A Randomised Controlled Trial of Integrative Cognitive Behavioural Therapy for Patients with Alopecia Areata: A Pilot Study

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DECLARATION

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PREFACE

This doctoral portfolio consists of three elements: The Research Thesis, The Client Study and Process Report and the Publishable Paper. These three elements of the portfolio all reflect the process, therapeutic work, my interests and the training that I have undertaken to become a counselling psychologist. These elements of the portfolio also reflect the identity I have developed as a counselling psychologist and the continued evolvement of my identity, therapeutic approach and interest in the field of counselling psychology and in particular in clinical health psychology. The identity of the counselling psychologist is one that combines the researcher and the practitioner and the three components in this portfolio highlight these two adjacent roles and therefore reflect my journey as a counselling psychologist. While the three elements that make this portfolio are distinct pieces of work and highlight my personal and professional development, they also have underlying themes that bridge between them.

The main theme which joins these components together is the study and exploration of the psychodermatology field within the field of counselling psychology. The field of psychodermatology strongly emphasises and focuses on the connection between the mind and the body which is a consistent and prominent theme within and across this portfolio. The theme of psychodermatolgy has been firmly explored within the field of counselling psychology and therefore from a counselling psychology lens and perspective.

Another underlying theme is the psychological difficulties of managing the skin condition: Alopecia Areata (AA) and psychological therapy for people with AA. This theme is bridged across the components of the portfolio by addressing and reflecting on the issues presented for people with AA, from a holistic, biopsychosocial and counselling psychology view point, while also implementing and evaluating a psychological intervention for people with AA. This theme is prominent throughout the portfolio, by presenting and considering the

psychological and physical difficulties presented for people with AA and the impact and effectiveness of the psychological intervention on these presenting difficulties.

The final bridge that exists between all three components of this portfolio is the elements of therapeutic and reflective work as a counselling psychologist. These themes are the foundation and underpinning of this research and portfolio. The foundation of this portfolio and all three components are bridged together by the therapeutic work that has been presented, explored and evaluated within this portfolio. The therapeutic work as a counselling psychologist is a prominent theme within the portfolio due to the intervention that has been created, devised and implemented from a counselling psychology perspective. The effectiveness of the therapeutic work was investigated by the research project and the case study presented reflected upon the intervention within a counselling psychology perspective. The three components of this portfolio are each detailed below in further depth.

Part A: The Research Project

The research project presented in this portfolio investigated the effectiveness of a psychological intervention for people with AA. The study was implemented as a pilot study involving a randomised controlled trial. The psychological intervention that was offered in this trial incorporated Cognitive Behavioural Therapy (CBT) as the foundation therapeutic modality combined with the theories and approaches from Narrative Therapy and Mindfulness.

The aim of the study was to establish whether there were found to be significant difference in psychological and physical symptoms associated with AA for people who received the intervention, compared to a waiting list control group. To investigate the psychological symptoms associated with AA, anxiety, depression, stress and quality of life were measured. For the physical symptoms, a scalp assessment, blood testing (thyroid functioning and Ferritin) and medical photography were implemented. The data was collected at the beginning of the trial and following the 12-week individual psychological intervention

or following a 12-week waiting period. The trial was a pilot study and therefore 15 participants took part in the study. The data was analysed using a mixed analysis of variance analysis to compare the two groups from the initial assessment and 12-week assessment.

The findings of this research project revealed that the intervention group significantly improved in psychological measures of quality of life and depression in comparison to the control group who were found to worsen on these measures from the initial assessment to the 12-week assessment. Additionally it was found that participants in the intervention group experienced significantly less hair loss compared to the participants in the control group who experienced significantly worsened hair loss. Lastly, participants in the intervention group reported significantly less distress experienced by the condition in comparison to the control group who experienced greater distress at the 12-week assessment.

To the researchers' knowledge, this research is the first randomised controlled trial to date to implement a psychological intervention for people with AA. Previous researchers have investigated the effectiveness of psychological interventions for people with a range of other similar psychodermatological conditions and found psychological and physical improvements (Lavda et al., 2012). This research extends the current literature, address a crucial gap in our knowledge, and has essential clinical implications and important considerations for future researchers.

Part B: Combined Process Report and Case Study

In this report I present my work with one client, Julie (all names have been anonymised for confidentiality purposes) who participated in the research trial presented in this portfolio. I worked with this client using the Integrative Cognitive Behavioural Therapy approach to support her with her skin condition of Alopecia Areata. Throughout this report I explore my challenges of working in a structured therapeutic approach and my dual role of a researcher

and psychologist within the research trial. The case study presents the intervention implemented within the research study and the practice of counselling psychology. This case study was chosen to demonstrate the challenges I experienced in the therapeutic work due to feeling that I was required to stick to a set agenda but also wanting to be flexible to allow for Julie's reflections and explorations, which I felt were vital for Julie.

During the chosen segment, we explore her difficulties of emotional expression and emotional regulation. This led to an important link with her communication and relationship with me which strongly linked to the challenges I experienced. I felt that this segment highlighted key challenges within the therapy and the project which felt meaningful to explore for my understanding and development within the project, for my relationship with Julie and for my development as a psychologist. This report also highlights the integrative approach implemented in the research project and the ways that Julie was supported by this integrative therapeutic modality.

Part C: Publishable Paper

This section of the portfolio is a publishable paper that has been written according to the guidelines for submission in the British Journal of Dermatology. This publishable paper provides a summary of the research project within this portfolio and presents the research findings, clinical implications and future research recommendations. The findings of the research project are considered crucial and necessary for expanding the research knowledge into the field of AA and psychodermatology. There are important clinical implications for the work conducted in dermatology and clinical health departments

PART A: The Research Project

A Randomised Controlled Trial of Integrative Cognitive Behavioural Therapy for Patients with Alopecia Areata: A Pilot Study

Supervisors

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&

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ABSTRACT

Background: Alopecia Areata (AA) is a stress related auto-immune condition. Majority of people with AA are found to experience anxiety, depression and an impact to their quality of life and are reported to have the highest suicide mortality rate amongst people with skin conditions. Due to the unknown causes of the condition, the design and efficacy of medical interventions are potentially impacted. However, to date, no randomised controlled trials have been implemented to evaluate psychological interventions for people with AA.

