (1.05)	-
Breast Cancer	-	1 (1.05)				Type 1 Diabetes	-	1 (1.05)
Papillary Thyroid Cancer	1 (1.05)	-				Haemolytic Uremic Syndrome	-	1 (1.05)
Ovarian Cancer	1 (1.05)	1 (1.05)						
Pilocytic astrocytoma	-	1 (1.05)						
Cholangiocarcinoma,	-	1 (1.05)						
Cancer not specified	4 (4.21)	1 (1.05)						
Total:	33 (34.74)	19 (20.00)		22 (23.91)	13 (13.68)		3 (3.16)	3 (3.16)

*including diagnoses of Acute Myeloid Leukaemia and Acute Lymphoblastic Leukaemia

Current Health. A Chi-Squared Test was conducted to assess whether the proportions of current health status were significantly different between the Adventure Therapy and control groups. Analysis showed that 16 cells had an expected count less than 5, so exact significance tests were selected for Pearson's chi-square. Analysis demonstrated proportions of current health status were significantly different between the Adventure Therapy and control group conditions, Fisher's Exact Test (10) = 29.22 $p < .0001$. A significantly higher proportion of control group participants identified their current health status as in 'Partial Remission', 'Poor Health' or 'Not specified'. A higher proportion of intervention participants identified as 'In remission (partial or compete not specified)' and 'Dialysis awaiting transplant' (Table 7).

Summary. There were significant differences between Adventure Therapy and control group for gender, current health status and employment status. There was no association between group and other socio-demographic comparisons, namely ethnicity, age of participants, health condition or age of health condition onset.

Table 9: Types of Valued Support Reported by Control Group

Types of Valued Support Reported	**Number of Participants Reported (% of control)**
Chronic Illness Specific Charity	26 (81.25)
National Health Service	23 (71.88)
Family	9 (28.13)
Health Psychology or Health-Related Counselling	7 (21.88)
Peer Support (In Person)	6 (18.75)
Peer Support (Online Support)	6 (18.75)
Local Authority / Social Services	2 (6.25)
Romantic Partner S	2 (6.25)
Survivor Groups	1 (3.13)
Animal Therapy	1 (3.13)
Self-Help	1 (3.13)
Medium of Support Reported	**Number of Participants Reporting (% of control)**
Psychological or Emotional Support	20 (62.50)
Financial Support	15 (46.88)
Practical Support	8 (25.00)

Control Group Valued Support. In an effort to understand the main types of support that control group participants received, individuals were asked to report the type and mediums of support they most valued. The majority of participants cited the importance of receiving support from a charity that specifically addressed their chronic illness condition and support provided through the NHS. Family, psychological and peer support were also cited as significantly valued in participants' journey of recovery. With regard to the medium of valued support, the majority of participants cited support that was psychological in nature, secondly financial and thirdly practical support (Table 9).

3.2.2 Comparison of Pre-Intervention Psychosocial Measure Scores by Chronic Health Conditions for the Adventure Therapy Group

An independent-samples t-test was run to determine if there were differences in psychosocial scores at pre-intervention (baseline) between different chronic health conditions. Five outliers were identified amongst the different measures, as assessed by inspection of a boxplot, however, none were found to be extreme. Psychosocial measure scores for each level of health difficulty were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), and observation of normality plots, and there was homogeneity of variances for each measure as assessed by Levene's test for equality of variances ($p > .05$).

Table 10: Pre-Intervention Psychosocial Measure Scores by Chronic Health Conditions for the Adventure Therapy Group

Intervention	**Cancer**			**Renal Failure**				
	N	**Mean**	***SD***	N	**Mean**	***SD***	**Mean Difference**	***SE***
Adversarial Growth	37	61.91	12.88	22	66.32	10.13	4.41	3.21
Social Connectedness	37	29.08	9.93	22	31.39	8.41	2.31	2.51
Self-Esteem	37	15.74	5.27	22	18.02	5.05	2.29	1.4
Self-Efficacy	37	27.94	6.09	22	29.82	4.4	1.87	1.49

Participants with renal difficulties had slightly higher scores at baseline for than those with experience of cancer for all four measures, however, these differences did not differ significantly. Adversarial Growth, $t(57) = 1.37$, $p = .175$; Social Connectedness $t(57) = .911$, $p = .366$; Self-Esteem $t(57) = 1.64$, $p = .107$; and Self-Efficacy $t(57) = 1.26$, $p = .213$.

Summary. There were no significant differences in dependent variable scores between participants with diagnosis of cancer or renal failure. Thus, it appeared justified to collapse the two groups into one single group of 'participants affected by chronic health conditions' for all subsequent analyses.

3.2.3 Comparison of Pre-Intervention Psychosocial Measure Scores by Chronic Health Conditions for the Control Group

An independent-samples t-test was run to determine if there were differences in psychosocial scores at baseline between different chronic health conditions within the control group. This analysis was conducted in order to assess whether participants with experiences of cancer and renal failure had similar baseline psychosocial measure scores, and can be understood as representative of similar self-assessments of psychosocial functioning and recovery from health-adversity. This analysis was used to assess whether it was justified to collapse the two groups into one single group of 'participants affected by chronic health conditions' for all subsequent analyses. One outlier was identified for self-esteem, and 3 outliers for self-efficacy, however, none were found to be extreme. Psychosocial measure scores for each level of health difficulty were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), and observation of normality plots, and there was homogeneity of variances for each measure as assessed by Levene's test for equality of variances ($p > .05$).

Table 11: Pre-Intervention Psychosocial Measure Scores by Chronic Health Conditions for the Control Group

Control Group	Cancer			Renal Failure				
	N	**Mean**	***SD***	**N**	**Mean**	***SD***	**Mean Difference**	***SE***
Adversarial Growth	19	63.47	9.81	13	62.77	17.61	0.70	5.38
Social Connectedness	19	34.44	9.48	13	25.83	10.22	8.62*	3.52
Self-Esteem	19	18.16	4.88	13	12.46	5.87	5.70*	1.91
Self-Efficacy	19	31.58	2.67	13	26.83	6.56	4.75*	1.92

**p > .05*

Participants with renal difficulties had slightly lower scores for Adversarial Growth at baseline for the control group, however, these differences did not differ significantly, Adversarial Growth t(17.13) = .13, p = .90.

The analysis demonstrated that participants with renal difficulties had statistically significant lower scores at baseline than participants with experiences of cancer; Social Connectedness t(30) = 2.45, p = .02, d = .87; Self-Esteem t(30) = 2.99, p = .006, d = 1.06; Self-Efficacy t(14.76) = 2.48, p = .026, d = .95.

Summary. For Adversarial Growth, scores were not significantly different between participants with diagnosis of cancer or renal failure at baseline. Thus, it appeared justified to collapse the two groups into one single group of 'participants affected by chronic health conditions' for subsequent analysis given the main focus of this study on experiences of positive change following adversity. However, scores for Social Connectedness, Self-Esteem and Self-Efficacy were significantly different between participants with diagnosis of cancer or renal failure at baseline, with large effect sizes between different health conditions.

While it appeared justified to collapse the two health condition groups into one single group given the similarity in scores and central focus of Adversarial Growth in this study's research questions, this research importantly cautions the reader in interpreting analyses within hypothesis three for Social Connectedness, Self-Esteem and Self-Efficacy measures.

3.2.4 Comparison of Pre-Intervention Psychosocial Measure Scores By Adventure Therapy And Control Group Conditions

An independent-samples t-test was run to determine if there were differences in dependent variable scores at pre-intervention (baseline) between the intervention and control group conditions. Ten outliers were identified amongst the different measures, as assessed by inspection of a boxplot, however, none were found to be extreme. Psychosocial measure scores for each level of health difficulty were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), and normality plots, and there was homogeneity of variances for each measure as assessed by Levene's test for equality of variances ($p > .05$).

Table 12: Pre-Intervention Psychosocial Measure Scores By Adventure Therapy And Control Group Conditions

	Adventure Therapy			**Control Group**				
	N	**Mean**	***SD***	N	**Mean**	***SD***	**Mean Difference**	***SE***
Adversarial Growth	60	63.13	12.38	32	63.19	13.27	0.06	2.78
Social Connectedness	60	29.76	9.41	32	30.95	10.54	1.19	2.15
Self-Esteem	60	16.46	5.41	32	15.84	5.94	0.62	1.21
Self-Efficacy	59	28.64	5.56	32	29.65	5.14	1.01	1.19

Participants with in the control group had marginally higher scores at baseline for Adversarial Growth, Social Connectedness and Self-Efficacy, however, these

differences did not differ significantly. Adversarial Growth t(90) = .552, p = .582; Social Connectedness t(90) = .552, p = .582; Self-Efficacy t(89) = .847, p = .399. Participants within the intervention had marginally higher scores at baseline for Self-Esteem, however, these differences did not differ significantly t(90) = .510, p = .611.

Summary. At baseline, there were no significant differences in dependent variable scores between participants within the Adventure Therapy intervention or control condition. Thus, it appeared that both groups at baseline (pre-intervention) were at a similar point in psychosocial recovery and appeared comparable in their self-assessment of Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy.

3.2.5 Participant Numbers and Attrition Rate Across Time and Intervention Conditions

Table 13: Attrition Rates Across Time and Intervention Conditions

	Pre-Intervention	Post-Intervention	3-Month Follow-Up	6-Month Follow-Up
Adventure Therapy	60	57	29	22
Control Group	32	26	20	-

This study had a particularly high attrition rate (Table 13) for the intervention condition, with a 61.67 percentage decrease between pre-intervention and 6-month follow up. At 3-month follow-up for the control group, there was a 46.15 percentage decrease from pre-intervention.

3.3 Hypothesis 1: Participants Will Report Statistically Significant Gains in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores at intervention completion.

Tests and Assumptions of Normality. A paired-samples t-test was used to determine whether participants reported a statistically significant increase in Adversarial Growth, and Social Connectedness scores at intervention completion. Two outliers were detected for each measure. One participant's data was removed from the study due to extreme scores across all four measures pre-and post-intervention. The remaining outliers were checked but did not impact the analysis, therefore, were kept in the analysis. Measure scores for Adversarial Growth and Social Connectedness were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), normality plots and Skewness and Kurtosis scores.

Tests for normality indicated that data for Self-Esteem and Self-Efficacy did not meet parametric assumptions. Two outliers were detected for self-efficacy. Inspection of their values did not reveal them to be extreme and they were kept in the analysis. A Wilcoxon signed-rank t-test was conducted to determine whether participants reported a statistically significant increase in Self-Esteem and Self-Efficacy scores at intervention completion.

Table 14: Descriptive Statistics for Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy pre- and post-intervention

	Pre-Intervention			Post-Intervention					
	N	Mean	*SD*	N	Mean	*SD*	Mean Difference	*SE*	Effect Size (*d*)
Adversarial Growth	60	63.71	12.19	57	75.16	9.65	11.45*	1.31	1.15
Social Connectedness	60	29.78	9.46	57	36.58	7.68	6.80*	1.05	0.85
	N	Median		N	Median		Median Difference		Effect Size (*r*)
Self-Esteem	60	16.25		57	20.00		4.00*		0.60
Self-Efficacy	59	28.11		57	31.00		3.00*		0.60

*$p > 0.001$

Paired-Sample t-Test Results. Those who took part in the Adventure Therapy intervention reported a statistically significant increase in Adversarial Growth $t(56) = 8.70$, $p > .001$, $d = 1.15$; Social Connectedness $t(56) = 6.45$, $p < .001$, $d = .85$; Self-Esteem $z = 4.37$, $p < .001$, $r = .60$; and Self-Efficacy $z = 4.49$ $p < .001$, $r = .060$. Effect sizes are large across all four dependent variables (Cohen, 1988).

Hypothesis One Summary. Hypothesis one is supported across all measured psychosocial variables and results demonstrate that those who took part in the Adventure Therapy reported a statistically significant increase in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores at programme completion. Calculated effect sizes were large for all four dependent variables (Cohen, 1988; Field, 2018; Rosenthal, 1994).

3.4 Hypothesis 2: Gains in scores for Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores at post-intervention will be maintained at 3- and 6-month follow-up.

Tests and Assumptions of Normality. A one-way repeated measures ANOVA was used to assess whether there were statistically significant differences in Adversarial Growth, Social Connectedness and Self-Esteem scores between baseline, post-intervention, and 3, and 6-month follow-up time points. One outlier was identified for Adversarial Growth and 4 outliers for Social Connectedness. One participant's data was removed due to extreme scores across all three measures at all time points. The remaining outliers were checked but did not impact the analysis, therefore, were not removed. The total number of participants for analysis was (N=22) due to attrition rates across the 6-month period. Measure scores for Adversarial Growth, Social Connectedness and Self-Esteem were normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$), normality plots and Skewness and Kurtosis scores. Where Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, a Greenhouse-Geisser correction was applied (Greenhouse & Geisser, 1959; Maxwell & Delaney, 2004). Results can be seen in Table 15 below.

Tests for normality indicated that data for Self-Efficacy did not meet parametric assumptions. Four outliers were detected for Self-Efficacy. Inspection of their values did not reveal them to be extreme and they were kept in the analysis. A Friedman test was run to determine if there were significant differences in Self-Efficacy scores between baseline, post-intervention, 3- and 6-month follow-up time points.

Adversarial Growth. For participants attending the Adventure Therapy, there was a significant effect of time Adversarial Growth scores $F(1.71, 35.95) = 8.76$, $p = .001$, partial $\eta^2 = .294$ (large effect, Greenhouse & Geisser, 1959; Maxwell & Delaney, 2004). Paired samples t-tests were used to make post hoc comparison between conditions, using Bonferroni adjustment. Paired sample t-tests for pre-post intervention are reported above in Hypothesis 1.

Pairwise comparisons indicated that at 3-month follow up, Adversarial Growth scores had decreased slightly from post-intervention by a *MeanDifference* score of -4.22, $SE = 1.60$, $p = .09$, which remained statistically significantly different to pre-intervention *MeanDifference* = 7.60, $SE = 2.51$, $p = .04$. At 6-month follow up, Adversarial Growth scores had increased slightly from 3-month follow-up by a mean score of .77, $SE = 1.79$, $p = 1.00$. However, likely due to a large standard deviation, these elevated scores for Adversarial Growth were not significantly different to baseline. Thus, while 6-month follow up scores were not significantly different to post-intervention or 3-month follow-up, indicating that follow-up scores were not significantly different to gains made at post-intervention, scores were not significantly different to pre-intervention (*MeanDifference* = 8.37, $SE = 3.39$, $p = .13$.

Therefore, we can conclude that participant scores in Adventure Therapy remained statistically significant to baseline at 3-month follow-up, despite a slight decrease in scores from post-intervention. However, elevated scores between 3-month and 6-month follow-up scores for Adversarial Growth were not significantly different to baseline, likely due to a large standard deviation. Therefore, we can conclude that hypothesis 2 is supported at 3-month follow-up, however, current analysis did not demonstrate that the effect of intervention is maintained at 6-month follow up.

Social Connectedness. For participants attending the Adventure Therapy, there was a significant effect of time on Social Connectedness scores $F(3,63) = 6.30$, $p = 0.01$, partial $\eta 2 = .231$ (large effect). Paired samples t-tests were used to make post hoc comparison between conditions, using Bonferroni adjustment. Paired sample t-tests for pre-post intervention are reported above in Hypothesis 1.

Pairwise comparisons indicated that at 3-month follow up, Social Connectedness scores had decreased slightly from post-intervention by a *MeanDifference* of -4.64, $SE = 1.79$, $p = .103$, which was not statistically significantly different to pre-intervention (*MeanDifference* = 2.55, $SE = 2.07$, $p = .1.00$). At 6-month follow up, Social Connectedness scores had increased slightly from 3-month follow-up by a *MeanDifference* score of 3.36, $SE = 1.68$, $p = .35$, which was not statistically significantly different to pre-intervention ($M = 5.91$, $SE = 2.11$, $p = .07$.

Thus, while a large and significant effect of time was found, these changes appear between pre- and post-intervention. Accordingly, follow-up participant scores for Social Connectedness do not significantly differ from post-intervention, and mean scores remain elevated from pre-intervention at all time points. However, follow-up scores are not statistically significant to pre-intervention. Therefore, we can conclude that while a significant effect of time was found, post-hoc analysis reveals that the full effect of the intervention is not maintained at 6-month follow up.

Self-Esteem. For participants attending the Adventure Therapy, there was not a significant effect of time on Self-Esteem $F(3,63) = 1.54$, $p = .21$, partial $\eta 2 = .068$. Therefore, hypothesis 2 is not supported and significant increases in Self-Esteem scores at post-intervention, demonstrated in hypothesis 1, are not maintained at 3- and 6-month follow up.

Self-Efficacy. Self-Efficacy scores increase from pre-intervention (*Mdn* = 28.11), post-intervention (*Mdn* = 31.00), and decreased at 3-month (*Mdn* = 29.00) and 6-month (*Mdn* = 29.00) follow-up, however, differences were not statistically significant, $\chi 2(3) = 3.57$, $p = .311$. Therefore, hypothesis 2 is not supported and Self-Efficacy scores at post-intervention, demonstrated in hypothesis 1, are not maintained at 3- and 6-month follow up.

Hypothesis Two Summary. Thus, for participants attending the Adventure Therapy, there was a significant effect of time on Adversarial Growth and Social Connectedness scores. For Adversarial Growth scores, we can conclude that hypothesis 2 is supported at 3-month follow-up, with participant scores remaining statistically significant to baseline. For Social Connectedness scores, we can conclude that while a significant effect of time was found, post-hoc analysis reveals that the full effect of the intervention is not maintained at 3 or 6-month follow up, with scores slightly reduced from post-intervention, and scores not significantly different to pre-intervention. No significant effect of time was found for Self-Esteem and Self-Efficacy, with statistically significant improvements in scores at post-intervention, demonstrated in hypothesis one, not maintained at three- and six-month follow up.