Aims: This aim of this pilot research project was to investigate the effectiveness of an Integrative Cognitive Behavioural Therapy (ICBT) for people with AA.

Method: 15 participants with AA were randomly allocated to receive 12-weeks of individual ICBT or a waiting list control group. Psychological and physical assessments were implemented at the beginning of the trial and after the 12-week intervention or waiting period.

Results: Mixed analysis of variance tests were conducted to explore the effectiveness of the intervention. The findings revealed that quality of life and depressive symptoms improved significantly for participants in the treatment group in comparison to the control group from the initial assessment and 12-week assessment. The findings also revealed that participants in the intervention group presented significant improvements to the level of distress they experienced due to the condition. Lastly, participants in the intervention group were found to experience significantly less hair loss in comparison to those in the control group from the initial assessment and 12-week assessment.

Discussion: The findings of this study provide important clinical implications for people with AA and other psychodermatological conditions. Larger scale studies are required to further investigate the impact of psychological interventions for people with AA.

CHAPTER 1: INTRODUCTION

1.1. Overview

Alopecia Areata (AA) is an auto-immune disorder that leads to non-scarring hair loss. Sufferers often present with distress and the condition is highly comorbid with a range of psychiatric disorders (Layegh, Arshadi, Shahriari, Pezeshkpour & Nahidi, 2010; Colon et at. 1991; Ruiz-Doblado, Carrizosa & García-Hernández, 2003). The causes of AA are still greatly debated and remain unclear, hence impacting the effectiveness of treatment methods implemented, with medical treatments not reliably and significantly improving the condition (Delamere, Sladden, Dobbins, & Leonardi-Bee, 2008). Psychological interventions have been successfully employed alongside medical treatment in other chronic skin conditions such as psoriasis and atopic dermatitis (Lavda et al., 2012). However research on psychological interventions for AA have so far been scarce. This highlights the necessity to develop, implement and investigate the effectiveness of tailored psychological interventions for people with AA.

The evidence base for the effectiveness of psychology interventions in the management of health conditions is limited. The following description of counselling psychology currently provided by the Society of Counselling Psychology (Division 17 of the American Psychological Association) states that:

"Counselling psychology addresses the emotional, social, work, school and physical health concerns people may have at different stages in their lives, focusing on typical life stresses and more severe issues with which people may struggle as individuals and as a part of

families, groups and organizations. Counselling psychologists help people with physical, emotional and mental health issues improve their sense of well-being, alleviate feelings of distress and resolve crises. They also provide assessment, diagnosis, and treatment of more severe psychological symptoms" (APA, 1996).

Nevertheless, until the late 1980s counselling services were almost non-existent in primary healthcare settings (Foster, 2000). However, in the last decade, an increase to the presence of counselling psychologists working in locations such as hospitals and surgeries has been recorded (Jones Nielsen & Nicholas, 2016). Today the Society of Counselling Psychology (USA) explicitly seeks to integrate counselling psychology in health care:

"The Health Psychology Section of APA Division 17 is dedicated to the science and practice of counselling psychology in health related contexts either through research with medical, rehabilitation, or related populations, direct service to individuals across their lifespan (e.g., prevention, adjustment to and recuperation from illness, healthy lifestyle changes, psychological concomitants of medical illnesses), teaching and training of graduate students or the education of other health care professionals, or involvement with health policy" (APA, 1996).

Despite this commitment, very few studies have trialled and tested counselling tailored interventions for the management of dermatological conditions (Lavda et al., 2012) and only one pilot study (Gallo et al., 2017) has applied a Mindfulness Based Stress Reduction (MBSR) intervention for the management of AA. Further research is required to address this gap in the literature by developing and testing psychological interventions for patients with AA.

This chapter reviews the relevant theoretical models and research in the fields of counselling psychology, psychodermatology, and specifically on AA, with the aim of critically evaluating the strengths and weaknesses of current available treatments for the condition and identifying gaps.

1.1.1. The Biopsychosocial Model

The Biopsychosocial Model presents the multimodal contributions of the biological, psychological and environmental factors that are associated with each other and jointly impact the development and maintenance of illnesses, and can aid or hamper the treatment of illnesses (Walker, Littlejohn, McMurray & Cutolo, 1999; Engel, 1977; George & Engel, 1980; Anagostopoulo, 2005). This model therefore offers a more inclusive approach for understanding health and illness. This perspective also emphasises the individual's active role in the development of illness, while acknowledging the biological, psychological and social difficulties that individuals present.

The biopsychosocial model has been particularly prominent within the field of psychodermatology, with research in the field emphasising the requirement for a biopsychosocial approach when treating people with skin conditions (Picardi & Pasquini, 2007). Authors have also proposed that the development of services which combine medical and psychological consultation is mandatory for effective practice (Picardi & Pasquini, 2007). The biopsychosocial model highlights the need for a holistic approach to working with people with skin conditions which is indicated by the expansion of the literature advocating it in psychodermatology.

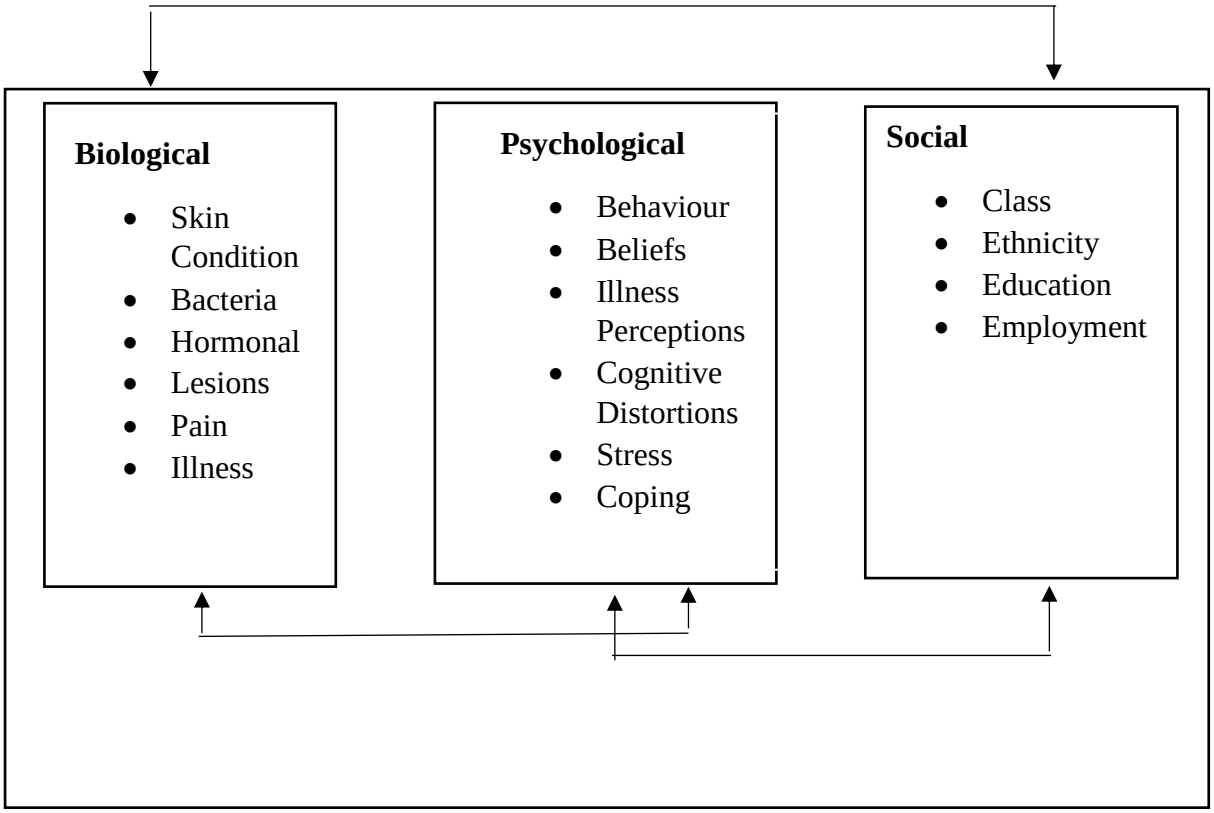

Figure 1.1: Biopsychosocial Model *(Picardi & Pasquini, 2007)*

1.2. Psychodermatology

Psychodermatology (also known as Psychoneurocutaneous Medicine) is the scientific field that covers all aspects that involve the connection between the mind and the skin and therefore bridges between the disciplines of psychology, psychiatry and dermatology (Jafferarny & França, 2016; Koo & Lebwohl, 2001). The skin is identified as the largest organ in the human body and therefore the most important connection between people and their environments (França & Jafferany, 2016). It has been recognised that due to this relationship between the individuals and the environment, the skin is highlighted to have a significant impact on personal appraisals and psychological wellbeing (Marhsall, Taylor & Bewley, 2016).

Within the field of psychodermatology, the patients' presentations are defined by the following classifications: a) Psychophysiological disorders, b) Primary psychiatric disorders and c) Secondary psychiatric disorders (Koo & Lebwohl, 2001). Psychophysiological disorders are skin disorders (such as: alopecia, vitiligo, atopic dermatitis and psoriasis) that are triggered or maintained by stress. Primary psychiatric disorders are disorders whereby the skin disorder is primarily psychological and self-induced, such as: trichotillomania, dermatitis artefacts. Lastly, secondary psychiatric disorders are skin disorders that significantly impact an individual's psychological wellbeing and have a substantial impact on their self-image, self-esteem and quality of life such as alopecia areata, vitiligo, atopic dermatitis and psoriasis (Koo & Lebwohl, 2001).

1.3. Psychodermatology: Research Trends

The field of psychodermatology is considered to be a relvatively new field of medicine that has expanded significantly in the last decade (Jafferarny & França, 2016). The expansion of the field has occurred with the recognition that best outcomes are reported for patients with psychodermatological conditions when receiving multidiscplinary and psychological interventions (Locala, 2009; Marshall, Taylor & Bewley, 2006). This highlights the strong relationship between the mind and the body.

Research in the field of psychodermatology was reported to be primarily conducted in the form of observational research but in the last decade, the research has changed to implementing clinical trials (Marshall, Taylor & Bewley, 2016). An extensive review was conducted by Jafferany (2007) into the empirical research in psychodermatology (covering papers published between 1951 and 2004). It examined the psychological difficulties and

psychiatric disorders common in people with skin conditions. The review also explored the efficacy of the psychological and psychotropic treatment interventions offered to patients for their presenting psychiatric disorders (Jafferany, 2007). The results revealed that psychotropic and dermatological medication have been the main treatment interventions offered to patients to patients with dermatological conditions. The authors concluded that the most effective interventions for patients with dermatological conditions, are those that support the medical and psychosocial difficulties, simultaneously. The authors also emphasized that psychological interventions may be important to implement alongside medical interventions for people with skin conditions, and that the connection between the mind and the body has been undervalued (Jafferany, 2007).