Table 15: Descriptive Statistics for Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy at all Four Time Points

	Pre-Intervention (N=22)		Post-Intervention		3 Month Follow-Up		6 Month Follow-Up	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Adversarial Growth	60.77	10.97	72.59**	7.53	68.35*	10.13	69.16	14.08
Social Connectedness	27.36	9.01	34.55**	7.00	29.91	9.93	33.27	10.10
Self-Esteem	15.82	4.08	17.73	4.41	16.64	6.26	16.36	6.69
	Median (N=59)	SD	Median (N =57)	SD	Median (N=29)	SD	Median (N=22)	SD
Self-Efficacy	28.11	5.56	31.00	4.60	29.00	6.41	29.00	7.59

*Statistically significant different to pre-intervention scores, $p < .05$
**Statistically significant different to pre-intervention scores, $p < .001$

Table 16: Descriptive Statistics For All Four Dependent Variable Means by Time and Intervention Condition

	Pre-Intervention				Post-Intervention				3-Month Follow-Up			
	Intervention Group (N = 29)		Control Group (N = 19)		Intervention Group		Control Group		Intervention Group		Control Group	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Adversarial Growth	60.79	11.33	62.16	12.69	73.83	8.25	63.6	12.33	69.00	11.97	66.53	10.02
Social Connectedness	27.9	9.73	31.65	12.81	35.97	7.24	31.79	11.60	31.10	11.18	32.42	11.52
Self-Esteem	15.52	5.40	16.37	5.61	18.60	4.74	15.79	5.67	17.24	6.59	16.62	6.00
Self-Efficacy	27.48	5.05	29.74	4.30	30.88	4.26	28.95	6.58	29.14	6.41	29.37	5.21

Table 17: Pre-Intervention Descriptive Statistics and Mean Differences by Group

Pre-Intervention	Adventure Therapy			Control Group				
	N	**Mean**	***SD***	N	**Mean**	***SD***	**Mean Difference**	***SE***
Adversarial Growth	60	63.13	12.38	32	63.19	13.27	0.06	2.78
Social Connectedness	60	29.76	9.41	32	30.95	10.54	1.19	2.15
Self-Esteem	60	16.46	5.41	32	15.84	5.94	0.62	1.21
Self-Efficacy	59	28.64	5.56	32	29.65	5.14	1.01	1.19

Table 18: Post-Intervention Descriptive Statistics and Mean Differences by Group

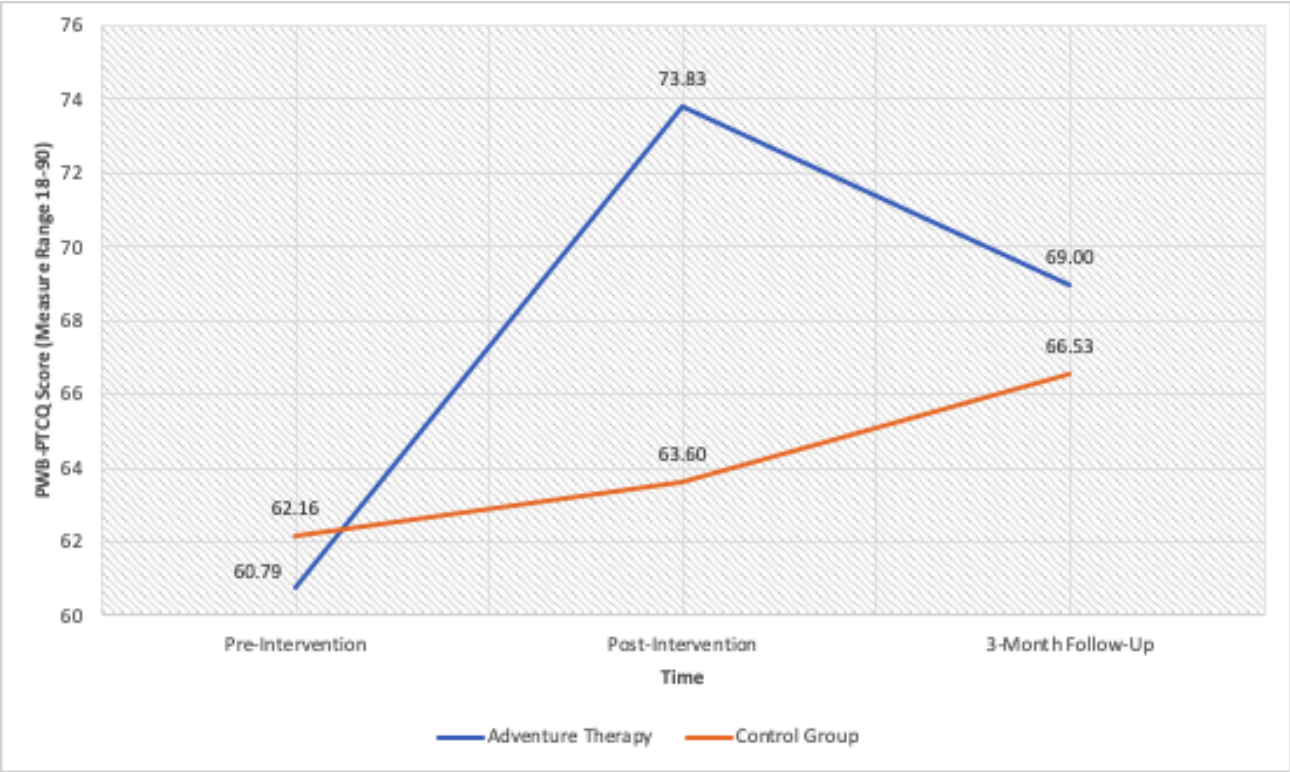
Post-Intervention	Adventure Therapy			Control Group				
	N	**Mean**	***SD***	N	**Mean**	***SD***	**Mean Difference**	***SE***
Adversarial Growth	57	75.16	9.65	26	63.63	12.29	11.53**	2.49
Social Connectedness	57	36.58	7.68	26	31.35	11.09	5.23*	2.1
Self-Esteem	57	19.58	4.92	26	16.04	5.81	3.54**	1.23
Self-Efficacy	57	31.89	4.6	26	28.97	5.78	2.93**	1.18

*Statistically significant different, $p < .05$
**Statistically significant different, $p < .016$

Table 19: 3-Month Follow-Up Descriptive Statistics and Mean Differences by Group

3-Month Follow-Up	Adventure Therapy			Control Group				
	N	**Mean**	***SD***	N	**Mean**	***SD***	**Mean Difference**	***SE***
Adversarial Growth	29	69	11.97	20	63.2	17.79	5.8	4.25
Social Connectedness	29	31.1	11.18	19	32.42	11.52	-1.32	3.34
Self-Esteem	29	17.24	6.59	19	16.62	6	0.62	1.88
Self-Efficacy	29	29.14	6.4	19	29.37	5.21	-0.23	1.76

Figure 3: Interaction Effect between Group and Time for Adversarial Growth



3.5 Hypothesis 3: There will be a significant difference in gains in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores between intervention and control groups at post-intervention and 3-month follow up.

Tests and Assumptions of Normality. A Two-Way Mixed ANOVA was used to assess whether there were statistically significant differences in Adversarial Growth, Social Connectedness and Self-Esteem scores between intervention and control groups at post-intervention and 3-month follow up. Six-month follow-up data was not available at the time of analysis, due to the longitudinal nature of data collection. Six-month follow-up data for the control group will be analysed for use in future publication. There were no outliers, as assessed by examination of studentized residuals for values greater than ±3. The total number of participants for analysis was (N=48), due to attrition rates across the 3-month period, with 29 in the intervention condition and 19 in the control group. Psychosoical measures were normally distributed at all levels as assessed by Normal Q-Q plots. There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ($p > .05$). Where Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, a Greenhouse-Geisser correction was applied (Greenhouse & Geisser, 1959; Maxwell & Delaney, 2004). Results can be seen in Table 16 above.

Adversarial Growth. There was a statistically significant interaction between the intervention and time on adversarial growth, $F(2, 92) = 7.63$, $p = .001$, partial $\eta 2 = .142$ (large effect; Field, 2018; Figure 3). Following planned comparisons, three separate independent-samples t-test for post-hoc analysis were run to observe where the significant differences lie (Table 17-19). Due to running repeated t-tests, and to avoid family-wise errors, a bonferroni correction was applied (0.5 / 3 = .016). Therefore, significance levels were required to be smaller than $p = .016$ to be considered significant findings.

Pre-intervention, there were no significant differences between the intervention and control for Adversarial Growth scores, t(90) = -.02, p = .98. Post intervention, Adversarial Growth scores were statistically significantly greater in the intervention compared to the control group, t(81) = 4.62, p > .001, d = 1.04. At 3 month follow-up, Adversarial growth scores were greater in the intervention, compared to the control group, however these differences did not remain statistically significant t(47) = 1.37, p = .18.

A further post-hoc analysis was run to examine changes over time in each condition. There was a statistically significant effect of time on Adversarial Growth for the Adventure Therapy intervention group, F(1.56, 43.62) = 24.65, p < .001, partial η2 = .468 (large effect; Field, 2018). However, there was not a statistically significant effect of time on Adversarial Growth for the control group, F(2, 36) = 1.72 p = .194. Thus, results demonstrate that participants report elevated scores for Adversarial Growth over time, only within the intervention condition.

Social Connectedness. There was a statistically significant interaction between the intervention and time on Social Connectedness, F(1.64, 75.59) = 3.94, p = .031, partial η2 = .079 (medium effect; Field, 2018). Post-hoc analysis used three separate independent-samples t-tests applying a bonferroni correction, as detailed above for Adversarial Growth.

Pre-intervention, there were no significant differences between the intervention and control for Social Connectedness scores, t(90) = -.55, p = .58. Post intervention, Social Connectedness scores were statistically significantly greater in the intervention compared to the control group, t(36.37) = 2.17, p = .04, d = .55 (medium effect; Field, 2018). However, the significance level is greater than the applied bonferroni correction. At 3 month follow-up, Social Connectedness scores were greater in the control, compared to the intervention group, however these differences were not statistically significant t(46) = -.40, p =.70.

A further post-hoc analysis was run to examine changes over time in each condition. There was a statistically significant effect of time on Social Connectedness scores for the Adventure Therapy intervention group, $F(2, 56) = 11.82$, $p < .001$, partial $\eta 2 = .297$ (large effect; Field, 2018). However, there was not a statistically significant effect of time on Social Connectedness for the control group, $F(1.36, 24.60) = .05$, $p = .89$. Thus, results demonstrate that participants report elevated scores for Social Connectedness over time, only within the intervention condition.

Self-Esteem. There was a statistically significant interaction between the intervention and time on Self-Esteem, $F(1.60, 77.55) = 3.97$, $p = .029$, partial $\eta 2 = .079$ (medium effect; Field, 2018 Post-hoc analysis used three separate independent-samples t-tests applying a bonferroni correction, as detailed above for Adversarial Growth.

Pre-intervention, there were no significant differences between the intervention and control for Self-Esteem scores $t(90) = .51$, $p = .58$. Post intervention, Self-Esteem scores were statistically significantly greater in the intervention compared to the control group, $t(81) = 2.87$, $p = .005$. At 3 month follow-up, Self-Esteem scores were greater for the intervention group, however these differences were not statistically significant $t(46) = .33$, $p = .74$.

A further post-hoc analysis was run to examine changes over time in each condition. There was a statistically significant effect of time on Self-Esteem scores for the Adventure Therapy intervention group, $F(2, 56) = 6.66$, $p = .003$, partial $\eta 2 = .192$ (large effect, Field, 20180. However, there was not a statistically significant effect of time on Self-Esteem for the control group, $F(1.31, 23.63) = 3.9$, $p = .68$. Thus, results demonstrate that participants report elevated scores for Self-Esteem over time, only within the intervention condition.

Self-Efficacy. There was a statistically significant interaction between the intervention and time on Self-Efficacy, $F(2, 92) = 4.37$, $p = .015$, partial $\eta 2 = .087$ (medium

effect). Post-hoc analysis used three separate independent-samples t-tests applying a bonferroni correction, as detailed above for Adversarial Growth.

Pre-intervention, there were no significant differences between the intervention and control for Self-Efficacy scores t(89) = -.85, p = .40. Post intervention, Self-Efficacy scores were statistically significantly greater in the intervention compared to the control group, t(81) = 2.48, p = .015. At 3 month follow-up, Self-Efficacy scores were greater for the control, however these differences were not statistically significant t(46) = -.13, p - .90.

A further post-hoc analysis was run to examine changes over time in each condition. There was a statistically significant effect of time on Self-Efficacy scores for the Adventure Therapy intervention group, F(2, 56) = 7.53, p = .001, partial η2 = .212 (large effect). However, there was not a statistically significant effect of time on Self-Esteem for the control group, F(1.42, 25.63) = 2.43, p = .71. Thus, results demonstrate that participants report elevated scores for Self-Efficacy over time, only within the intervention condition.

Hypothesis Three Summary. There was a statistically significant interaction between the intervention and time on all four dependent variables. A large interaction effect was found for Adversarial Growth and a medium effect for the other dependent variables. Post-hoc analyses demonstrated that significant different changes lied in pre-post changes. Further post-hoc analysis also demonstrated a statistically significant large effect of time on all four dependent variables for the Adventure Therapy intervention group. However, the effect of time on improved dependent measure scores was not found in the control condition.

3.6 Qualitative Results

3.6.1 Descriptive Statistics

Five participants took part in the focus group. All five shared experiences of cancer, and were in remission at the time of focus group. Further socio-demographic information can be seen in Table 20.

Table 20: Socio-demographic Information for Focus Group Participants

	N	% of group		N	% of group
Gender			**Health Difficulty**		
Female	3	60	Cancer	5	100
Male	2	40	Renal	-	-
Ethnicity			**Current Health**		
White British, White English, White Scottish or White Welsh	5	100	In Remission (Partial or complete not specified)	5	100
Employment				**Mean**	**S.D.**
Working Paid	1	20			
Working Self-Employed	2	40	Age (N = 3)	24	4
Not Working (Other)	1	20	Age of Onset (N = 3)	21.17	3.01
Not specified	1	20			

3.6.2 Thematic Analysis

Three themes emerged that that corresponded with research questions for ‘experiences of change’ namely ‘A Turning Point’, ‘Feeling Confident in Myself’, and ‘Pushing Yourself in New Directions’. Three themes emerged that corresponded with research questions exploring participant rationales for positive transformation, namely ‘The Group’, ‘You Can Overcome Adversity’, and ‘A Safe Space To Deal With Fears’. Themes and subthemes are presented below, and are visually illustrated in a Mind Map in Appendices Q and R.

3.6.2.1 Experiences of Change.

Three themes emerged that relate to the 'experiences of change' namely 'A Turning Point', 'Feeling Confident in Myself', and 'Pushing Yourself in New Directions'.

3.6.2.1.1 Theme One: 'A Turning Point'.

One theme that emerges from participants' narratives was that of psychological recovery and recuperation. On completion of the Adventure Therapy intervention, participants described significant changes in their relationship to illness, and their recovery. As Sophie (Lines 718-722) states when reflecting upon her experience of the Adventure Therapy "It's a bit of a turning point really… it's definitely changed my life". Participants spoke of the impact of their illness on self-concept, confidence and motivation, and the way in which the intervention served as a turning point towards recovery and growth.

> "I think, to me, it's been the actual cure for me, for my illness. Like, I feel like, especially with an illness like cancer when you get diagnosed you don't necessary feel illness – well I didn't because I had breast cancer, I didn't feel ill – and I was really really angry at the Doctors for making me ill and giving me all this treatment and 'why are you doing this to me?', and making me so poorly, and I guess [the intervention] has been that cure in that it has turned my head around in that it's actually… I'm fine now and, like, it's like, yeah, it's given me back that confidence, and like, zest for life and like, actual motivation to go out and achieve things*"* – Liz (Lines 709-716).

This turning point was characterized as an opportunity to overcome the adversity and mental suffering associated with experiencing a chronic illness. As Sophie (Lines 161-163) shares "I think it's given you them tools in that week to give you what you need to, kind of, move on with your life, I guess. And I think that's done more for me than what any

medication or anti-depressants or whatever could do". Whereas National Health Service treatment for chronic illness focuses on disease and physical recovery, participants spoke of the healing psychological effect of attendance on the intervention. As Richard (Lines 749-750) states, "Just to finish mine off, [the intervention] cured me mentally. The chemo cured me physically but [the intervention] cured me mentally". Such transformation in the face of adversity, appears to provide participants with an opportunity for psychological recovery and an outlook with renewed optimism, hope and possibility for further growth. "You realise that you can actually do these things that you've actually given up hope on, that it's given you a new lease of life, sort of, motivated, and you realise that you can get up and go and climb a mountain or whatever" (Mike, Lines 207-214.

3.6.2.1.2 Theme Two: 'Feeling Confident in Myself'.

A second theme that emerged from participants was 'Feeling Confident in Myself'. Participants discussed how the intervention served to transform their self-concept, and provided them with an opportunity to rediscover their sense of self, with narratives that integrate but do not solely centre upon ill-health. As a result, participants spoke of psychosocial recovery and growth as a consequence of self-concept transformation. As Richard (Lines 103-110) shared, "So, I just lost all confidence in myself and then I went to [the intervention] and meeting a great group of people supported me and didn't make me feel useless, and they said nice stuff about me. It just, sort of like, got me feeling a bit more confident in myself that I can now do stuff. Like, I volunteer as a voluntary speaker, which is something I couldn't do before [the intervention]. So it's just, stuff like that, it's just managed to make me feel like my older self again, sort of thing, like before cancer. So yeah, that being really, really myself."