In the past two decades, the field of psychodermatology has seen a significant increase to research conducted and implemented (Jafferany, Ferreira & Patel, 2020). The expansion can be explained by the growing evidence on the relationship between psychological distress, stress and skin disorders, as well as the empirical evidence on the positive outcomes of psychological interventions implemented in this patient group (River, 2013). River (2013) argues that the clinical evidence on the relationship between the psychological disorders and skin conditions is undeniable, and can impact the development of disorders as well as treatment outcomes. The recent increase has been supported through a recent call by the Association of Psychoneurocutaneous Medicine of North American to promote further awareness and education into the field of psychodermatology (Jafferany & França, 2016). Nevertheless, research into psychological interventions is still limited and a greater emphasis is still placed on psychopharmacological interventions to support psychiatric difficulties rather than psychological interventions (Jafferany, 2007; Hunt & McHale, 2007; River, 2013). It can be proposed that the reason that psychopharmacological interventions were considered and

implemented more frequently than psychological interventions may be due to the emphasis on medical interventions provided within the field of dermatology.

With the expansion of the field, the type of skin conditions that are given attention to and researched in psychodermatology have also expanded. Psychodermatology research into psoriasis, acne and atopic dermatitis has seen an increase (Lavda, Webb & Thompson, 2012), while AA has been given limited attention in psychodermatology.

1.4. Psychodermatology: Impact of Stress

Stress is defined as psychological pressure or threat that interferes with the regular maintenance of an organism (França & Jafferany, 2016). The Transactional Model of Stress and Coping (Lazarus & Folkman, 1984) has extended this definition by explaining that stress occurs as a result of exposure to a particular demand, and that the experience of stress occurs when an individual perceives that the demands of the environment exceed their capacities or resources to meet these demands. Lazarus and Folkman (1994) clarify that whether the individual perceives the demand as a stressor, and whether stress response occurs is dependent upon cognitive appraisals. Cognitive appraisal refers to the stage whereby the individual identifies and evaluates a demand as one that is potentially a threat, and assesses their ability to manage it (Lazarus & Folkman, 1984). Stress emerges when an individual considers that the demand is indeed a threat and that they do not have the resources to meet the demand. Once stress emerges, the individual engages with coping behaviours. Coping refers to the cognitive and behavioural strategies that an individual implements to manage the demands as well as the stress that is felt (Lazarus & Folkman, 1984). However, there are significant individual differences in the ways that individuals cope with stressors and stress that may considerably

impact their physical health and psychological wellbeing (Picardi et al., 2000; França & Jafferany, 2016).

Evolutionarily, human beings have developed the ability to protect themselves from threat, and therefore needed to respond effectively to threat in order to survive. This is referred to as the "*fight or flight*" response (Lovallo, 2005; 2015). The *fight or flight* response is a short-term acute physiological response to stress which signals to the person that they need to protect themselves from the threat that they are facing (Lovallo, 2005; LeDoux, 1994; 1998). This psychological stress responses releases stress hormones in the body including norepinephrine and epinephrine (Lovallo, 2005; 2015). The hormonal responses to stress in the body then activates the Hypothalamic Pituitary Axis (HPA) system (Oxington, 2005) which triggers the pituitary gland and adrenal gland through the secretion of adrenocorticotropic hormone (ACTH) and cortisol (Oxington, 2005). The effect of acute stress and the physiological responses can then lead to physical responses and indicators of stress in the body such as heart racing and shortness of breath (Harari & Legge, 2001). Acute stress is found to impact the immune system by activating immune mediators to support and protect the individual during the 'fight or flight' response (McEwen, 2017). Once the episode of acute stress has ended, balance is restored both psychologically and physically through a recovery stage. However, acute stress differs significantly from chronic stress. When an individual experiences chronic stress, this can have a long term significant impact on the central nervous system, the immune system and the hippocampus (Oxington, 2005). In comparison to the impact of acute stress on the body which focuses on protection of the body, chronic exposure to the same stressor over an extended period of time has the opposite impact on the body (McEwen, 2017). Researchers have found that the over-stimulation of the HPA can lead to greater vulnerability to autoimmune conditions, since the secretion of cortisol suppresses the function of the immune system (Buford & Willoughby, 2008). Ample research into the impact of chronic stress on the

immune system supports these findings (Glaser & Kiecolt-Glaser, 2005). Research has found that individuals who were chronically stressed experienced weaker immune system function, greater vulnerability to illnesses and exacerbated existing health conditions, in comparison to those who were not experiencing stress (Glaser & Kiecolt-Glaser, 2005; Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002; Segerstrom & Miller, 2004).

A related field of study is psychoneuroimmunology, which explores the relationship between the immune system, psychological stress, behaviours, neurological brain chemistry and medical conditions (DeKeyser, 2003; Zachariae, 2009). The field focuses on the impact of stress on the immune system and the effect this has on people's overall health and psychological wellbeing (DeKeyser, 2003; Goodkin & Visser, 2008). Research has been conducted to explore the impact of acute stress on the immune system and biological irregularities and found that Post Traumatic Stress Disorder (PTSD) was associated with cardiovascular conditions, psychiatric disorders and inflammatory illnesses (Wong, 2002). These findings are also supported by research on high comorbidity between autoimmune conditions, inflammatory illnesses and PTSD (Neigh & Ali, 2016). These studies highlight the impact of stress on the immune system and autoimmune conditions.

While it is clear that stress can impact the immune system and trigger chronic health conditions, stress can also maintain and exacerbate chronic health and skin conditions (Alsamaeai & Aljubori, 2010). Research has been conducted into stress experienced by people with skin conditions and the findings revealed that individuals with Alopecia and other skin conditions experienced significantly more stressful events, family problems and personal problems in comparison to individuals without skin conditions (Manolache & Benea, 2007).

Further research provided supporting evidence for the role of stress in the exacerbation of skin conditions (Brajac, Tkalcic, Dragojevic & Gruber, 2003; Gupta & Gupta, 2003). Researchers concluded that trait-anxiety and stress may impact the onset and worsening of skin

conditions such as psoriasis and AA (Brajac et al., 2003; Gupta & Gupta, 2003). However, the authors also identified significant individual differences in how people cope with skin conditions which strengthen the associated between stress and skin conditions (Gupta & Gupta, 2003). This suggests that stress significantly contributes to the triggering and maintenance of skin conditions, and the authors therefore argue that psychological interventions should be implemented to support patients with skin conditions (Brajac et al., 2003; Gupta & Gupta, 2003).

1.5. Coping with Chronic Skin Conditions

Individuals living with chronic skin conditions have been found to report high levels of psychological distress, reduced quality of life and higher levels of anxiety, depression and suicidality rates (Sampogna, Taboli & Abeni, 2013; Liu, King & Craiglow, 2016; Rencz et al., 2016; Davis & Callender, 2018; Tuckman, 2017). Authors have argued that individuals living with skin conditions require the development of cognitive and behavioural mechanisms to cope with the continuous stress that occurs due to the chronic skin condition (Walker & Papadopoulos, 2005).

While the psychological difficulties associated with skin conditions are significant, the literature reports on a range of other stressors that accompany these difficulties including physical difficulties, the management of undergoing treatment interventions and their associated side effects (Sampogna et al., 2013; Liu et al., 2016; Rencz et al., 2016; Davis & Callender, 2018; Tuckman, 2017; Walker & Papadopoulos, 2005).

Coping has been defined as cognitive and behavioural actions that individuals engage with in order to manage the demands presented to them, as well as moderate the stress that they are experiencing, when the demands are perceived as exceeding the means that they possess

(Lazarus & Folkman, 1984; Walker & Papadopoulos, 2005). Research has found that individuals with skin conditions vary in their ability to implement adaptive coping strategies, and these in turn impact their presentations of anxiety, depression, stress and quality of life (Scharloo et al., 2000).

Researchers have proposed that coping with skin conditions can be impacted by the condition type, condition severity, the treatment, predisposing factors, social factors and cognitive and behavioural factors (Walker & Papadopoulos, 2005).

1.5.1. Cognitive and Behavioural Factors

The cognitive and behavioural factors that contribute to the individual differences in the coping and management of skin conditions are important to consider. These factors address the impact of illness perception and therefore the implementation of helpful coping mechanisms. Coping has been emphasised to depend on the appraisal of the circumstances that the person is facing and their capacity to manage them (Lazarus & Folkman, 1984). Coping behaviours can be broadly split into two types: a) problem-solving strategies or b) emotion-focused strategies (Lazarus & Folkman, 1984).

Problem-solving strategies include behaviours that aim to modify aspects of the situation that are in one's control (Lazarus & Folkman, 1984; Thompson & Kent, 2001). Examples of problem-solving strategies may be seeking medical guidance, using medications, positive social interactions, educating others and managing situations in an assertive manner. Emotion-focused strategies are often used when individuals consider that the situation is not in their control and the strategies implemented are used to support the emotional impact of the circumstances presented. It involves attempts to reduce the emotional impact of the stress through the use of emotional strategies such as avoidance and isolating themselves (Walker & Papadopoulos, 2005; Lazarus & Folkman, 1984; Thompson & Kent, 2001). These different

coping strategies emphasise the role and helpfulness of the cognitive and behavioural factors to the adjustment and coping of skin conditions. Authors have described that emotional coping strategies may be perceived has helpful in the short term but may be problematic in the long term. For example, concealing the condition may enable the person to continue with everyday activities and therefore may be helpful in the short term, however, these behaviours do not enable the individual to develop new coping mechanisms, and challenge unhelpful beliefs (Walker & Papadopoulos, 2005). Assertive problem solving behaviours are those that are more proactive and challenging for the individual, and therefore support changes to their thought process, behaviours, perception and enable the individual to develop further helpful strategies (Walker & Papadopoulos, 2005).

These adaptive or maladaptive approaches to coping have significantly different outcomes for people with skin conditions. When individuals tend to approach and confront the problem as it arises, this tends to be associated with better psychological coping and management (Krohne, 1993). Researchers have found that individuals with dermatological conditions who engaged in more helpful coping and confronting strategies were prescribed fewer treatments and had lower anxiety and depression scores (Scharloo et al., 2000). Further research into distress and coping strategies for people with skin conditions found that increases in anxiety and depression was associated with less adaptive coping mechanisms (Mazzotti et al., 2012). Illness appraisal and coping abilities are therefore emphasised as crucial for supporting the management of skin conditions and for psychological wellbeing.

Another cognitive factor that has been found to contribute to the individual differences in the coping and management of skin conditions is alexithymia. Alexithymia is defined as the difficulty in emotional recognition and expression (Walker & Papadopoulos, 2005; Willemsen, Roseeuw & Vanderlinden, 2008). It has been found that individuals with skin conditions have increased levels of alexithymia (Picardi et al., 2003; Fortune et al., 2002). Research has also

shown that people with chronic skin conditions and high levels of alexithymia scored highly on measures of anxiety (Fortune et al., 2002). The literature presented emphasises the association between emotional difficulties, psychological difficulties and coping with skin conditions.

1.5.2. Illness Severity and Treatment

The severity of the skin condition is an important consideration with regards to the impact and management of skin conditions. Researchers have found that psychological difficulties are strongly associated with the severity of the skin conditions (Sampogna, Tabolli & Abeni, 2007; Choi & Koo, 2003).