Participants speak of reclaiming their identity prior to illness, and the sense of joy that is associated with recovering their sense of self. As Liz (Lines 762-765) explained "I think I was quite sceptical when I went on the week at the beginning, and I was thinking 'Oh yeah, I've done these activities before when I was at school. How's this going to help me?' and I did feel quite defiant, and by the end of the week I was like sobbing, like "Ahh, I've got my life back!' **laughter** ". Such narratives were also accompanied by optimism and motivation to continue to act in ways that were characteristic by this more favourable sense of self. "I saw the person who I used to be and it was like completely overwhelming, cause I thought 'why can't I be this person all the time when I'm at home?' And that gave me the, kind of, motivation to be like, 'I am going to be this person all the time at home', cause I've managed it here for a week, so why can't I do it all the rest of the time?" (Liz, Lines 295-302).

Re-embracing this sense of self and revised self-concept was associated with renewed confidence and motivation, a "spring in my step", and a greater sense of autonomy (Richard, Line 90). The intervention "does make me feel more, well cause it's given me that confidence. That confidence has allowed me to be more confident to go out and do stuff on my own, sort of thing, whereas, like, I drove down to [city location] a couple of months ago and I could never have done that before. Partly because I didn't have a car but partly because I didn't have the confidence to go that far on my own, sort of thing, without anyone's help. Just it's brought back that independence and individuality for me".

3.6.2.1.3 Theme Three: 'Pushing Yourself in New Directions'.

The third theme evident in participants' narratives was 'Pushing Yourself in New Directions'. Participants discussed how the intervention encouraged them to continue to engage in new and meaningful activities post-intervention. As Mike (Lines 740-743) shares, "I suppose, it sort of, gives you the push to get on and sort of, well, push yourself more and

makes you realise that other people are going through it as well, that there's other charities and things where you can actually volunteer and give back as well. So, that's what I'm doing a bit more now". It would appear that the participants were able to transfer accomplishments and experiences of 'pushing yourself' to wider psychosocial challenges in their day-to-day life post-intervention. As Richard describes (Lines 728-738),

> "Like, it [treatment] got rid of all the cancer cells and stuff like that, but mentally I had to rebuild a life after. It's like the best way I've had it described to me, is like it's a hurricane. When you're going through the hurricane, you can't really take anything in. Like everything is getting thrown around, and then after you've just gotta clear it all up and rebuild again. After that, it's just, sort of, like… and also with my work being so uncooperative with me and made me feel useless and stuff, going to [the intervention] got those feelings back for me. It's given me that new lease of life, sort of, thinking like, "I can do this. I can do that. I can push myself". I mean I was, like, nine months off treatment, so I was still using the thing like 'Oh, I'm tired from my chemo or whatever', whereas 'I climbed a mountain' or 'I went down an abseil', so that excuse doesn't carry so much weight as it did before. So, you do have to, sort of, like, get out and push yourself more and you get rewarded more for it by pushing yourself."

Such efforts were also expressed in relation to renewed health management and a focus upon enhancing well-being. Rather than a return to previous ways of being before their health difficulties, participants' spoke of pushing their boundaries and engaging in health-conscious activities in new and novel ways. As Liz (Lines 165-170) comments, "I've had people comment on how active I am now. Like, I would never have come sailing before, I would never have walked up Mount Snowdon before. Like, even before cancer, I would never have done that. So, everyone at work is commenting, like 'You live such an active

life', and all my friends have, like, noticed the difference. I, like, take care of my health and my fitness now, which I've actually never done before in my life". As Steph (Lines 391-395) summarizes, "I think it's the whole week in general; meeting with people who have similar experiences to you, the physical achievement of some of the activities that you get to do, the support you get through some of the groups once you leave, and then psychological, sort of, group work you did, sort of prepares you for the activities you do in the week and for going back home as well".

3.6.2.2 Exploring Participant Rationales for Positive Transformation

Three themes emerged that relate to rationales for positive transformation, namely 'The Group', 'You Can Overcome Adversity', and 'A Safe Space To Deal With Fears'. Themes and subthemes are presented below.

3.6.2.2.1 Theme Four: 'The Group

One salient theme in exploring participant rationales for why positive transformation occurred within the Adventure Therapy Intervention was 'The Group'. Different narratives for 'The Group' are expressed in three subthemes, namely 'Being Around People That Totally Get It', 'Feeling Supported', and 'Encouraged by Others'.

3.6.2.2.1.1 Sub-theme 4.1: 'Being Around People That Totally Get It'

Participants shared the helpful nature and transformational quality of being around others with similar experiences of chronic illness. Thus, the group setting provided individuals with a sense of togetherness in the knowledge of shared experienced, and strong felt sense of being understood. Such experiences were discussed in contrast to social networks at home, with peers who commonly did not understand or feel supportive for the individual undergoing treatment and management for a chronic health difficulty. As Sophie

(Lines 145-147) describes, “I think when you’re going through treatment there isn’t always people directly around you that have been through that. I think it’s [the intervention] an opportunity to be around people that totally get it and remember that, like, you’re not on your own”.

This sense of feeling understood also appears to help facilitate further sense of belonging and safety in the company of others. “I think as well it’s about being around people that get it. Like, I mean I struggle with fatigue really bad and if my friends say ‘Do you want to come for a weekend away?’ I get really anxious about it because if I say to them half way through the day, ‘Do you know what, I need to go have a lie down?’, they don’t quite get it and they’ll think like ‘push yourself on’ and sometimes you physically can’t. Around these lot [peers from the intervention] it’s all good. I’ll go, ‘I’m gonna sit out for the afternoon and chill’ and they’re all like ‘Yeah, no bother’, and I think that’s been really important for me actually”.

3.6.2.2.1.2 Sub-theme 4.2: ‘Feeling Supported’.

The importance of ‘The Group’ was also characterised by ‘Feeling Supported’, and the significance of peers on the intervention serving as a “support network” (Richard, Line 168). One participant expresses that without such support network, they would not have felt able to complete the Adventure Therapy, “I wouldn’t have done that week without everyone else” (Richard, 696-697).

Such support not only serves to help individuals complete the rigours of the intervention, but also provided participants with enhanced self-esteem and further opportunity for positive transformation. Richard (Lines 776-779) commented on feeling safe to be vulnerable in the supportive group, “It was like you said, being emotional. I think I cried every day, but it was just the support I got from it really. Like coming up to me and

making sure I was alright and putting their arm around me or whatever, it made me feel needed, and valued, and appreciated, which really did change me for the better".

3.6.2.2.1.3 Sub-theme 4.3: 'Encouraged by Others'.

Participants also spoke of the different roles they took within the group and the opportunities to support and encourage others in achievement. "I was, like, thinking, 'Oh am I going at the front too much? Or am I being too loud and boisterous?' but then other people were saying 'Oh, I saw you do that abseil first and it made me wanna do it, cause I saw how you just got on and did it' or like 'Oh, you encouraged me to do that because I saw that you'd done it easily'. So, then it gave me that kind of self-worth and self-confidence to realise that actually, I do have a place in a group and that I do have value and everyone else has value" (Liz, Lines 236-246).

Participants spoke of feeling inspired by the achievement of others, and the importance of this in their own experience. As Sophie (Lines 270-272) shared, "I think just to see how shy and stuff his character was and then by the end of the week he was, like, singing to us all and getting involved, and I just thought it was really inspiring really".

Participants' also comment on the physicality and experiential nature of the intervention. Such accounts reflect upon the ability to 'see' individuals' accomplishments. The physicality and experiential nature of the therapy appears to help inspire and encourage peers to also engage in challenges and therapeutic tasks. As one participant commented the experiential nature of the therapy allows others to observe change, "it's like they've witnessed it" (Steph, Line 496). This ability to 'bear witness' was spoken about in contrast to individual, talking therapies. "I don't know, the fact that we did physical activities, other people could see and say, for example, that you were strong, whereas if you talk to somebody, I don't know, it's different them saying at that end of your conversation "Oh,

yeah I think you're really strong" (Steph, 486-489). The outcome being that participants' believed the encouragement by others with a greater degree than if such words were expressed without the means for experiential and embodied evidence and substantiation.

3.6.2.2.2 Theme Five: 'You Can Overcome Adversity'

Another theme that characterized participant rationales for why positive transformation might have occurred within the Adventure Therapy Intervention was 'You Can Overcome Adversity'. When considering why the intervention might have facilitated change in the aftermath of adversity, one participant reflected that "It just made you think that you can overcome adversity" (Richard, Line 782). Different narratives are expressed in two sub-themes namely 'It's not I can't, it's how can I?', and 'Capable Body'.

3.6.2.2.2.1 Theme 5.1: 'It's Not I can't, It's How Can I?

Participants shared the helpful nature and transformational quality of 'changed perspectives' (Sophie, 134). This theme is characterised by cognitive reappraisal and transformation in attitudes towards one's abilities and limitations. As Steph (Lines 347-350) considers when thinking about a shift in perspective pre- and post-intervention, "I think I'd have been in a place where I'd look at my life and think 'Oh, I've failed at this, I've failed at that. I haven't done this, I haven't done that', whereas now I don't look at my life like that. I think, 'what have I achieved? What have I overcome? What am I going to do next?".

This shift in perspective is part of the mission statement of the intervention, as one participant reflects "It's not I can't, its how can I? That's the motto' (Steph, Line 790). Such transformation is similarly seen in the words of Richard (Line 783-786), "It's just about knowing that you can do something as opposed to can't. It's just giving you that belief that

you can do stuff, whereas before I'd be like 'I can't do that. I can't do an abseil, I hate heights', but you do do it and that's probably the biggest change for me".

Whilst some participants shared that the intervention helped to enhance their sense of capability, other narratives discussed a shift in perspective that provided increased self-compassion and provided individuals with a greater ability "to sort of, be kind to myself" (Steph, Line 756). As Steph (Lines 182-186) explains "I think it's interesting how some people have found that it pushes them on to do more, whereas for me, it made me step back and think actually I'm pushing myself too hard, that I've been trying to achieve things that maybe aren't achievable for me, but to turn it on it's head and think 'well how can I achieve that differently?' or look at things I've done and think it's an achievement rather than a failure". She continues by explaining, "I don't beat myself up as much" (Steph, Line 362).

3.6.2.2.2.2 Theme 5.2: 'Capable Body'

Participants also shared the helpful nature and transformational quality of engaging in experiences that enhanced their sense of having a 'Capable Body'. Chronic illness is frequently characterised by a corporeal experience of sickness, in as much as the body is the site of distress. Experiences of treatment, be that dialysis or chemotherapy, as well as complications associated with cancer and renal disease heighten the sense of the body as vulnerable and a site of risk. Narratives of participants, discuss the transformational experience of an embodied reappraisal of capability. As Liz (Lines 396-402) shared, "I think it was just, like, being treated like you weren't ill. Like, I was really shocked when we got there, we were all really knackered from travelling and things, and then we're told 'right come and do these activities', and then you have a quick meal and then you're out in a cave in pitch black. We're all like 'Hang on, we've all had cancer! We're tired, like, we need to rest'. It's like 'No you don't. You're doing it.' And then, like, we all did it and we did it and

we were all fine and then we still all went into the bar afterwards, we still had enough energy to like socialise with each other afterwards".

Richard (Lines, 698-704) comments on the significance of an embodied experience of achievement, one that is in stark contrast to the embodied experience of illness. "Singing in a cave, singing 'Bring Me Sunshine', I never thought I'd do that. I still can't believe I did it but just stuff like that, and also, like, doing an abseil, and also, like, the walk we did I think on the Thursday before we came back. That was the day before the 1st September, which was a year to the date since I had chemo, started chemo, and it was just, sort of, like, the first time it put it in perspective, sort of, like, how far I've come. This time last year I was in chemo but now I've climbed up a mountain. It's just physicalising it and seeing it for yourself, sort of thing". The Adventure Therapy Intervention appears to provide participants with an opportunity to transform their self-concepts of health, through the use of their bodies in ways that confront and revise notions of inability that are commonly tied to health concerns. As Liz (121-124) describes, "They kind of, like, force you to stop wrapping yourself up in cotton wool and then you carry that through into your life afterwards as well, and you start pushing yourself in other directions. You start pushing yourself at a time when you wouldn't necessarily have done before".

This again, was discussed in contrast to more traditional talking therapies. "I think, yeah, it is similar to counselling in that is has that reflection but it's more of a physical thing" (Liz, 446-447). Similarly, Richard (Lines 259-261) comments that, "You can be told an amount of time 'You can do it. You can do it', but if you don't actually go out and do it, then nothing has actually been achieved really and that's what I think".

3.6.2.2.3 Theme Six: 'A Safe Space To Deal With Fears'.

A third theme that characterized participant rationales for why positive transformation might have occurred within the Adventure Therapy Intervention was 'A Safe Space To Deal With Fears'. Different narratives for this theme are expressed in two subthemes, namely 'Opportunity for Reflection', and 'Opportunity for Risk'.

3.6.2.2.3.1 Sub-theme 6.1: 'Opportunity for Reflection'.

Participants shared that the Adventure Therapy intervention provided an opportunity to reflect upon their journeys of health and recovery in a novel and safe space. Away from known others, and the expectations of others, participants' commented on the transformational quality of the residential week-long setting of the intervention. As Steph (Lines 676-679) shares, "The whole week allows you to be away from home and sort of reassess your life and reassess your life back home, and then, like, at the end of the week, setting goals for when you go back that you want to achieve". It would appear that being immersed in an Area of Outstanding Natural Beauty for a prolonged period of time provided participants to (re)member their sense of self, and their sense of belonging. Liz (Lines 126-132) comments,

> "I think being away from my home gave me time to remember who I was for a week, as me on my own, with a bunch of new people that I'd never met before, and like remembering who I am without being around like my partner, and my family, and my friends and like being who they saw me as. And I could just like be myself again and remember who I was, and I remember thinking that on [the intervention], thinking 'This is who I am and this is who I want to be', and I've taken that through and like, yeah, made changes in my life to carry that on and be that person."

The intervention also appeared to be a safe space to deal with past adversity due to its elective nature, in as much as participants are given agency as to when and how they wish to confront distress associated with their chronic illness experiences. As Richard (428-331) discusses, "It's more optional at [the intervention], you can speak about your problems when you want to or when you don't want to. Whereas if you go to a counselling session or psychology or whatever, you do have to speak about your problems because that's the whole point of the thing". Often characterised as 'Challenge by Choice' in Adventure Therapy literature (Carlson & Cook, 2007), participants are provided with permission and agency to self-direct the way in which they wish to use the therapeutic support available.

3.6.2.2.3.2 Sub-theme 6.2: 'Opportunity for Risk'

Participants also shared that the Adventure Therapy intervention provided an opportunity to engage in risk on their own terms, in controlled and managed circumstance. Thus, participants engaged in adventurous activities with elements of managed risk, such as rock climbing, abseiling, and ghyll scrambling. This is quite often spoken as the first opportunity to engage in embodied positive risk taking since their experience of significant illness, and participants are provided with psychological seminars to help manage potential fears. Consequently, the intervention appears to provide participants with ways to safely manage risk. As Steph (Lines 440-445) describes, "We did some, sort of, sessions about when we went out, if we were doing climbing or abseiling, that we might have some fears and we talked about how we were going to deal with those fears and it sort of prepared us and then doing the actual activities it's like putting it into practice. So, going out and doing climbing and abseiling and thinking back to our session before and thinking 'No, I'm not gonna let the little monkey in my brain stop me'".

The experience of engaging with risk, and confronting fears was talked about in contrast to more traditional clinic-based talking therapies. Sophie (Lines 424-426) discussed that "I mean, when you go to counselling you're sitting and talking about your problems. When you're doing something like this you're trying to deal with them and deal with the things you're frightened about". Further, participants talked of how this engagement with fear and risk provided opportunities for accomplishment and reflections on their own capabilities. As Steph (Lines 469-471) articulates when talking about her experience of descending an abseil, "People could see the fear in me but then once you've got to the bottom you'd overcome that. So, you're seeing it in yourself, sort of the change and the achievement".

The opportunity to engage with risk and fear on participants' own terms, at the individual pace and level of challenge they desire, appears to create a safe environment, something quite opposed to the unelected forced-upon nature of being diagnosed and confronted with a life-threatening illness, where risk and fear can often be felt as overwhelming and unmanageable. Thus, the intervention recognises the need for individual agency in therapeutic encounters, and this is reflected in participant accounts of the statements they recall from the intervention. As Sophie explains (Lines 385-387), "Like, one of the slogans is 'Throwing A Rope' and that's essentially what [the facilitator] does. It's up to you whether you grab it or not".

3.7 Results Chapter Summary

Hypothesis one is supported across all measured psychosocial variables and results demonstrate that those who took part in the Adventure Therapy reported a statistically significant large increase in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy scores at programme completion.

For participants attending the Adventure Therapy, there was a significant effect of time on Adversarial Growth and Social Connectedness scores (baseline to 6-month follow-up). For Adversarial Growth scores, we can conclude that hypothesis two is supported at 3-month follow-up, with participant scores remaining statistically significant to baseline. For Social Connectedness scores, we can conclude that while a significant effect of time was found, post-hoc analysis reveals that the full effect of the intervention is not maintained at 3 or 6-month follow up. No significant effect of time was found for Self-Esteem and Self-Efficacy.

Within hypothesis three, there was a statistically significant interaction between the intervention and time on all four dependent variables. A large interaction effect was found for Adversarial Growth and a medium effect for the other dependent variables. Post-hoc analyses demonstrated that significant different changes lay in pre-post changes. Further post-hoc analysis also demonstrated a statistically significant large effect of time on all four dependent variables for the Adventure Therapy intervention group. However, the effect of time on improved dependent measure scores was not found in the control condition.

Within a Thematic Analysis, three themes emerged that that corresponded with research questions for ‘experiences of change’ namely ‘A Turning Point’, ‘Feeling Confident in Myself’, and ‘Pushing Yourself in New Directions’. Three themes emerged that corresponded with research questions exploring participant rationales for positive transformation, namely ‘The Group’, ‘You Can Overcome Adversity’, and ‘A Safe Space To Deal With Fears’.

4. Discussion

4.1 Chapter Overview

The present research adopted a mixed-method, experimental and longitudinal study design to investigate and explore the impact of an Adventure Therapy in the promotion of psychosocial competencies often challenged by experiences of chronic illness in adolescence and young adulthood, namely a sense of belonging, self-concept and sense of mastery. Beyond a model of recovery and the recuperation of psychosocial losses, this research was particularly interested to investigate whether participation in an Adventure Therapy intervention may help enable individuals to make meaning from their aversive health experiences, and grow from their adversity, perhaps, even surpassing levels of functioning that existed before confrontation with their chronic illness. This study also sought to explore participants' narrative and rationales for positive transformation following involvement in Adventure Therapy. Thus, the following discussion seeks to relate mixed-method results in the previous chapter to literature drawn from related Adventure Therapy and Adversarial Growth research.

4.2 Discussion of Mixed-Methods Findings in Relation to Existing Literature

4.2.1 Facilitating Growth in the Face of Adversity.

Within the systematic review, initial hypotheses were raised as to whether Adventure Therapies not only help to recover and recuperate the psychological and social effects of chronic illness in adolescence, but may also provide opportunities for growth and positive transformation in the face of adversity (Alt, 2009; Slavin, 2015). Such findings were conceptualised under the term 'Adversarial Growth', which contends that under the right conditions, highly challenging life events can foster positive psychological change (Joseph et al., 2012; Linley & Joseph, 2004).

Results from this study indicate that those who took part in the Adventure Therapy reported a statistically significant increase and large magnitude of change in Adversarial Growth at intervention completion (Cohen, 1988; Field, 2018). Such findings support hypothesis one and indicate that the intervention was highly effective at post-intervention in facilitating enhanced self-assessments of personal growth following health-related adversity. These findings, therefore, provide substantiation to the claims that Adventure Therapy might provide the therapeutic environment in which young adults with experiences of chronic illness can not only recover but grow from their experiences of health-related adversity.

These findings appear echoed by participant accounts for Theme One: 'A Turning Point'. Participants described significant changes in their relationship to illness, with the intervention serving as a turning point towards recovery and growth. Speaking of renewed confidence, and motivation, 'zest for life', this turning point was characterized as an opportunity to overcome the mental suffering associated with experiences of chronic ill-health. Such transformation in the face of adversity appears to provide participants with an opportunity for psychological recovery and an outlook with renewed optimism, hope and possibility for further growth. Mixed-methods findings, thus, provide further contention that Adversarial Growth may represent an outcome, akin to well-being, in the aftermath of adversity but also a resource and coping strategy for managing adversity, which in turn may facilitate further positive adjustment (Calhoun & Tedeschi, 1995; Davis, Nolen-Hoeksema, & Larson, 1998). Accordingly, participant experiences of the intervention and ensuing months, echo literature that argues that Adversarial Growth may not only influence well-being directly, but also buffers against further adversity by providing the individual with a greater sense of meaning, and in turn optimism, to continue facing the challenges that chronic illness may pose (Harper et al., 2007). In this vain, individuals may be better able to accept the hardships and integrate the aversive elements of chronic illness, reinterpreting such

experiences within a narrative of personal growth, consequently restoring a sense of security, personal agency and sense of capability to engage in further areas of growth (Husson et al., 2017; Morrill, Brewer, & O'Neill, 2008).

This study also investigated whether Adversarial Growth is a natural phenomenon in the process of recovery from childhood and adolescent chronic illness for this specific population. Hypothesis three investigated the differences between the intervention and control group over time (baseline to three-month follow-up), and results demonstrate that there is a large and significant interaction between intervention condition and time. While there was a large and statistically significant effect of time on Adversarial Growth for the Adventure Therapy intervention group, there was not a significant effect of time on Adversarial Growth for the control group. Thus, results demonstrate that participants report elevated scores for Adversarial Growth over time, *only* within the intervention condition. It is interesting to note that those involved in the control group received a number of therapeutic inputs and while their scores did improve over time, a significant effect for time on Adversarial Growth was only found for those involved in the Adventure Therapy intervention.

When looking at six-month follow-up scores, results also demonstrate a significant and large effect of time on Adversarial Growth scores for the Adventure Therapy group. Results demonstrate Adversarial Growth scores remained statistically significant to baseline at 3-month follow-up, despite a slight decrease in scores from post-intervention. However, scores for Adversarial Growth at 6-month follow-up were not significantly different to baseline, despite being slightly larger and not significantly different to 3-month follow-up scores. Therefore, while hypothesis two was supported at three-month follow-up, and scores remain improved for Adversarial Growth at six-month follow up (*Mean Improvement* = 8.37, *SE* = 3.39), the effect of intervention is not fully maintained at 6-month follow up. It is

interesting to note that mean Adversarial Growth scores slightly improve from three to six-month follow-up. It appears likely that the large standard deviation (*SD* = 14.08*)* and smaller sample size at six-month follow-up (N =22) may have impacted upon the confidence levels and resultant non-significant findings. With no other study investigating the longitudinal effects of an Adventure Therapy on experiences of positive transformation, be that under the conceptualisation of Adversarial Growth, or 'post-traumatic growth' (Tedeschi & Calhoun, 1996) 'stress- related growth' (Park et al., 1996), thriving (Carver, 1998), or benefit-finding (Affleck & Tennen, 1996; Tennen & Affleck, 1999), such findings provide initial and novel evidence to suggest that Adventure Therapy may be an effective intervention to help facilitate a process of long-term growth in the face of adversity.

Given that over half of adolescent and young adults with experiences of chronic illness state that their psychological and social support needs have been unmet (Zebrack et al., 2007) and that National Health Service is increasingly restricted in funding, there have been calls to explore more innovative psychosocial interventions provided by the third-sector (National Institute for Health and Care Excellence, 2005). Thus, it is contended that in designing interventions for this population, social, cognitive, emotional and psychological issues should be considered, to repair and transform into growth much of what may have been lost, delayed or challenged through experiencing chronic illness (Epstein, 2004). Not satisfied with simply removing the suffering of our clients, there are strong ethical and clinical contentions, which denote that individuals who have faced adversity deserve opportunities to excel, thrive and grow from their experiences (D'Agostino & Edelstein, 2013; Linley & Joseph, 2004; Shapiro, 2001). Results from this study provide initial evidence to suggest that this Adventure Therapy may provide such a transformative intervention in the short and longer term, facilitating large effects of change.

4.2.2 Further Experiences of Positive Change and Potential Rationales.

4.2.2.1 Sense of Belonging and Importance of 'The Group'.

This study also recognised the significant impact of chronic illness on the development on peer networks, with common associated experiences of social isolation and alienation (Al Omari & Wynaden, 2014; Hedström, 2004). Consequently, this study looked to investigate changes in 'Social Connectedness', otherwise understood as a person's subjective experience of belonging in their journey of recovery (Lee & Robbins, 1995).

Hypothesis one demonstrated that there were large and significant changes for Social Connectedness mean scores following a brief, 5-day Adventure Therapy intervention for young adults affected by chronic illness. Thus, results indicate that Adventure Therapy was effective at post-intervention in facilitating enhanced scores for 'Social Connectedness' or participants' sense of belonging, following health-related adversity (Cohen, 1988).

When looking at six-month follow-up scores in hypothesis two, results also demonstrate a significant and large effect of time on Social Connectedness scores for the Adventure Therapy group. Post-hoc analysis revealed that significant changes lay between pre- and post-intervention, however, and elevated mean scores for Social Connectedness at post-intervention did not significantly differ at follow-up time points. Furthermore, scores slightly increased from 3-month to 6-month, perhaps as a result of attendance at a refresher weekend. Findings, therefore, demonstrate that while a large and significant effect of time was found, post-hoc analysis revealed that full effect of the intervention is not maintained at 6-month follow up. These findings appear to mirror research by Zebrack et al. (2017), which found that social support scores were significantly greater at post-trip however, scores decreases from post-trip to follow-up. Thus, the overall rate of change in support over time was only marginally significant for their assessment of social support and belonging.

Increases in Social Connectedness scores were found at 6-month follow-up, the time at which a 'refresher', 'top-up' Adventure Therapy weekend is offered by the intervention. Perhaps, these findings indicate the need for the intervention to provide further social support at periodic intervals post-intervention to maintain the large effects at post-intervention in participants' sense of belonging.

Within qualitative accounts of participant experiences, individuals spoke at length about the significance of 'The Group' during the intervention, as a support network that continued beyond the confines of the 5-day intervention. In contrast to peers at home, with whom participants' shared experiences of feeling judged, misunderstood and anxious when discussing health-related issues, participants shared the importance of 'Being around people that totally get it' (Sub-theme 4.1). Such experiences appear to mirror quantitative findings for enhanced Social Connectedness, with participants sharing that they no longer felt alone or alienated but among a peer network with whom they felt understood, 'Feeling Supported' and felt a sense of belonging. This belonging appears to be one that was characterized by emotional intimacy and the ability to be vulnerable with one another, as well as individuals finding their role and "place in the group" (Liz, 236).

This study also investigated whether improvements in Social Connectedness scores were a result of attending the intervention or a phenomenon that commonly occurred over time in the process of recovery from childhood and adolescent chronic illness for this specific population. Hypothesis three investigated the differences between the intervention and control group over time, and results demonstrate that there is significant and large interaction between intervention condition and time. While time was a significant independent variable in enhancing Social Connectedness scores for those in the intervention, this relationship was not found for the control group. Thus, within this study, Social Connectedness, or a valued

sense of belonging, did not occur over time in and of itself, but a significant effect over time was only found for those individuals involved in the Adventure Therapy.

Furthermore, the importance of 'The Group' was illuminated in accounts of potential rationales for positive transformation. Such experiences of 'The Group' were characterised by sub-theme 4.1 1 'Being around people that totally get it', and sub-theme 4.2 'Feeling Supported', which reflected participant's accounts of emotional intimacy and the ability to be vulnerable and supportive with experientially similar others. Moreover, participants spoke of the importance of feeling 'Encouraged by Others' (Subtheme 4.3), where accounts reflected feeling inspired by others' achievements. Not only citing a resource in witnessing the achievements of others, participants also reflected upon the ability for others to witness their own achievement; the outcome being that participants believed the encouragement given by others more than if such words were expressed without the means for experiential and embodied evidence and substantiation.

These accounts for the importance of the group in facilitating growth and positive transformation are ones that are mirrored within the literature. Being around experientially similar others and feeling supported within a peer support network, has been linked as an important experience in the recovery from chronic illness (Kelly, 2004). As experiences from Roberts, Piper, Denny, and Cuddeback (1997, p. 138), being around peers with similar experience "makes you feel like you belong and are not the only one in the world to have dealt with something so scary in life and at such a young age". While young adults commonly report their need to explain their situation to healthy peers and report feeling misunderstood or alienated in such disclosure, it would appear that accounts from this study mirror research into experiences of peer support, where young people spoke of the relief in not having to explain (Cassano, Nagel, & O'Mara, 2008).

The importance of 'The Group' is also illustrated in research for Adventure Therapy with adults facing chronic illnesses. Research for breast cancer survivors found that Adversarial Growth was facilitated through providing opportunities for social support and schema change (McDonough et al., 2011; Tedeschi & Calhoun, 2004). Moreover, Adventure Therapy research suggests that it is the group aspect of a positive support system, opportunities for disclosure, and shared problem-solving, that facilitate Adversarial Growth for adult breast cancer survivors (Burke & Sabiston, 2012; K. Hefferon, Grealy, & Mutrie, 2009) Thus, in a study of Dragon Boat racing for adult breast cancer survivors, McDonough et al. (2011) found a positive association between social relationships, support and Adversarial Growth over time. Further, Adventure Therapy research proposes that the group may serve as an important facilitator of Adversarial Growth, as it provides an opportunity to interact with survivors who role model adversarial growth (Lechner, Howard, & Glenn, 2009; McDonough et al., 2011). This is synonymous with research demonstrating that positive role-modelling behaviour in other adult breast cancer survivors is related to one's own personal growth (Morris et al., 2014; Weiss, 2004). Such findings for the importance of the social context are exemplified in the Adventure Therapy research of Dunn et al. (2009, p. 132), who contend that "peer support may be a necessary prerequisite for successful self-transformation after cancer".

4.2.2.2 Changes in Self-Concept.

This study also recognised the significant impact of chronic illness in development of individual's self-concept, with the common experience being that individuals report low self-esteem (Evan & Zeltzer, 2006). Consequently, this study looked to investigate changes in 'Self-Esteem' in their journey of recovery (M. Rosenberg, 1965). Changes in self-concept were also identified in the thematic analysis for Theme Two: 'Feeling Confident in Myself'.

Results from this study indicate those who took part in Adventure Therapy reported statistically significant increases in Self-Esteem scores. Thus, hypothesis one demonstrated the intervention was effective at post-intervention and that those involved reported a large magnitude of change in their assessment of 'Self-Esteem' or enhanced self-concept, following health-related adversity and experiences of an Adventure Therapy (Cohen, 1988). These findings appear in line with previous research that found significant improvements in self-esteem, self-compassion, and body image appraisals following Adventure Therapy (Kessell et al., 1985; Rosenberg et al., 2014). However, for participants attending the Adventure Therapy intervention there was not a significant effect of time on Self-Esteem across six-month time intervals, indicating that the effect of the intervention is not maintained longer-term.

This study also investigated whether improvements in Self-Esteem scores were a result of attending the intervention or a phenomenon that commonly occurred over time in the process of recovery from childhood and adolescent chronic illness for this specific population. Hypothesis three investigated the differences between the intervention and control group over time (baseline to 3-month follow-up) and results demonstrate that there was a significant interaction between intervention condition and time. While there was a significant effect of time on Self-Esteem scores for the Adventure Therapy group, no significant effect was found for the control group. Thus, results demonstrate that participants report elevated scores for Self-Esteem over time, only within the intervention condition.

These changes in self-esteem were mirrored by participant narratives for changes in their self-concept following involvement in the intervention. Thus, in Theme Two 'Feeling Confident in Myself', participants discussed how the intervention served to transform their sense of self, with narratives that integrate but do no solely centre upon an identity of ill-health. Consequently, participants described reclaiming their identity prior to illness, and the

associated joy of recapturing this sense of self. In re-embracing this sense of self and revisions to individual self-concept, participants spoke of renewed confidence, motivation and sense of personal agency. Such narratives are reminiscent of literature that demonstrate enhanced internal locus of control, and greater belief in individual's ability to be the agent of meaningful changes in their lives (Kessell et al., 1985).

4.2.2.3 Changes in Sense of Mastery and Capability.

This study also recognised the significant impact of chronic illness during adolescence on the development of individual's autonomy, with the common experience that individuals report lower sense of mastery and capability than their healthy peers (Taylor et al., 2013). Consequently, this study looked to investigate changes in 'Self-Efficacy' (Schwarzer & Jerusalem, 1995). Changes in appraisals of capability were also identified in the thematic analysis.

Results from this study indicate those who took part in the Adventure Therapy reported a statistically significant increase in Self-Efficacy scores. Hypothesis one demonstrated that there were significant changes with a large magnitude of effect, for Self-Efficacy mean scores following the intervention. These findings appear in line with previous research that found enhanced scores for Self-Efficacy at completion of an Adventure Therapy intervention (Zebrack et al., 2017), as well as enhanced Internal Locus of Control scores, indicating enhanced beliefs in participants' capacity to influence circumstance in their life (Kessell et al., 1985). However, for participants attending the Adventure Therapy intervention there was not a significant effect of time on Self-Efficacy across six-month time intervals, indicating that the effect of the intervention is not maintained longer-term.

These changes in Self-Efficacy were mirrored by participant narratives for changes in their sense of capability and mastery following involvement in the intervention. Thus, in

Subtheme 3.3: 'Pushing Yourself in New Directions' participants appeared to be able to transfer accomplishments and experiences of 'pushing yourself' to wider psychosocial challenges in their day-to-day life post-intervention. Similarly, Theme 5: 'You Can Overcome Adversity' is characterised by individuals' renewed appraisal of their capability and sense of mastery in their ability to overcome the associated difficulties of their chronic health condition.

This study also investigated whether improvements in Self-Efficacy were a result of attending the intervention or a phenomenon that commonly occurred over time in the process of recovery from childhood and adolescent chronic illness for this specific population. Hypothesis three investigated the differences between the intervention and control group over time (baseline to 3-month follow-up) and results demonstrate that there is significant interaction between intervention condition and time. While there was a significant effect of time on Self-Efficacy scores for the Adventure Therapy group, no significant effect was found for the control group. Thus, results demonstrate that participants report elevated scores for Self-Efficacy over time, only within the intervention condition.