Interestingly, findings suggest that when the severity of the skin condition improved, individuals reported no changes to their experiences of anxiety, stress and low mood (Fortune et al., 2002). Gupta, Long & Tillman (1999) also reported that some patients who experienced improvements to their skin conditions, reported worsened or similar scores on their perceived disability arising from the skin condition. However, the studies reported by Fortune et al. (2002) and Gupta, Long & Tillman (1999) were both conducted in people with psoriasis undergoing phototherapy which may have impacted these results. Phototherapy is a treatment choice for people suffering with psoriasis, with similarities to sunlight, phototherapy is used to normalise melatonin levels and treat the physical symptoms of psoriasis (Torales et al., 2020). Phototherapy can have significant unpleasant short term side effects such as painful inflammation, reddened skin, dry skin, blistering and increased experience of herpes simplex infections (Coelho & Apetato, 2016). Therefore, while the severity of the condition may improve from this treatment, the experience of the treatment's side effects may also contribute to individuals' experience of psychological distress and therefore their management and coping of the condition.

Research has been conducted into people suffering with AA and other types of hair loss and the impact of the severity of hair loss on their quality of life was investigated (Reid et al., 2012). The authors concluded that patients rated their hair loss as worse than the dermatologists did, and that the severity of the patients' hair loss was strongly associated with their reported quality of life, rather than the dermatologists' rating of hair loss. This research adds important clinical understanding to the literature by suggesting that the perceived severity of the hair loss was strongly related to the impact on patients' quality of life. Additionally, a gap was detected between the patients' hair loss assessment and the dermatologists. This links with the stress models reviewed earlier, suggesting that appraisals of severity can influence patients' stress levels, impacting their quality of life as well as their coping capacities. This research supports the relationship between appraisals of clinical severity and presented psychological difficulties.

1.5.3. Predisposing factors

Several predisposing factors have been reported to impact patients' capacity to manage and cope with skin conditions. Researchers have found that people with skin conditions who reported higher distress levels, and greater impact of the condition on their quality of life, also showed attachment avoidance style and attachment anxiety (Krasushka & Lavda, 2018). Insecure attachment styles were found to be associated with greater impact of the condition on the quality of life for people with atopic dermatitis and AA (Rabung et al., 2004; Dieris-Hirsche et al., 2012; Schmidt, 2013). The attachment style presented by people with a variety of skin conditions including AA, in particular, high attachment avoidance and high attachment anxiety has been linked to psychological distress, reduced quality of life, poor management of the condition, and maladaptive coping strategies (Walker & Papadopoilos, 2005; Schmidt et al., 2002; Krasuska & Lavda, 2018; Picardi et al., 2003).

Individuals with skin conditions have also been identified and reported to experience frequent feelings of shame which have been reported to significantly impact self-esteem and body image, and the quality of intimate relationships (Jowett & Ryan 1985; Rzepa et al., 2013; Lahousen et al., 2016). It has been suggested that shame is a predisposing factor that is associated with early relationships, and cognitive processes developed by early experiences regarding self-esteem and an individuals' perception of acceptance from others (Walker & Papadopoilos, 2005).

1.5.4. Social factors

The management and coping with a skin conditions has been can be significantly impacted by social factors (Thompson & Kent, 2001; Walker & Papadopoilos, 2005). Social support has been described as the feeling and belief that one is cared for and valued by those around them (Cobb, 1976; Thompson & Kent, 2001). Social support may therefore contribute to an individual perceiving themselves as socially accepted by those around them (Thompson & Kent, 2001). The availability of social support is considered crucial for psychological wellbeing, especially when coping with an illness, as it facilitates better compliance with treatment, increased self-care and health promoting behaviours, faster recovery, enhanced quality of life, and even better survival rates in patients with life threatening illnesses (Holt-Lunstad & Uchino, 2015).

Research has reported that fewer psychological difficulties were found in patients with skin conditions who had higher levels of family support (Kalick et al., 1981). It is suggested that the relationship between social support and coping with the skin conditions can be explained by the sense of acceptance which individuals gain from their close relationships, which in turn supports their self-acceptance and self-esteem (Argyle, 1988; Thompson & Kent,

2001). Research also reported that poor social support increases the susceptibility of the onset and exacerbation of skin conditions (Picardi et al., 2005; 2003).

Researchers have explored the significant psychological difficulties associated for people with skin conditions and reported that these impact patients' psychological distress, physical impairments, social interactions and therefore on their quality of life (Rapp, Cottrell & Leary, 2001). Rapp et al., (2001) conducted a study into the social coping mechanisms implemented by people with psoriasis and the impact this has on their quality of life. The authors found that patients with psoriasis implemented strategies such as: covering the condition, avoiding social interactions, and discussing the condition with others around them. The patients who implement these coping mechanisms reported a greater negative impact of the condition on their quality of life. However, individuals who educated others around them about the condition were found to have less negative impact on their quality of life (Rapp et al., 2001). The authors concluded that social factors relating to the condition are strongly associated to the individuals' quality of life and management of the condition.

1.6. Theoretical frameworks: Psychodermatology

While the field of psychodermatology strongly emphasizes stress as a trigger that can lead to the development and maintenance of skin conditions, it is important to acknowledge that individuals who experience stress do not all develop skin conditions, and those that do suffer with skin conditions experience their conditions in a range of manifestations and severities. It is therefore helpful to consider theoretical models that support the understanding into individual differences of the experience of skin conditions.

1.6.1. Diathesis stress model

The Diathesis Stress Model (DSM) is the theoretical framework that highlights the combined impact of stress and a genetic predisposition on the development of health conditions (Walker & Papadopoulos, 2005). When this model is considered with regards to skin conditions, authors propose that people with skin conditions have an inherited weak organ (the skin), which leads to the vulnerability to psychological and biological difficulties. This response occurs in an automatic nature and the effects are directed towards the weak organ (Walker & Papadopoulos, 2005).

While the predisposition is considered a strong predictor of the emergence of skin conditions, another factor that is considered vital in the explanation of the onset of skin conditions is stress. The DSM highlights the interaction between the genetic predisposition and stress that can bring about the onset and development of skin conditions (Walker & Papadopoulos, 2005).