In exploring participants' rationales for positive transformation, this research identified the importance of shifts in appraisals of personal capabilities (Theme 5). Accordingly, participants spoke of the transformational quality of perspective shifts, with narratives characterised by cognitive reappraisal in their attitudes towards personal capabilities and limitations. Such narratives are mirrored by qualitative accounts for adult breast cancer survivors who climbed Mt. Kilimanjaro in an Adventure Therapy expedition (Burke & Sabiston, 2012). Research by Burke and Sabiston (2012) proposes that the intervention fostered greater self-belief, and that the climb provided a challenge in which the women transitioned into seeing themselves as capable in their ability to overcome adversity. Similarly, an Adventure Therapy programme found that the intervention was able to promote

Adversarial Growth through providing a social environment in which women affected by breast cancer could shift their identity into that of a proactive survivor (Morris et al., 2014). Thus, it contended that such therapies provide individuals with the opportunity to undergo a process of self-transformation that may incorporate the meaning of the chronic illness into their worldview and integrate aspects of survivorships into a redefined self, one characterised by survival, capability, and growth (Carpenter, Brokkopp, & Andrykowski, 1999; Dunn et al., 2009).

Along with narratives for cognitive reappraisal in individuals' capability and ability to act with self-compassion, participants also shared the transformational quality of engaging in experiences that enhanced their sense of having a 'Capable Body' (Sub-theme 5.2). Participants commented on the significance of an embodied experience of achievement, one that is in stark contrast to the embodied experience of illness. Thus, the Adventure Therapy intervention appears to provide participants with an opportunity to transform their self-concepts of health, through the use of their bodies in ways that confront and revise notions of 'disability'. Such findings are reflected in Adventure Therapy research for cancer survivors, which contend that the physical nature and corporeal dimension of the intervention may promote adversarial growth, due to the body being a focus of ill-health, as well as "a conduit of growth and renewal as one reconnects with the body during recovery" (McDonough et al., 2011, p. 629). The physical challenges of the intervention, thus, may provide an embodied experience of confronting and overcoming adversity and may provide a corporeal reorganisation towards hardship, one that provides an experience of overcoming adversity, and a shift away from the body being a site of disability, fear and danger (Burke & Sabiston, 2012; Kate Hefferon, Grealy, & Mutrie, 2010).

Positive growth and transformation may be facilitated by participant accounts for cognitive, narrative and embodied re-orientations towards their sense of capability. The

Theme 5: 'You Can Overcome Adversity', appears to characterise such reappraisal and accounts seem to reflect the transfer of accomplishments within the intervention to experiences in their everyday life. In what Wagner (2014, p. 8) characterises as 'transference', "the ability to take home what happened in the wilderness", also commonly understood as 'metaphorical association', participants report greater confidence in their capability to achieve. Accordingly, participants spoke of Theme Three: 'Pushing Yourself in New Directions' upon intervention completion. Thus, it would appear that the intervention helps individuals to acknowledge their capacity to overcome challenging situations, within the confounds of the adventure and challenge, and to make connections to their capabilities and perhaps grow from experiences of ill-health on return to their everyday circumstance.

4.2.2.4 Adventured-Based Therapy: A Safe Opportunity for Reflection and Engagement with Risk.

Participants shared that the Adventure Therapy intervention provided an opportunity to reflect upon their journeys of health and recovery in a novel and safe space. Away from known others, and the expectations of others, participants' commented on the transformational quality of the residential weeklong setting of the intervention. It would appear that being immersed in an Area of Outstanding Natural Beauty for a prolonged period of time provided participants to remember their sense of self, and their sense of belonging. Research for Adversarial Growth has found that the longer the time since the critical event, the greater the extent of growth is reported (Cordova, Cunningham, Carlson, & Andrykowski, 2001; Evers et al., 2001). While it is cited as unlikely that the passage of time per se influences Adversarial Growth, opportunities such as time away from regular routines, in natural green spaces, may provide individuals with the time and space in which to engage in a process of reflection and processing (van den Berg, Maas, Verheij, & Groenewegen, 2010; Vries, Helgeson, Schulz, & Almansa, 2019). The intervention also appeared to be a

safe space to deal with past adversity due to its elective nature, in as much as participants are given agency as to when and how they wish to confront distress associated with their chronic illness experiences. Often characterised as 'Challenge by Choice' in Adventure Therapy literature (Carlson & Cook, 2007), participants are provided with permission and agency to self-direct the way in which they wish to use the therapeutic support available. Such experiences may present individuals with the safety and containment to actively take part in reflection and reprocessing of their adversity.

Furthermore, research into 'green exercise' has found that adrenaline, noradrenaline and blood pressure are reduced during and into the evening following daytime exercise in green space (Li, Otsuka, & Kobayashi, 2011). Given the importance of the parasympathetic nervous system (PNS) in restoration (D. K. Brown, Barton, & Gladwell, 2013), such findings indicate that the contact with green space which Adventure Therapies provide, may help to promote physiological restoration, through activation of the PNS and inhibition of sympathetic nervous system, which is associated with excitatory responses engendered in health-related adversities and traumas (Gladwell, Kuoppa, Tarvaienen, & Rogerson, 2016; Shand et al., 2015). Accordingly, participant rationales for the 'Opportunity for Reflection', may reflect evidence for the value of green space in restoration, with findings supporting the notion that green space can provide a buffer against the negative health impact of stressful life events (van den Berg et al., 2010). With proposals that adversity processing requires the simultaneous activation of pre-frontal cortex and diencephalon brain regions, such down-regulating activities may also serve to provide the right conditions under which adversity and health-related trauma may be successfully processed (Shapiro, 2001).

In the context of a growth-enhancing intervention, participant accounts for the 'Opportunity for Reflection' (Sub-theme 6.1) might also reflect part of a process of positive meaning-making in their experience of ill-health. Research by C. Park, Chmielewski, and

Blank (2010) found that in the context of higher levels of growth in young adult cancer survivors, intrusive thoughts were inversely related to negative affect, more positive affect and higher levels of spiritual well-being and satisfaction with life. That is to say that for those who could make positive meaning in their cancer experience, thinking about them more frequently was related to better well-being. Thus, in the context of this study, the importance of having 'Opportunity for Reflection' within a personal growth-facilitating intervention, may serve to provide participants with the right conditions in which to make positive interpretations of one's ill-health experience.

Participant accounts also cite the importance of opportunities to engage in risk on their own terms, in a safe and managed intervention. It would appear that the challenging environment of Adventure Therapy may act as a 'proving ground', with deliberate engagement in challenge and risk, demanding individuals to use coping strategies that serve adaption functions (Carlson & Cook, 2007). Thus, "It is possible therefore that survivors of trauma who choose to take on activities that produce distress, make salient one's vulnerabilities, and generate an awareness of one's mortality may do so because it not only promotes psychological changes that are highly positive but also acts as a vehicle to "craft" new understandings of what it means to be a chronic illness survivor" (Burke & Sabiston, 2012, p. 14). Folkman (2008) contends that stressors can be appraised as harm, threat or a challenge. Within the therapeutic and containing environment of an Adventure Therapy, it is likely that risk-taking activities are perceived as a challenge. When appraising such activities as a 'challenge', Folkman and Moskowitz (2000) found that this appraisal is associated with positive affect such excitement and confidence. While Tedeschi and Calhoun (2004) contend that transformative experiences require affective, not just cognitive engagement, appraisals of 'challenge' accompanied by excitement, eagerness and confidence, may well serve to facilitate in the enhancement of adversarial growth. Moreover, Sabiston, McDonough, and

Crocker (2007) question the importance of the group in challenging experiences, contending that it is the supportive group environment in which physical challenges occur, that may be an essential component in the facilitation of positive psychological growth. Such supportive and therapeutic social experiences, from instructors and peers, may help facilitate positive engagement in challenge through creating a containment and sense of safety.

4.3 Strengths and Critique of the Study

4.3.1 Strengths

One of the principal merits of this study is its unique and novel nature of inquiry into a field of study as yet unexamined from a perspective of Adversarial Growth and Adventure Therapy for young adults with experienced of chronic illness. This is the first study to systematically investigate changes in Adversarial Growth or growth by any other name, such as 'post-traumatic growth' (Tedeschi & Calhoun, 1996) 'stress- related growth' (Park et al., 1996), thriving (Carver, 1998), and benefit-finding (Affleck & Tennen, 1996; Tennen & Affleck, 1999), for young adults with chronic illness experiences who have attended an Adventure Therapy. Consequently, this study provides evidence to previously unstudied research questions.

Within the field of research investigating Adventure Therapy and the psychosocial impact of chronic illness for young adult populations, the majority of studies are critiqued by their lack of longitudinal methodologies. As such, conclusions about the clinical effectiveness of Adventure Therapy interventions is limited by the lack of data evidencing whether positive changes demonstrated within the intervention is maintained over a period of time, and maintained upon participants' return to their home environment. Two studies have been identified that examine longitudinal changes. However, the validity of Herskowitz (1990) longitudinal findings are critiqued, given its methodological weaknesses, such as a lack of transparency in the reporting of participant recruitment and demographics, analytic

procedures, limited declaration of results and small sample size (N = 6; Critical Appraisal Skills Programme, 2018). While follow-up data was gathered by Rosenberg et al. (2014) investigating body-image, self-compassion, and battery of psychosocial outcomes, and the methodology was appraised as 'Good', such findings were limited to a period of one-month post-intervention (Downs & Black, 1998). The present study is merited in its longitudinal methodology design, with data gathered on the effectiveness of the intervention up to six-months post-intervention and in research efforts to provide transparency in procedures, and reporting, and larger sample size.

This research study also has strengths in its experimental research design, using a control group condition to investigate differences in the magnitude of change in psychological dependent variables across intervention conditions. At present, only two other studies exist that have used an experimental methodology in their investigation of an Adventure Therapy intervention for adolescent and young adult populations that have experienced of chronic illness (Herskowitz, 1990; Rosenberg et al., 2014), with only one investigating follow-up changes.

Furthermore, this study can be merited in its use of mixed-methods and research efforts to align data collection and analysis with its epistemological position, that of 'critical realism' (Bhaksar, 1989; Willig, 1999). The application of a Priority-Sequence Model (Morgan, 1993), relies on the principle of complementarity, and attempts to connect the strengths of different research methods to address the complexity of the research topic being investigated. This research design has been cited as particularly beneficial in the field of clinical health psychology, "when a study's goals include both pure research and applied uses in practical settings" (Morgan, 1993, p. 365).

A further strength of this study can be seen in providing novel research into this topic area within a British healthcare context. The majority of research to date has been conducted within American and Canadian settings (Alt, 2009; Herskowitz, 1990; Kessell et al., 1985; Rosenberg et al., 2014; Stevens et al., 2004; Wagner, 2014; Wingler, 2015), with one unpublished qualitative thesis study situated within a British healthcare setting (Slavin, 2015). With calls by United Kingdom policy and practice guidelines to explore innovative psychosocial interventions provided by the third-sector organisations (National Institute for Health and Care Excellence, 2005) to address the unmet psychological and social support needs of young people facing chronic illness, this research begins this inquiry by providing insight through exploration of an Adventure therapy intervention facilitated by a charity within the United Kingdom.

Additionally, this study is merited in its ambitious intent as a Doctorate in Clinical Psychology Thesis, with research questions investigating a topic hitherto unexamined in a British or international context, and a methodology that utilises mixed-methods, longitudinal, and an experimental research design.

4.3.2 Critique

Attrition. This study had a particularly high attrition rate for the intervention condition, with a 61.67 percentage decrease between pre-intervention and 6-month follow up. Without participant data it is not possible to conclude the reasons for dropout, but it may be likely that the high attrition rate reflects a lack of motivation to engage with the research process. This would be understandable given this population's focus on recovery, and their potential wish to move away from reflection on ill-health. It may also be possible that participants who dropped out may represent those that found the intervention to be of less use, and as a result, the effect of the intervention would be less impactful should these

individuals have recorded questionnaires at follow-up time points. The high attrition rate may also reflect methodological decisions, such as informing participants of the research study upon their arrival. Despite being briefed that their participation was entirely voluntary and that their decision would not impact their experience on the intervention, this data collection procedure may have led participants to complete the questionnaires while on the intervention out of 'social desirability' (Van de Mortel, 2008). Upon returning home, participants may have felt freer to make their decision to no longer take part in the research process.

Homogeneity vs. Heterogeneity: Within the results section, socio-demographic data was analysed to assess differences within and between the intervention and control group populations. In so doing, statistical differences in baseline scores were found within the control group between renal and cancer health conditions for Social Connectedness, Self-Esteem and Self-Efficacy scores. Whether these differences represent different psychosocial experiences of different health conditions, or whether these differences are an artefact of small sample sizes, it is important that hypothesis three and interaction effects of group and time for Social Connectedness, Self-Esteem and Self-Efficacy are interpreted with caution.

While socio-demographic and baseline difference analyses provided statistical justification for collapsing all chronic illness experiences into one group for hypothesis one, and two across all measures, and hypothesis three for Adversarial Growth, this decision is not without critique. It may well be that there were not significant differences in dependent variables between renal and cancer experiences, and that participant scores reflect similarity in their self-assessment of psychological variables, however, this decision necessarily excludes the heterogeneity that exists within and between cancer and renal experiences. For instance, participants within this study reported 16 different diagnoses of cancer, each with distinct presentations, treatment courses, and effects upon their lives. Furthermore, two individuals may report two very different experiences of the same diagnosis of cancer,

dependent upon age of onset, stage of cancer development, the level of support they received by clinical staff and friends/family, and course of treatment. Thus, while necessary to homogenise this fairly small sample under statistical justification, such an exercise disregards the heterogeneity that exists between and within different diagnoses of chronic health conditions. Issues of heterogeneity are particularly illustrated in the significant differences of gender, employment status, and current health status between the intervention and control conditions.

Moreover, the complexity of recovery and the different interpretations of what is meant by the term (be that physical, psychological, emotional, social, financial) was a challenge in assessing how to conceptualise differences in self-perception of current health status. For instance, while 55 percent of the intervention group report that they were in remission, partial or complete, at the start of the intervention, 6 participants (8.33 per cent) in the intervention condition were actively using dialysis on a daily basis throughout the intervention, with one intervention programme specifically adapted to accommodate the needs of participants with End-Stage Renal Failure. Thus, a point of contention may be that this study is critiqued in the breadth of participants' current health status, with insufficient data that acknowledges individual participants' medical, psychological and social state of health and recovery.

Experimental Procedures: As an independent research study, this study can be critiqued by methodological limitations in the principal researchers' ability to influence experimental procedures. Accordingly, randomization was not possible given that individuals either self-refer or interest was expressed through a youth support co-ordinator, with individuals attending the intervention due to belief in its ability to be of some help in their journey of recovery. A result of the experimental procedures was that causation could not be inferred from the results. Furthermore, the nature of this research precluded the possibility of

inviting those recruited into the control group to later attend the intervention, say in a Stepped Wedge Trial Design (Brown & Lilford, 2006). Such a design would involve sequential roll-out of the intervention to all participants over a number of time points, and would allow the order in which participants receive the intervention to be determined at random. From an ethical point of view, this design is particularly relevant where the intervention is predicted to be of greater good than harm. Thus, this study acknowledges the methodological and ethical implications of a research study that does not provide opportunity to conduct such experimental methods as a Stepped-Wedge Trial Design. However, control group participants were informed of the intervention, should they wish to self-refer, and future recruitment through identified charities was discussed with the intervention director.

Validity of Adversarial Growth: The assessment of adversarial growth was gathered using the Psychological Well-Being Post-Traumatic Changes Questionnaire (Joseph et al., 2012). Chosen for its greater integration of theory than other growth measures, such as The Post-Traumatic Growth Inventory (Tedeschi & Calhoun, 2004), and the potential for respondents to rate changes in both positive and negative directions, its use is not without critique. Thus, experiences of adversity are conceptualised under the title of 'post-traumatic changes', with an emphasis on 'trauma'. Accordingly, for the purposes of this study, instructions for the questionnaire were adapted as to use 'experiences of cancer and/or renal issues' instead of the use of 'trauma'. Despite this adaptation, the validity of the measure can be called into question for participants whose ill-health experiences have been present from birth or very early age. The measure asks participants to consider 18 personal statements that they consider to have changed as a result of their experience of cancer/renal issues. Thus, questions of validity are raised for those born with or with experiences of illness from an early age, with little or no conceptualisation of what pre-morbid functioning might have been. Particularly illustrative for renal difficulties, which are commonly related to auto-immune

difficulties or have a genetic component (NIH, 2019; Segelmark & Hellmark, 2010) participants may not be able to conceptualise what life was like 'before' renal difficulties. Furthermore, chronic illness is often characterised by periods of better and worse health, with a cyclical experience of disease and impact on the bio-psycho-social aspects (Conrad & Altmaier, 2009). Thus, participants may be drawn to select a particularly difficult period of ill-health over another.

Further, which adversity, Adversarial Growth refers to remains problematic within the field of chronic illness. Rather than an identified single event, such as an accident, time-limited period of war, or natural disaster; chronic illnesses, such as cancer or renal failure can endure for years and in some cases, decades with cycles of remission and relapse (Conrad & Altmaier, 2009). Thus, while much of the literature suggests that initial diagnosis and acute treatment can be understood as a health-related trauma, many individuals experience a number of further hardships with later threats of re-occurrence, health complications and inter-personal challenges where their illness becomes highly visible, such as in moments of psychosocial confrontation. As such, there are arguments to suggests that many within this population may never be truly post-adversity (K. Hefferon, 2012).

4.4 Clinical vs. Statistical Significance

It is argued that statistical significance alone is insufficient as the measure of effectiveness for new interventions (Jacobson & Traux, 1991; Leung, 2001). Statistical significance, as represented by *p* values gives the probability that any outcome would have arisen by chance, and accordingly whether to accept or reject a null or directional hypothesis (Page, 2014). However, there are propositions for clinicians and researchers to go "beyond statistical significance", and for research methods to prioritise more clinically relevant information (Jacobson & Traux, 1991; Page, 2014, p. 726). From a clinical perspective, the presence or absence of statistically significant differences can be of limited value. For

instance, it would be mistaken to suggest that non-significant outcomes automatically equate to a clinically ineffective treatment, because small sample sizes and measurement variability can influence statistical results (Field, 2018).

An alternative proposition is to use 'Clinical Significance' rather than 'Statistical Significance', and to assess the magnitude of treatment effects by evaluating clinically meaningful change (Jacobson & Traux, 1991). Such propositions argue that a treatment's merit should be based upon the extent to which the intervention "moves someone outside the range of the dysfunctional population or within the range of functional population" (Jacobson & Traux, 1991, p. 12). As such, this method is based upon categorical understandings of health and recovery, and requires clinical 'cut-off' points between functional and dysfunctional conceptualisations of distress. Methods such as 'A Reliable Change Index' are also proposed to operationalise the magnitude of change that has occurred during therapy (Christensen & Mendoza, 1986; Jacobson, Follette, & Revenstorf, 1986).

Adversarial Growth as theorized and operationalised by Joseph et al. (2012) is "consistent with the ambition of person-centred psychology to offer a non-medical positive psychological view of mental health" (Joseph, 2015, p. 182). As such Adversarial Growth offers a conceptualisation of recovery and functioning outside of medical language and diagnostic classification. Theoretically founded upon principles of well-being, the construct of Adversarial Growth and the created PWB-PTCQ measure offers a conceptualisation compatible with the 'potentiality model' of a person-centred approach (Joseph & Worsely, 2005). Within a dominant medical discourse of mental health, the effectiveness of an intervention is commonly assessed as to whether it facilitates reduction or clinically significant change in psychiatric disorders. Rather, Adversarial Growth and the measure used in this study assesses changes in an individual's assessment of their well being and functioning, outside of diagnostic categorisation. Beyond the removal of suffering, the

traditional goal of treatment based upon the medical model, this concept and measure looks beyond pathology and is instead interested in positive experiences, opportunities for growth and how individuals can move towards living life more fully after experiences of significant adversity (Joseph, 2004). To put it another way, the PWB-PTCQ measure adopted within this study embraces a different ontology to mainstream psychiatry and offers a counter to the medical notion of symptom reduction, instead prioritising a humanistic, growth-oriented view of experience. As such, the measures utilised within this study and the assessment of clinically significant change is ontologically incommensurate. Accordingly, the 'Psychological Well-Being-Post-Traumatic Changes Questionnaire' (PWB-PTCQ; Joseph et al., 2012), 'The Social Connectedness Scale-Revised' (Lee & Robbins, 1995), 'The Rosenberg Self-Esteem Scale' (Lee & Robbins, 1995), and 'The General Self-Efficacy Scale' (Schwarzer & Jerusalem, 1995) are not diagnostic or categorical in construction. As such, it would be problematic to assess the clinical significant change in 'social connectedness' for example, as the construct itself is not categorical in nature, lending to classification of what would be deemed 'functional' or 'dysfunctional' amounts of connectedness to others. In an effort to go "beyond statistical significance", yet in keeping with the philosophical foundations of the research and selected measures, this study analysed effect sizes to assess the magnitude of change (Page, 2014, p. 726).

However, the demerits of this approach are noted within the current psychological climate of 'evidence-based practice' and the dominant view of mental health encouraging effectiveness to be measured through a lens of psychopathology, clinical diagnoses and symptom reduction.

4.5 Theoretical Implications

4.5.1 Considering Positive Responses to Adversity.

Beyond a deficit-model of ill-health and recovery, this study provides further theoretical substantiation to the claim that reactions to adversity must take account of the potential for positive, as well as negative changes, if understandings are to be considered comprehensive (Linley & Joseph, 2004). Accordingly, this research aligns with the increasing focus in chronic health literature, such as within psycho-oncology research, on positive responses to the experiences of ill-health and the proposal that certain aspects of life, may not only recuperate but improve following health-related adversity (Dunn et al., 2009). Despite the suffering associated with aversive health experiences and the potential for psychological harm, this research study echoes the contentions of research papers, which demonstrate that individuals are capable of finding benefit, thriving and growing from such hardship (Crawford, Gayman, & Tracey, 2014; Love & Sabiston, 2011; Morris et al., 2014). While experiences of chronic disease may be extremely stressful and traumatic, Adventure Therapy intervention may help facilitate opportunities for transformation and the potential for personal growth (Love & Sabiston, 2011)

4.5.2 Conceptualising Adversarial Growth: Embodied Experiences of Growth.

A systematic review of qualitative research for Adversarial Growth and life-threatening illness identified fifty-seven academic articles (K. Hefferon et al., 2009). Along with the importance of Theme 5.2 ‘Capable Body’ in this study, K. Hefferon et al. (2009) identified ‘a new awareness of the body’ as a key theme in the synthesis of current literature for Adversarial Growth. The authors argue that the corporeal dimension of growth has been repeatedly overlooked by research in the field, and contend that the operationalisation of Adversarial Growth requires a new domain to account for revised awareness and appreciation for one’s body.

This contention for a revised awareness and appreciation for one's body for Adversarial Growth appears to be supported this research and by participant narratives for their rationales of positive transformation. In Theme 5.3 participants shared the helpful nature and transformational quality of engaging in experiences that enhanced their sense of having a 'Capable Body'. Narratives of participants, discuss the transformational experience of an embodied reappraisal of capability and of the corporeal experience of realising that their bodies were capable, and no longer sites of vulnerability and fragility. The Adventure Therapy intervention appears to provide participants with an opportunity to transform their self-concepts of health, through the use of their bodies in ways that confront and revise notions of inability that are commonly tied to health concerns. Thus, in consideration of theoretical implications, this study proposes that for young adults who have faced chronic illness, the corporeality and embodied experience of their changing bodies might be an important dimension of conceptualising and operationalising 'Adversarial Growth' (K. Hefferon, 2012).

4.5.3 Conceptualising Adversarial Growth: Process, Resource or Coping Strategy? Critical Reflections on Longitudinal Findings

Longitudinal findings for Adversarial Growth, may, however lend further evidence to current understandings and conceptualisation of Adversarial Growth within this specific population. There exists controversy within the literature as to whether Adversarial Growth represents an outcome, akin to well-being, in the aftermath of adversity or rather a resource and coping strategy for managing adversity, which in turn may lead to positive adjustment (Calhoun & Tedeschi, 1995; Davis et al., 1998). A possible explanation for these inconsistencies, may well be that Adversarial Growth not only influences well-being directly, but also buffers against further adversity by providing the individual with a greater sense of meaning, and in turn optimism, to continue facing the challenges that cancer may pose

(Harper et al., 2007). In this vain, individuals may be better able to accept the hardships and integrate the aversive elements of chronic illness, reinterpreting such experiences within a narrative of personal growth, consequently restoring a sense of security, personal agency and meaning in the hardships they currently face (Husson et al., 2017; Morrill et al., 2008). Some authors have proposed that Adversarial Growth may be best understood as a coping process at earlier stages of the health adversity, and an outcome at later stages (Helgeson et al., 2006).

4.6 Clinical Implications

4.6.1 Adventure Therapy: Facilitating Growth in the Face of Adversity.

The current research provides evidence to suggest that Adventure Therapy, as a novel psychological therapy, may provide an effective medium of support, outside of National Health Service practice and provide opportunities for young adults with experiences of chronic illness to ameliorate the psychosocial impacts of long-term ill-health and for such experiences, under the right conditions, to transform into experiences of growth (Calhoun et al., 2010).

Although experiences of chronic illness in early life can be extremely stressful and traumatic, it may also provide an opportunity for positive growth and adaptation, with the current study supporting research that demonstrates that individuals are capable of thriving, and surpassing previous levels of functioning that existed prior to their experiences of ill-health (Crawford, Holt, Vallance, & Courneya, 2015; Linley & Joseph, 2004; Love & Sabiston, 2011). Thus, as Odo and Potter (2009, p. 27) contend, “In spite of the losses, the sadness, the anger, and the confusion, young adult survivorship is potentially a period of significant growth, possibility, and hope”.

4.6.2 Potential Benefits of Enhanced Adversarial Growth.

When conceptualised as an outcome unto itself, a number of physical and mental health benefits have been associated with Adversarial Growth (Barskova & Oesterreich, 2009). Thus, in eight cross-sectional studies for people living with a serious medical condition, an inverse relationship has been found between Adversarial Growth measures and depression symptoms (Barskova & Oesterreich, 2009). This relationship has been found in samples of cancer patients and survivors (Ho, Chan, & Ho, 2004; Urcuyo, Boyers, Carver, & Antoni, 2005), persons living with HIV/AIDS (Milam, 2004; K. Siegel & Schrimshaw, 2007), and stroke survivors (Thompson, 1991). An inverse relationship between measures for Adversarial Growth and distress were also found for cancer survivors (Ho et al., 2004; Katz, Flasher, Cacciapaglia, & Nelson, 2001; Urcuyo et al., 2005), and persons living with multiple sclerosis (Pakenham, 2005a, 2005b). Therefore, a high level of Adversarial Growth seems to be related to favourable mental health outcomes, such as less pronounced depression and distress symptomology, with a directly positive predictive effect on mental health related quality of life (Barskova & Oesterreich, 2009; Husson et al., 2017). Moreover, the potential health-related benefits of fostering Adversarial Growth are vast, such as improved health-management (Luszczynska et al., 2007), and improved immuno-competence (Dunigan et al., 2007).

Research has further found that a positive correlation between individuals reporting high levels of Adversarial Growth and psychological well-being, particularly within domains of renewed purpose in life and sense of mastery (Ruini, Vescovelli, & Albieri, 2012). Such findings have important clinical implications, when considering the well-documented protective role of psychological well-being on physical and mental health (Ryff et al., 2006; Ryff & Singer, 2002; Ryff, Singer, Dienberg, & Love, 2004). Findings within this study for enhanced scores on the Psychological Well-Being Post-Traumatic Changes Questionnaire

(Joseph et al., 2012), might therefore support the assertion that greater psychological well-being might have a buffering effect when facing future stressful life events (Ruini et al., 2012; Silva, Moreira, & Cristina, 2012).

Research on the moderating impact of Adversarial Growth on health outcomes, also supports the clinical implication that this Adventure Therapy intervention may serve to facilitate continued physical and mental health improvements over time, through an indirect pathway of fostering more adaptive coping resources (Barskova & Oesterreich, 2009). Initial research has found that individuals who experience greater growth-related changes may alter their coping strategies towards more advantageous health behaviour (Barskova & Oesterreich, 2009). Accordingly, participant descriptions within Theme 3: 'Pushing Yourself in New Directions' echo this contention, with participants describing renewed health management strategies and an enhanced focus upon fostering psychological and physical well-being. Rather than view Adversarial Growth solely as an outcome unto itself, such findings provide support for understanding Adversarial Growth as a *process*, *resource* or *coping strategy* that aids AYAs psychosocial recovery in the aftermath of health-related adversity (Helgeson et al., 2006).

4.6.3 Engaging Hard-To-Reach Populations.

The proportions of gender were significantly different between the Adventure Therapy and control group conditions. Such findings may provide insight into a gendered preference for psychosocial support options for young adults who have faced chronic illness. Accordingly, the control condition was largely recruited through peer-support and online support forums for specific chronic health charities. These online spaces are advertised as digital support networks and community spaces to share information, advice and emotional support. It might be that these mediums better suits the psychosocial needs of females

looking for support. Conversely, the Adventure Therapy group had a higher percentage of male participants, perhaps, indicating that males with experiences of chronic health conditions prefer to access support services which are task-based that do not involve talking (online or in person) as the primary means of support.

Accordingly, research for male 'gender role conflict' contends that restrictive definitions of masculinity limit men's well-being and ability to engage in certain help-seeking activities (O'Neill, 2015). Research by Topkaya (2014) similarly found that males were more likely to have self-stigma about psychological difficulties, and that higher self-stigma was associated with more negative attitudes towards psychological help-seeking. Such findings are in line with previous research that contends that gender is a significant predictor in attitudes towards psychological help-seeking (Kakhnovets, 2011; Koydemir-Ozden, 2010). Thus, men with more western-traditional conceptions of masculinity may be reluctant to seek psychological support, a situation that places men at further risk of unresolved psychological difficulties (Good, Thomson, & Brathwaite, 2005). Given evidence to support men's underutilization of mental health services (Mackenzie, Gekoski, & Knox, 2006), the higher proportion of men accessing this Adventure Therapy intervention (53.33 per cent) may provide insight that Adventure Therapy may fill the gap in service provision for men who may traditionally shy away from accessing psychological help.

4.6.4 Critical Considerations and Ethical Implications

From a critical stance, longitudinal findings within this research may also provide credibility to contentions that growth after adversity for many may be illusory (McFarland & Alvaro, 2000). Rather than reflect actual growth, such voices critique that individuals may be motivated to cope with adversity by perceiving personal growth. As such, it is contended that individuals may inflate personal growth to help alleviate their own distress (McFarland &

Alvaro, 2000). Consequently, arguments have been made that Adversarial Growth may serve as a defence and possible denial of health-related adversity and the associated suffering (Tomich & Helgeson, 2004). Evidence for women with advanced breast cancer, does support this theory, with early Adversarial Growth predictive of negative affect nine-months later (Tomich & Helgeson, 2004). Given this study's non-significant longitudinal findings for Self-Esteem and Self-Efficacy, and mean scores returning to similar levels pre-intervention at six-month follow-up, the above argument may provide a way in which to understand such scores. As such, premature beliefs in perceived growth may lead to violated expectations and may lead to later distress, if significant health and psychosocial difficulties remain, which problematize early conceptions and personal narratives of 'growth'. However, contrasting evidence Carver and Antoni (2004) has also found that early Adversarial Growth was predictive of better quality of life, positive affect, and negatively predicted depression four to seven years later. Given that scores for Adversarial Growth and Social Connectedness marginally improve between three and six-month follow-up, perhaps these measures provide an insight into a trend towards increased scores over a longer period of time, with future studies requiring a longer-term approach in their measurement of growth and psychosocial functioning in order to explore this further.

Hypothesis three results, and observed interaction effects between intervention and control groups (Figure 3), may further be indicative of 'false hope' and may signify that young adults with experiences of significant health adversity are better off with treatment-as-usual. As such, this trend may give credit to hypotheses that Adventure Therapy interventions may be unhelpful, to the point of harmful, in providing individuals with unrealistic appraisals and overstated claims as to potential changes and growth. This may go some way towards explaining the large increase in measures scores post-intervention, and longer-term decline in scores. These results may also reflect Adventure Therapy research that has demonstrated

task-specific therapeutic changes. For instances Ewert (1990) found that enhanced scores for self-esteem within rock-climbing experiences did not transfer to more global feelings of self-esteem post-intervention. As such, it questions whether outcomes assessed within this research, namely, Adversarial Growth, Social Connectedness, Self-Esteem and Self-Worth translate outside of the specific and unusual therapeutic context in which it is based.

One critical aspect that may be of further consideration is the question of power, and the performances of power within therapeutic relationships on Adventure Therapy interventions. Within a high-risk, challenge-based environment, these interventions place individuals in positions of extreme need and dependency, in so doing, creating a great deal of power and responsibility within professionals (Mitten, 1994). Whilst personal empowerment is often a desired outcome of Adventure Therapy, the use of high-risk, adventure-based activities in the attainment of these goals, presents a conundrum. Being in novel, outdoor settings, away from supports and encountering challenge-based activities, has the possibility to enhance feelings of insecurity. This may result in accentuating the power difference inherently existent between therapeutic professionals and clients, and this sense of dependency may give leaders more power over the client than in traditional indoor, clinic-based interventions. As such, this line of critique calls attention to the dilemma of a therapeutic intervention which aims to foster empowerment, capability and independence, through therapeutic processes, relationships and settings that are constituent upon dependency and disempowerment. A common practice in Adventure Therapy is to contrive a situation where the perceived risks are greater than the objective risks (Gass et al., 2012). As a result, many of the activities, whether that is rock-climbing, abseiling, or ghyll scrambling, require a great deal of specialist equipment and knowledge about risk assessment. Consequently, participants are encouraged to trust in professionals that the setting is safe, in spite of their experience of feeling intensely fearful and unsafe. Within this exchange, the central paradox exists that the client must

engage in perceived risk "at the request of another person without enough information to determine, herself, whether the action is safe" (Mitten, 1994, p. 65). As such, there are notable ethical implications from a trauma-informed, and feminist line of inquiry.

As Crisp (1996) writes, it is surprising and perhaps concerns that ethical issues do not take a greater place within the literature and discussion of the field. Whilst the Therapeutic Adventure Professionals Group of the A.E.E. have developed a code of ethical practice (Association for Experiential Eduction, 1992), and two key texts include chapters on ethics (Davis-Berman & Berman, 1994; Gass et al., 2012), papers on the ethics of practice for Adventure Therapy are few and far between.

Perhaps, some of these issues may account for the longitudinal and interaction effects observed within this study and the contention that initial assessment of growth after the intervention may be illusory (McFarland & Alvaro, 2000). Conversely, longitudinal and interaction analyses are based upon a relatively small sample size with the significance and magnitude of findings impacted by a relatively few number of individuals. Without detailed circumstantial information at each point of data collection, it is not possible to know whether decline in scores may instead be due to the nature of chronic health difficulties and the cyclic nature of 'good' and 'poorer' health; systemic issues; or personal vulnerabilities and difficulties.