The DSM is a prominent model within the field of psychodermatology due to the acknowledgement that the onset of skin conditions occurs due to the interaction between psychological and physical vulnerabilities. This highlights the important role of the psychological and physical underlying difficulties for people with skin conditions and is therefore a crucial theoretical framework underpinning research that is being implemented within the field of psychodermatology, to understand the onset and joint collaboration of the physical and psychological dispositions that develop skin conditions.

1.6.2. The Health Locus of Evaluation

The Health Locus of Control has been an important model to consider in psychodermatology as this highlights the active role of the individual, and the impact of their

beliefs on their behaviours. The 'health locus of control' concept (Rotter, 1954; Kassianos, Symeou & Ioannou, 2016; Wallston, Strudler Wallston & DeVellis, 1978) suggests that people's beliefs regarding how much control they have in their own lives matters greatly in the health domain. People with internal locus of control believe that they have significant control over their lives, while people with external locus of control believe they hold little control over their lives, and hence they believe that their lives are controlled by outside factors (such as other people, circumstances, God or luck).

The theoretical framework suggests that individuals with skin conditions may experience psychological distress to differing degrees due to their locus of control. The locus of control is linked with their beliefs regarding their capacity to manage and impact their medical condition. Patients with an external health locus of control may believe that they hold less control over their health, while those with an internal locus of control may hold an opposite belief.

This theoretical framework is particularly helpful within the field of psychodermatology, due to the consideration that people experiencing skin conditions and therefore psychological distress, may have a more externalized locus of control. Drawing on counselling psychology principles applied within the field of psychodermatology, research and interventions implemented for people with skin conditions should promote the development of an internal locus of control, by promoting a greater understanding into health related behaviours, and the connection between the mind and body.

1.6.3. The Self-Regulatory Model of Illness Behaviour

The self-regulatory model of illness behavoiour (SRM) (Leventhal, Meyer & Nerenz, 1980) highlights the active role of the individual and the impact of their illness perception on

their coping behaviours. The SRM model contends that there are three stages that contribute to a problem solving process: 1) interpretation of the problem and illness 2) coping and managing the problem and 3) appraisal that involves considering the effectiveness of the coping mechanisms implemented. These three stages are explained to occur in a cycle, and are maintained until the individual perceives that their strategies have been successful.

The first stage of interpretation of the health condition refers to two internal processes that impact the interpretation: symptom perceptions and social perceptions. Symptom perceptions refer to the ways in which an individual interprets their symptoms, which can be influenced by a range of psychological experiences, thoughts and expectations. The social perceptions refer to how certain health conditions are considered socially which impact the person's interpretations of health problems, and how the individual perceives their conditions.

These interpretations of the health condition then impact coping and condition management behaviours, and the appraisal refers to how effective the individual perceives the coping mechanisms. If the person does not perceive these mechanisms as effective, the cycle of this model continues until the individual feels they have reached a state of equilibrium and successful self-regulation.

Within the field of psychodermatology, the SRM highlights the prominent role of the individual and the impact of individuals' perspective and evaluation of their skin condition and ongoing coping mechanisms. The model firmly underpins research and interventions within the field of psychodermatology, due to placing a focus on the role of the person's perception and psychological state regarding their skin condition and coping mechanisms. This model is important to consider within the field of psychodermatology due to the individual differences presented in how people cope with skin conditions and therefore the different ways individuals may cope to psychological and physical interventions implemented within psychodermatology.

The theoretical perspectives presented above, each lend themselves to the research, interventions and therefore wider field of psychodermatology. While each of the theoretical perspectives highlight important contributions regarding individual differences when coping with skin conditions, a particularly strong theoretical perspective has been the DSM. The joint contributions of the biological and psychological contributions to the onset of a skin condition are crucial to acknowledge within the field of psychodermatology particularly when implementing research and interventions within this field.

1.7. Theoretical Frameworks: Counselling Psychology

Counselling psychology theories and therapeutic modalities have provided important contributions to the field of psychodermatology. The theories and therapeutic modalities presented below can explain the individual differences in the physical, psychological, social and emotional experiences of patients with skin conditions. They also provide a framework for psychological interventions which may support patients with skin conditions.

Counselling psychology is a wide psychological field that encompasses the following three key psychological modalities: person-centered, psychodynamic and cognitive and behavioural approaches (Orlans & Scroyoc, 2008). When considering individual differences in coping and management of skin conditions, within the field of psychodermatology, the person-centred approach and the cognitive and behavioural approach have been central. Furthermore, third wave interventions incorporating mindfulness and narrative therapy have also been explored in the literature. The three modalities are therefore examined below.

1.7.1. Person-Centered Theory

The Person-Centered theoretical framework and therapeutic modality within counselling psychology highlights the contributions of an individuals' external and internal locus of evaluation in the experience of psychological difficulties and psychological wellbeing (Rogers, 1959). According to the person-centered theoretical underpinning, individuals who experience greater psychological difficulties tend to have a more externalized locus of evaluation (Rogers, 1959). An external locus of evaluation describes an individual who perceives their self-worth and self-evaluation as dependent on others around them (Mearns, Thorne & McLeod, 2013). An internalized locus of evaluation describes an individual to perceive their self-worth and evaluation of themselves as based on their own views and judgements rather than dependent on others around them (Mearns et al., 2013). Therefore, patients who are experiencing greater psychological difficulties with regards to their skin condition, may be experiencing these difficulties due to their external locus of evaluation. The person-centered therapeutic modality emphasizes the role of the therapist in helping patients develop a deep relationship between themselves and the client. This type of relational depth can support the individual in developing a more internalized locus of evaluation (Mearns & Cooper, 2005). To develop this type of therapeutic relationship, the person-centered approach highlights three key qualities that the therapist requires: empathy, unconditional positive regard and congruence (Mearns et al., 2013; Rogers, 1959).