Accordingly, this research would recommend further longitudinal information for populations studied, as well as more detailed information about participants' health, and recovery throughout data collection, as well as larger sample sizes to account for individual variation in scores. These efforts may hope to address the effectiveness of the therapy and the contention itself as to whether such practices are a 'Therapy' by name and practice, merely

practices therapeutic in approach or perhaps simply the "specialist application of adventure activities" (Ringer, 1995, p. 3).

4.7 Future Research Recommendations

Replication with other Adventure Therapy interventions. The definition of Adventure Therapy has been a well-debated and contentious topic since the origins of its practice. Accordingly the International Adventure Therapy Committee recognise the difficulty of providing an exclusive definition to a therapeutic modality that is provided across countries, cultures, and political climates, and is provided to a diverse range of populations, with multi-disciplinary professionals trained in a myriad of therapeutic approaches (IATC, 2018). With such diverse practices, interventions appear diverse in their physical location, use of natural/urban spaces, social context, use of 'adventure' experiences, engagement with wider systems, staffing background and qualification, and therapeutic intentions (e.g. preventative in their approach or as applied for treatment). Given the specific needs of different populations, each programme is likely to be different and requiring careful adaptation. Thus, in order to substantiate any claims that Adventure Therapy, as a psychological modality, is effective in facilitating personal growth for young adults who have faced chronic illnesses, future recommendations are that additional Adventure Therapy interventions also investigate changes across time for Adversarial Growth in a British and international context.

Replication with Different Chronic Health Conditions. Furthermore, whilst this study has investigated the impact of attending an Adventure Therapy intervention for young adults with experiences of cancer or renal failure, future research is recommended to investigate the impact upon other chronic health conditions. Other highly prevalent chronic illnesses for this age group in Europe and North America are Asthma (Asthma UK, 2018), Diabetes (Diabetes UK, 2015), and Epilepsy (Young Epilepsy, 2018). Future research is recommended to investigate the suitability and effectiveness of Adventure Therapy to address the psycho-

social vulnerabilities of these populations and to assess whether such interventions may also help facilitate a process of personal growth. Such research might also benefit understandings and policy guidelines for best-practice by investigating whether experiences of particular diagnoses are associated with greater or lesser change in psycho-social competencies and personal growth following attendance at an Adventure Therapy intervention.

Current State of Health. It is also recommended that future studies look to investigate at what point of recovery and for whom Adventure Therapy is most effective. Given the diversity in years since chronic illness onset in this research, and diversity in self-assessments of current state of health, future research would benefit by investigating whether Adventure Therapy is most suitable and effective for those with more recent or distal experiences of chronic illness.

Longitudinal and Experimental Recommendations. In order to further substantiate claims, it is recommended that future studies look to assess changes in Adversarial Growth and dependent variables across a longer period of time. Results from this study demonstrate an acute large effect for Adversarial Growth and Social Connectedness, followed by a small but non-significant reduction in the effect at 3-month follow-up. Scores for both measures, however, demonstrate increases between three and six-month follow-up. Thus, it is recommended that future studies look to observe this trend across a longer period of time. It is also recommended that a larger sample size is recruited to both conditions. While sufficiently powered, longitudinal findings (6-month) for Adversarial Growth are hypothesised to not be statistically significant to baseline to due a large standard deviation of scores. It is also recommended that future studies adopt an experimental design akin to a Stepped Wedge Trial Design (Brown & Lilford, 2006). Such a design would involve sequential roll-out of the intervention to all participants over a number of time points, and would allow the order in which participants receive the intervention to be determined at

random. Such recommendations are made on the basis of ethical considerations, with this design particularly relevant where the intervention is predicted to be of greater good than harm, as well as interpretative recommendations. In the current research study, experimental procedures meant that causation could not be inferred from the results.

Dose Effect. There is also limited research into a 'dose effect' of Adventure Therapy for this population. Findings from this study possibly indicate the need for the intervention to provide further social support at periodic intervals post-intervention to maintain the large effects at post-intervention in participants' sense of belonging. As such, recommendations for further research should include the investigation of the beneficial effects of routine 'refresher' weekend programmes on participant's scores and experiences of growth in the face of adversity.

4.8 Conclusions

In conclusion, this study contributes new and novel findings to an emerging field of research. A mixed-method, longitudinal, quasi-experimental design provides evidence for the contention that Adventure Therapy may help facilitate growth in the face of adversity for young adults who have experienced chronic illness. Beyond a model of resilience and recovery, findings support research for Adversarial Growth, which argues that highly aversive life events may not be uniformly associated with maladjustment but instead may be opportunities for personal growth, benefit-finding and thriving. Accordingly, this study found that participants attending the Adventure Therapy intervention had statistically significant improvements in Adversarial Growth, Social Connectedness, Self-Esteem and Self-Efficacy, with large effect sizes pre-post intervention. A longitudinal effect, over three months was also found for Adversarial Growth, with the experimental design demonstrating a significant interaction between group and time for Adversarial Growth and other psychosocial dependent variables. Further findings provide initial evidence to suggest that Adversarial Growth for

this sample did not occur over time, as a natural process of recovery, but instead only occurred when facilitated by the researched Adventure Therapy intervention. Mixed-method findings also provide complementary evidence for participants' experiences of change and positive transformation, as well as insight into some of the possible rationales for change, with the importance of 'The Group', 'You Can Overcome Adversity', and 'A Safe Space to Deal with Fears', evident in participants' narratives.

Conversely, longitudinal comparison with a control group raise queries as to whether the assessed intervention is a help or hindrance in the process of recovery and growth from experiences of chronic illness. Results query whether Adventure Therapy interventions may provide individuals with unrealistic appraisals of change, and that longitudinal findings may provide credibility to contentions that growth after adversity for many may be illusory. Further research is required to examine longitudinal changes and to better understand the process of recovery with a population for whom their health and self-appraisals of recovery are tied with a cyclic notion of 'good' and 'poorer' health.

These findings have important theoretical implications, such as reconceptualising how we understand Adversarial Growth, as an embodied, phenomenological experience, as well as clinical implications in how we as clinicians should meet our clients and their needs. Rather than be satisfied with the reduction of distress and 'psychopathology', these findings provide substantiation to claims that individuals are capable of growth, not just recovery, following highly aversive life events. With United Kingdom policy guidelines acknowledging the limits of current service provision to support the psychosocial effects of chronic illness during adolescence and young adulthood, this research provides initial evidence to claim that Adventure Therapy, as a psychotherapy, may provide this population with the right conditions in which to achieve personal growth, and thrive 'outside of the clinic'.

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Appendix A: The Psychological Well-Being – Post-Traumatic Changes Questionnaire (PWB-PTCQ; Joseph et al., 2012).

Stage (T1-4): Name:_____ Group:

Please complete the following 4 questionnaires. There is no right or wrong answer. Complete with what feels right for you at this moment in time. They should take 5-15 minutes to complete.

The Psychological Well-Being – Post-Traumatic Changes Questionnaire (PWB-PTCQ; Joseph et al., 2012).

Circle the answer that shows how much you think you have changed as a result of your experience of cancer and/or renal issues.

	Much more so now	A bit more so now	I feel the same about this as before	A bit less now	Much less so now
1. I like myself	5	4	3	2	1
2. I have confidence in my opinions.	5	4	3	2	1
3. I have a sense of purpose in life.	5	4	3	2	1
4. I have strong and close relationships in my life.	5	4	3	2	1
5. I feel I am in control of my life.	5	4	3	2	1
6. I am open to new experiences that challenge me.	5	4	3	2	1
7. I accept who I am, with both my strengths and limitations.	5	4	3	2	1
8. I don't worry what other people think of me.	5	4	3	2	1
9. My life has meaning.	5	4	3	2	1
10. I am a compassionate and giving person.	5	4	3	2	1
11. I handle my responsibilities in life well.	5	4	3	2	1
12. I am always seeking to learn about myself.	5	4	3	2	1
13. I respect myself.	5	4	3	2	1
14. I know what is important to me and will stand my ground, even if others disagree.	5	4	3	2	1
15. I feel that my life is worthwhile and that I play a valuable role in things.	5	4	3	2	1
16. I am grateful to have people in my life who care for me.	5	4	3	2	1
17. I am able to cope with what life throws at me.	5	4	3	2	1
18. I am hopeful about my future and look forward to new possibilities.	5	4	3	2	1

Appendix B: The Social Connectedness Scale – Revised (Lee & Robbins, 1995).

The Social Connectedness Scale (Lee & Robbins, 1995)

Circle the answer that shows how much you agree or disagree with each of the following statements.

1. I feel disconnected from the world around me.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6
2. Even around people I know, I don't feel that I really belong.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6
3. I feel so distant from people.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6
4. I have no sense of togetherness with my peers.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6
5. I don't feel related to anyone.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6
6. I catch myself losing all sense of connectedness with society.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6
7. Even among my friends, there is no sense of brother/sisterhood.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6
8. I don't feel that I participate with anyone or any group.	Strongly Agree 1	2	3	4	5	Strongly Disagree 6

Appendix C: The Rosenberg Self-Esteem Scale (M. Rosenberg, 1965).

Stage (T1-4): Name:_____ Group:

Rosenberg Self-Esteem Scale (Rosenberg, 1965)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

1. On the whole, I am satisfied with myself.	Strongly Agree	Agree	Disagree	Strongly Disagree
2. At times I think I am no good at all.	Strongly Agree	Agree	Disagree	Strongly Disagree
3. I feel that I have a number of good qualities.	Strongly Agree	Agree	Disagree	Strongly Disagree
4. I am able to do things as well as most other people.	Strongly Agree	Agree	Disagree	Strongly Disagree
5. I feel I do not have much to be proud of.	Strongly Agree	Agree	Disagree	Strongly Disagree
6. I certainly feel useless at times.	Strongly Agree	Agree	Disagree	Strongly Disagree
7. I feel that I'm a person of worth, at least on an equal plane with others.	Strongly Agree	Agree	Disagree	Strongly Disagree
8. I wish I could have more respect for myself.	Strongly Agree	Agree	Disagree	Strongly Disagree
9. All in all, I am inclined to feel that I am a failure.	Strongly Agree	Agree	Disagree	Strongly Disagree
10. I take a positive attitude toward myself	Strongly Agree	Agree	Disagree	Strongly Disagree

Appendix D: The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995).

General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how 'True' you believe each statement to be.

1. I can always manage to solve difficult problems if I try hard enough	Not at all true	Hardly true	Moderately true	Exactly true
2. If someone opposes me, I can find the means and ways to get what I want.	Not at all true	Hardly true	Moderately true	Exactly true
3. It is easy for me to stick to my aims and accomplish my goals.	Not at all true	Hardly true	Moderately true	Exactly true
4. I am confident that I could deal efficiently with unexpected events.	Not at all true	Hardly true	Moderately true	Exactly true
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	Not at all true	Hardly true	Moderately true	Exactly true
6. I can solve most problems if I invest the necessary effort.	Not at all true	Hardly true	Moderately true	Exactly true
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	Not at all true	Hardly true	Moderately true	Exactly true
8. When I am confronted with a problem, I can usually find several solutions.	Not at all true	Hardly true	Moderately true	Exactly true
9. If I am in trouble, I can usually think of a solution	Not at all true	Hardly true	Moderately true	Exactly true
10. I can usually handle whatever comes my way.	Not at all true	Hardly true	Moderately true	Exactly true

Appendix E: Recruitment Poster for Control Group

University of Essex

RESEARCH INTO YOUNG PEOPLE'S EXPERIENCES OF ILL-HEALTH

Are you 18-30?
Have you experienced cancer or kidney failure?

We would like to hear from you. We need your experiences to understand how different support options help people in their journey of recovery.

What would I do? You would be asked to complete 4 simple questionnaires on four different occasions over a 6 month period. The questionnaires will take 5-15 minutes to complete.

If you choose to participate, you will be entered into a lottery to win a £50 Amazon voucher.

For more information or to volunteer for this study
please visit goo.gl/5Z8Q88 or contact the researcher
Matthew Slavin Tel: 07979 515 811 E: ms16029@essex.ac.uk

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Appendix F: Focus Group Semi-Structured Interview Protocol

Welcome / Introductions

- Introduce myself
- Introduce topic and two key discussion points
    - Impact of intervention as related to your experience of ill-health
    - Understanding why intervention has been helpful or unhelpful
- Recruitment criteria
- Guidelines for Focus Group
- Review consent and consent for recording
- Room for questions
- Round of introductions

Topic Guide

Topic 1: Impact of Adventure-Based Therapy

- Experiences of Adventure-Based Therapy
    - *What was it like to go on *The Intervention**
    - *What do you remember the most from *The Intervention**?

- Identifying Changes
    - *How are things different than before?*
    - *Are you aware of any changes you've noticed in yourself from going on the programme (positive or negative?)*
    - *In what ways was it helpful or unhelpful?*
    - *Did you notice any changes in yourself in the period before / during / after *The Intervention**
        - *What would those who know you best say about changes they would have noticed before / during /after *The Intervention**?

- Pre-morbid difficulties
    - *If you didn't go on *The Intervention*, what would have been the problem with things continuing as they were?*

Topic 2: Rationales of Change

- Rationales
    - *What was it about *The Intervention* that accounted for change?*
    - *Most important thing? (that helps bring about change)*
    - *Most important ingredient? (recipe metaphor)*

- Process questions (use as prompts throughout)
    - *E.g. How would you explain this change?*

- Meaning of change
    - *What does this change (or lack or change) mean to you?*

Group Facilitation Questions

- *Similarities / Differences?*

Ending(s)

- Review
- Any further comments?
- Debrief

Appendix G: Ethical Approval by the School Ethics Representative on behalf of the Faculty Ethics Committee

20 July 2017

MR M. SLAVIN

[redacted]

Dear Matthew,

Re: Ethical Approval Application (Ref 16075)

Further to your application for ethical approval, please find enclosed a copy of your application which has now been approved by the School Ethics Representative on behalf of the Faculty Ethics Committee.

Yours sincerely,

Lisa McKee

Ethics Administrator

School of Health and Human Sciences

cc. Research Governance and Planning Manager, REO

Supervisor

Appendix H: Ethical Amendment Request Approval

Ethics Approval: Amendment Request

Name: Matthew Slavin

Date: 21/05/2018

Signature:

Study Details

Re: Ethical Approval Application (Ref 16075)

Project Title: "Thinking outside the clinic: The impact of an Adventure Therapy programme in the promotion of post-traumatic growth"

Course: Doctorate in Clinical Psychology

Description of Amendment:

- Qualitative Data Collection: In addition to the use of focus group, I wish to also have the possibility to conduct individual interviews with participants.
- Recruitment of Control Group for Questionnaire Completion: In order to increase the number of control group participants who complete quantitative questionnaires, I would like to extend the method by which I share information about the study. [redacted]Regional Forums be willing, I would like to use their social media platforms as a way to share invitations to this study. In this respect, I have made a website, which charities can share links to in their social media accounts. The website contains information about the study, the principle investigator, contact details and links to participate. https://experiencesofrecovery.wordpress.com I would also like to extend my recruitment beyond [redacted] to further charities that work with young adults who have experienced cancer or renal failure during childhood and adolescence.

Reason for Amendment:

Qualitative Data Collection: Within my proposal, I highlighted two opportunities to conduct focus groups where young adults who have participated in the outdoor programme return for a 'refresher' weekend. These 'refresher' weekends have had limited uptake, with many attendees not meeting inclusion criteria for my study (such as attending[redacted] experiences other than ill-health). While I have one focus group that will run in May, I wish to have the opportunity to conduct individual

Appendix H: Ethical Amendment Request Approval (page 2 of 3)

interviews, as I can foresee that a second focus group will be very difficult to establish practically. Participants live across the breadth of the United Kingdom, and it has proven very difficult logistically to arrange. I believe that interviews will provide participants with greater opportunity to share their experience of this programme. In an effort to ensure that participants are provided with a medium that causes minimum disruption to their schedule, I propose to conduct interviews by Skype and telephone. In order to ensure that data is stored securely, a Dictaphone will be used to record an audio file of Skype conversations and telephone calls. On completion of interviews, audio files will be transferred immediately to a password-protected computer for purposes of analysis. The file will be stored in an Encrypted Folder, which is further password-protected. Audio files on the Dictaphone will then be deleted. The data collected will be reviewed every 5 years in line the British Psychological Society's data retention policy.

Should face-to-face interviews be preferred, and should it prove logistically possible for me to travel within work-demands, then I will consider this option above remote contact. Interviews will be recorded using a Dictaphone and transferred to a password-protected computer at the end of interview for purposes of analysis. The file will be stored in an Encrypted Folder, which is further password-protected. Audio files on the Dictaphone will then be deleted. The data collected will be reviewed every 5 years in line the British Psychological Society's data retention policy.

The location of interviews will need careful consideration of individual context, the participants' needs and risk assessment. Prior to conducting face-to-face interviews, I will discuss these consideration factors with supervisors to ensure that both myself and the participant remains physically and emotionally safe, and that confidentiality and anonymity are carefully considered.

Consent Forms: Please find attached in this email an information sheet, consent form and debriefing form for interviews, which should meet current REO requirements.

Recruitment of Control Group: I have had limited success in recruitment through the [redacted] Despite their access to a large number of young adults who would meet inclusion criteria, the current method of recruitment is limited to the individual enthusiasm of [redacted] Co-ordinators and their ability to hold this project in mind, and signpost to posters within clinic settings. This method of recruitment resulted in 9 participants completing questionnaires across a 6-month period. In order to achieve sufficient power for analysis, I am aiming to recruit >50 participants. The ability to use social media, beyond paper posters, I believe will provide greater exposure to potential participants. If approved, I would ask [redacted] to post information about the study on their regional social media forums. In order to provide greater transparency and a central point for full information about the study, I have also developed a website which contains information about the study, the principle investigator, contact details and links to participate. I would also like to extend my recruitment beyond [redacted] to further charities that work with young adults who have experienced cancer or renal failure during childhood and adolescence. If charities are willing, I would also like to

Appendix H: Ethical Amendment Request Approval (page 3 of 3)

use their social media platforms as a way to share invitations to this study. In order to ensure a representative control group, I would also look to discuss recruitment via renal charities, such as [redacted], and cancer charities such as [redacted] also like to use social media (Twitter) to share information about the study, so that young adults who are not in receipt of emotional and practical support from services, are allowed the opportunity to participate and share their experience.

Consent for participants in the control group is gained through the online questionnaire (reviewed and approved in initial ethical application), and as such, I have not included a separate consent form.

Consent for participants in the intervention group. Forms for 2018 programmes have been printed and provided to the programme for use over 3 intervention programmes during Summer 2018. These printed info sheets, consent forms, and debriefing forms were reviewed and approved in initial ethical application.

(For office use only)

The amendment has been approved ☑

The amendment has not been approved ☐

Resubmission required ☐

Signature: [redacted]

Name (in block capitals): [redacted]

Department: HSC

Date: 12/6/18

Appendix I: Participant Information Sheet for Intervention Group

University of Essex

Study Information for intervention group

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

Invitation

My name is Matthew Slavin, and I'm currently completing a Doctorate in Clinical Psychology with the University of Essex. Ahead of your involvement in a [redacted]t programme, I am inviting you to participate in a research project. This research will be used in part fulfillment of my Doctoral qualification, as well as future publication.

Before you decide to provide consent, it is important for you to understand why the research is being done and what it will involve.

- Your participation in this study is entirely voluntary (your choice). You do not have to take part in this study, and do not have to provide a rationale if you do not wish to participate.

I am more than happy to answer any questions about the study. Please feel free to speak with me in person before deciding to take part, or after should you have any further questions. I have also provided contact details if I am not on the programme with you. Thank you for reading this.

What is the purpose of the study?

This study aims to examine the impact of participation in a [redacted] adventure programme. More specifically, it will examine changes in 'Adversarial Growth' scores for individuals who have experienced health-challenges related to cancer or renal complications. A full copy of the research will be made available in Autumn/Winter 2019.

What will participation involve?

This study involves completion of 4 questionnaires, which should take 5-15 minutes, at several time points; 1) At the start and end of the [redacted] Programme 3) 3-month follow up, 4) 6-month follow up. You may complete these questionnaires online or, if you wish, we can provide you with paper copies with freepost return address, so than you incur no costs.

There will also be the option to attend an hour focus group at the [redacted]t 'refresher' weekend if you are in attendance and are interested in this additional involvement.

Participants who complete questionnaires across all time points will be entered into a prize draw. One young person will be selected at random to receive a £50 Amazon voucher.

What are the risks of this study?

We deem there to be minimal risks involved in the study. The project has adhered to British Psychological Society ethical guidelines, and has been subject to the University of Essex's ethics review. All information collected, will be kept strictly confidential and anonymous for the purpose of this study. In any reporting, we will ensure that your name will not be used and you will not be identified. The data collected will be reviewed every 5 years in line the British Psychological Society's data retention policy.

Principal Researcher Mr. Matthew Slavin Phone: [redacted]
Email:

Academic Supervisor [redacted] Email:
Academic Supervisor Email:

Appendix J: Participant Information Sheet for Control Group

Accessed Online at Essex Qualtrics Software:

https://essex.eu.qualtrics.com/jfe/form/SV_7P76lCl1ToFSNff

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

Invitation
My name is Matthew Slavin, and I'm currently completing a Doctorate in Clinical Psychology with the University of Essex. I am inviting you to participate in a research project. This research will be used in part fulfilment of my Doctoral qualification, as well as future publication.

Before you decide to provide consent, it is important for you to understand why the research is being done and what it will involve.

- Your participation in this study is entirely voluntary (your choice). You do not have to take part in this study, and do not have to provide a rationale if you do not wish to participate.

I am more than happy to answer any questions about the study. Please do not hesitate to get in touch, using the contact details provided below. Thank you for reading this.

What is the purpose of the study?
This study aims to understand how different support options help people in their journey of recovery from cancer and/or renal complications. More specifically, it will examine changes in 'Adversarial Growth' scores for individuals who have or have not attended an Adventure-Based Therapy. A full copy of the research will be made available in Autumn/Winter 2019.

What will participation involve?
This study involves completion of 4 questionnaires, which should take 5-15 minutes, at several time points; 1) Baseline, 2) 5 days later, 3) 3-months later 4) 6-months later. You may complete these questionnaires online or, if you wish, we can provide you with paper copies with freepost return address, so than you incur no costs. Participants who complete questionnaires across all time points will be entered into a prize draw. One young person will be selected at random to receive a £50 Amazon voucher.

What are the risks of this study?
We deem there to be minimal risks involved in the study. The project has adhered to British Psychological Society ethical guidelines, and has been subject to the University of Essex's ethics review. All information collected, will be kept strictly confidential and anonymous for the purpose of this study. In any reporting, we will ensure that your name will not be used and you will not be identified. The data collected will be reviewed every 5 years in line the British Psychological Society's data retention policy.

Principal Researcher Mr. Matthew Slavin Phone: [redacted]

Academic Supervis [redacted]

Academic Supervisor [redacted]

Appendix K: Participant Information Sheet for Focus Group

University of Essex

Study Information Invitation

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

My name is Matthew Slavin, and I'm currently completing a Doctorate in Clinical Psychology with University of Essex. I am inviting you to participate in a research project. This research will be used in part fulfillment of my Doctoral qualification, as well as future publication.

- Your participation in this study is entirely voluntary (your choice). You do not have to take part in this study, and do not have to provide a rationale if you do not wish to participate.

I am more than happy to answer any questions about the study. Please feel free to speak with me in person before deciding to take part, or after should you have any further questions. Thank you for reading this.

What is the purpose of the study?
This study aims to examine the impact of participation in [redacted] enture programme. More specifically, it will explore experiences of [redacted] individuals who have experienced health-challenges related to cancer or renal complications. A full copy of the research will be made available in Autumn/Winter 2019.

What will participation involve?
It will involve an ho[redacted]up. The focus group or 'group interview' will explore what it was like to attend a [redacted]programme and Club activities. It will be recorded and I will transcribe what was spoken about. This will form part of my Doctoral theses.

Participants who complete the focus group will be entered into a prize draw. One person will be selected at random to receive a £50 Amazon voucher.

What are the risks of this study?
We deem there to be minimal risks involved in the study. The project has adhered to British Psychological Society ethical guidelines, and has been subject to the University of Essex's ethics review. All information collected, will be kept strictly confidential and anonymous for the purpose of this study. In any reporting, we will ensure that your name will not be used and you will not be identified. The data collected will be reviewed every 5 years in line the British Psychological Society's data retention policy.

Principal Researcher Mr. Matthew Slavin [redacted]
Pho[redacted]
Ema[redacted]
Academic Supervisor [redacted]
Ema[redacted]
Academic Supervisor [redacted]
Ema[redacted]

Appendix L: Consent Form for Intervention Group

University of Essex

Consent Form for Questionnaire Completion

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

Contact Details:

Principal Researcher	Mr. Matthew Slavin	[redacted]

Please Initial:

- I confirm that I have read and understood the information sheet for the above study designed to examine the impact of participation in a [redacted] adventure programme. I have had the opportunity to ask questions and am satisfied with the answers I have been given. ☐
- I understand that my participation is voluntary and that I am free to withdraw at any time, without penalty. ☐
- I understand that my responses will remain confidential and anonymous. ☐
- I understand that the study complies with ethical regulations specified by the British Psychological Society. ☐
- I understand that I can contact the principal researcher for this project to receive more information ☐
- I consent to being contacted regarding completion of follow-up questionnaires at 5 days, 3-months and 6-months after programme completion ☐

- I would like to complete follow-up questions via (Please circle);

Online questionnaire or **Hard Copy (freepost)**

'I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and give consent to participate in this study.'

Please complete either your ***email or home address*** so that we can contact you for follow-up questionnaires.

Full Name _____

Address _____

_____

_____

Email Address _____

Signature _____ Date _____

Appendix M: Consent form for Control Group

Consent Form for Control Group Completion
Accessed Online at Essex Qualtrics Software:
https://essex.eu.qualtrics.com/jfe/form/SV_7P76lCl1ToFSNff

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

Please Tick:

- I confirm that I have read and understood the information sheet for the above study designed to examine the impact of participation in [redacted] adventure programme. ☐
- I understand that my participation is voluntary and that I am free to withdraw at any time, without penalty. ☐
- I understand that my responses will remain confidential and anonymous. ☐
- I understand that the study complies with ethical regulations specified by the British Psychological Society. ☐
- I understand that I can contact the principal researcher for this project to receive more information ☐
- I consent to being contacted regarding completion of follow-up questionnaires at 5 days, 3-months and 6-months after programme completion ☐
- I have had all my questions answered to my satisfaction, and give consent to participate in this study ☐

- I would like to complete follow-up questions via;

Online questionnaire or **Hard Copy (freepost)**

Please provide your *email address* so that we can contact you for follow-up questionnaires & enter you into the prize-draw.

Email Address

_____

Appendix N: Consent Form for Focus Group

University of Essex

Consent Form for Focus Group

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

Contact Details:

Principal Researcher	Mr. Matthew Slavin	[redacted]

Please Initial:

- I confirm that I have read and understood the information sheet for the above study designed to examine the impact of participation in [redacted] adventure programme. I have had the opportunity to ask questions and am satisfied with the answers I have been given. ☐
- I understand that my participation is voluntary and that I am free to withdraw at any time, without penalty. ☐
- I understand that my responses will remain confidential and anonymous. ☐
- I understand that the study complies with ethical regulations specified by the British Psychological Society. ☐
- I understand that I can contact the principal researcher for this project to receive more information ☐
- I confirm that I am happy for the focus group to be audio recorded ☐

'I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and give consent to participate in this study.'

Full Name _____ Email Address _____

Signature _____ Date _____

Appendix O: Debrief Form for Questionnaire Battery Completion

University of Essex

Debriefing Form for Questionnaire Completion

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

Contact Details:

Principal Researcher	Mr. Matthew Slavin	[redacted]

This study aims to examine and build a theory of change for 'Adversarial Growth' among young adult cancer and renal failure survivors who have participated in a UK-based outdoor adventure programme. Several 'Adventure Therapy' programmes have been introduced to the United States, with initial research suggesting a number of psychosocial benefits demonstrated upon programme completion. This study looks to extend the current evidence and establish the impact of attend a 5-day residential programme w[redacted] In so doing, this research project aims to evaluate the potential benefits of 3rd sector involvement for psychological rehabilitation of cancer and renal failure survivors in the United Kingdom.

We invited young people who have experienced significant ill-health to complete four questionnaires. We will get in touch via your chosen method of communication in 5 days, 3 months time, and at 6 months time. Please complete the follow up questionnaires as fully as possible and return via the online submission or by hardcopy and freepost return envelope.

As explained, all collected information, will be kept strictly confidential and anonymous for the purpose of this study. In addition, you will be responses will be quoted in a way that is mindful of your privacy to ensure anonymity in reporting. The data will be analysed and will serve as the results of thesis for a Doctorate in Clinical Psychology, as well as future academic publication(s).
Should this study raise any concerns you would like to talk about, you might wish to speak with support staff from [redacted] our relevant contact at the [redacted] rust. Alternatively, you could contact the following organisations:

https://www.cancerresearchuk.org/about-cancer/cancer-chat
http://www.kidney.org.uk/helpline

Once again, thank you for your participation in this study. If you have further questions, please feel free to contact myself, Matthew Slavin on the contact details provided.

Appendix P: Debrief Form for Focus Group

University of Essex

Debriefing Form for Focus Group Completion

"Thinking Outside the Clinic: The Impact of an Adventure-Based Therapy Intervention on Adversarial Growth for Young Adults with Experiences of Chronic Illness"

Contact Details:

Principal Researcher	Mr. Matthew Slavin	[redacted]

This study aims to examine and build a theory of change for 'Adversarial Growth' among young adult cancer and renal failure survivors who have participated in a UK-based outdoor adventure programme. Several 'Adventure Therapy' programmes have been introduced to the United States, with initial research suggesting a number of psychosocial benefits demonstrated upon programme completion. This study looks to extend the current evidence and establish the impact of attending a 5-day residential programme wit[redacted] In so doing, this research project aims to evaluate the potential benefits of 3rd sector involvement for psychological rehabilitation of cancer and renal failure survivors in the United Kingdom.

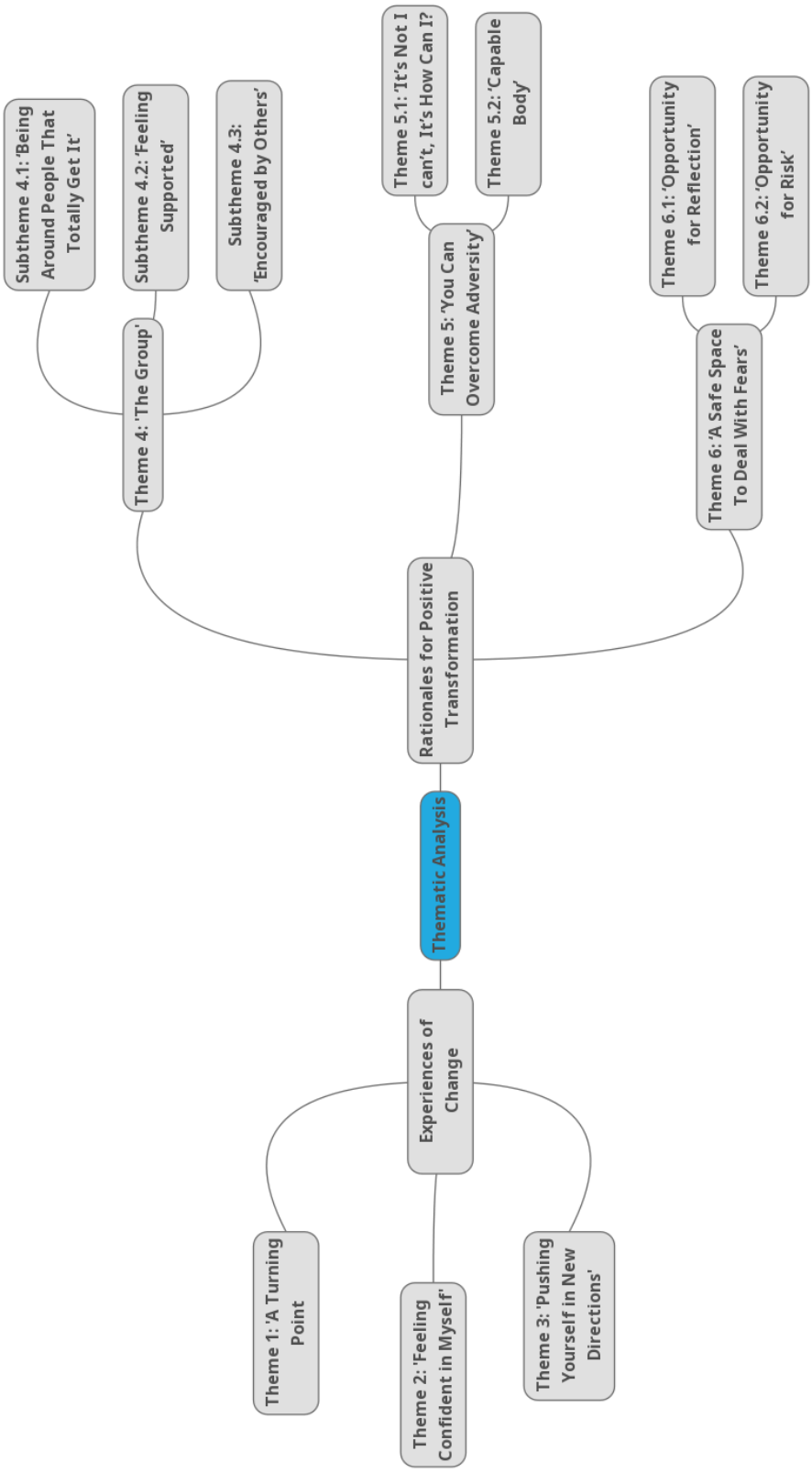
We invited young people who have attended a [redacted] group and experienced significant ill-health to participate in a focus group. The conversation will be transcribed verbatim (written out in full) and analyzed. Analysis will seek to understand your individual experiences and will explore why individuals found [redacted] to be a help or hindrance to you reclaiming your life following significant ill-health.

As explained, all collected information, will be kept strictly confidential and anonymous for the purpose of this study. In addition, your responses will be quoted in a way that is mindful of your privacy to ensure anonymity in reporting. The data will be analysed and will serve as the results of thesis for a Doctorate in Clinical Psychology, as well as future academic publication(s).
Should this study raise any concerns you would like to talk about, you might wish to speak with support staff from [redacted] or your relevant contact at the [redacted]. Alternatively, you could contact the following organisations:

https://www.cancerresearchuk.org/about-cancer/cancer-chat
http://www.kidney.org.uk/helpline

Once again, thank you for your participation in this study. If you have further questions, please feel free to contact myself, Matthew Slavin on the contact details provided.

Appendix Q: Mind Map of Themes



Appendix R: Mind Map of Themes and Constituent Codes