The therapeutic relationship is emphasised by all therapeutic modalities as a key and crucial element for all successful therapeutic outcomes (Paul & Charura, 2014). The person-centered approach is a foundational approach in counselling psychology and therefore an underpinning approach in the field of Psychodermatology. When conducting research and interventions within the field of psychodermatology, it is crucial to focus on and consider the individual differences presented by the participants and their locus of evaluation. Therefore

emphasis should be placed on the relationship between the therapist and the individual to promote successful treatment outcomes.

1.7.2. Cognitive Behavioural Therapy

Behavioural Therapy is considered to be 'first wave' of psychological therapy, while the 'second wave' refers to the merging of cognitive therapy and behavioural therapy which formed Cognitive Behavioural Therapy (CBT) (Greenberger & Padesky, 1995; Beck, 1967). CBT consider that individuals' thoughts, behavioural, emotional and physical responses and behaviours are vital in understanding and supporting people with psychophysical conditions and psychiatric disorders (Greenberger & Padesky, 1995; Beck, 1967). CBT has been extensively researched for people with health conditions and other psychiatric difficulties and has been found to have significant effects and benefits (Lavda et al., 2012; Roth & Fongay 2006). This therapeutic modality empathises supporting the individual with difficult thoughts, feelings, behaviours and physical experiences, which tend to interact and worsen psychological distress. The patient is encouraged to challenge maladaptive thoughts, and moderate behaviours and physical experiences to decrease the psychological distress and unhelpful negative cycles (Greenberger & Padesky, 1995; Beck, 1967).

The CBT theoretical framework is considered to be consistent with the medical model and approach, due to the joint emphasis and focus on symptoms presented and symptom reduction (Hofmann et al., 2012). Therefore the CBT framework forms an important theoretical underpinning in the field of psychodermatology. CBT demonstrates that an individuals' thought processes with regards to their skin condition has an impact on their emotions, behaviours, and therefore on the skin condition. These cognitions and emotions also affect other physical symptoms of stress which as noted earlier can trigger or maintain skin conditions (Greenberger & Padesky, 1995; Beck, 1967). The model presented in Figure 1.2 shows the

CBT model and the relationship between the thoughts, feelings, behaviours and physiological experiences.

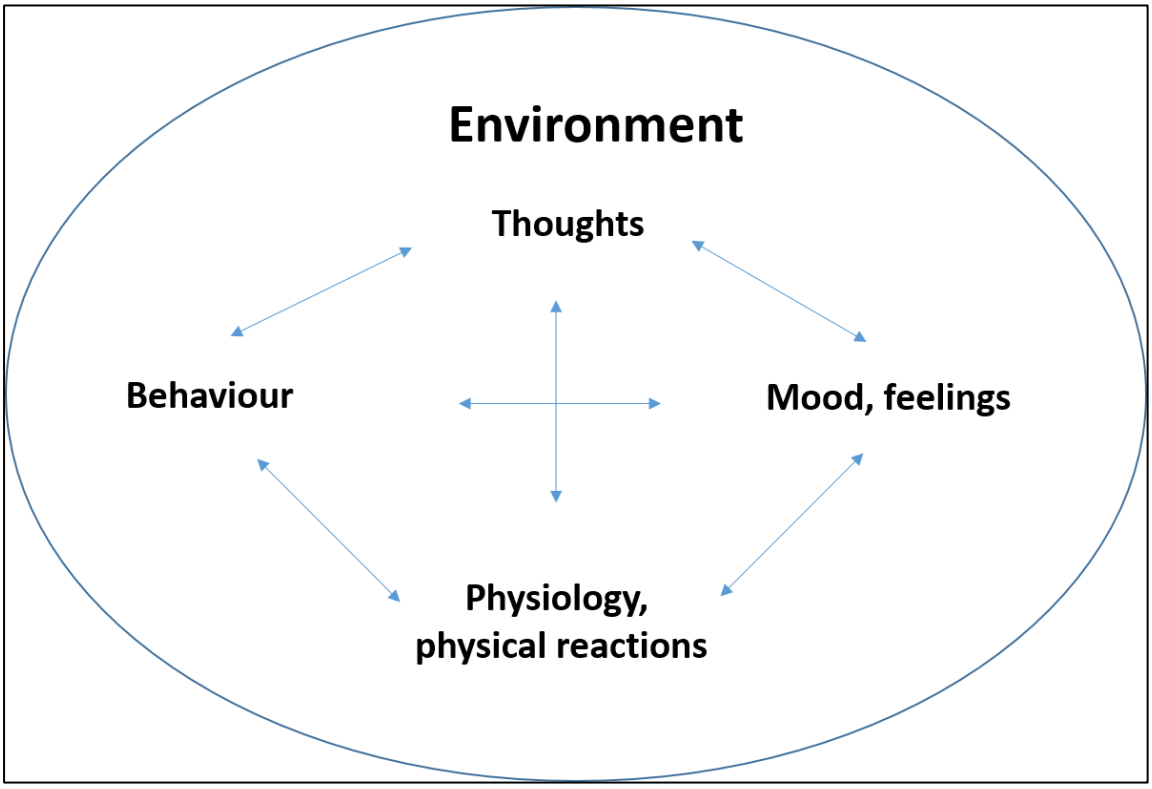

Figure 1.2: Cognitive Behavioural Therapy Model (Beck, 1967)

1.7.3. CBT, Narrative Therapy and Mindfulness

In the past decade, a 'third wave' of therapeutic modalities was developed which refers to psychological interventions that are seen as either new interventions or additions to CBT (Hayes, 2004; Ost, 2008). Mindfulness is considered a third wave intervention and is described as focusing one's attention in the present moment in a non-judgemental manner. It aims to raise people's awareness to their experiences, cognitions, emotions and bodily experiences, and teach them to break away from automatic maladaptive cognitive and behavioural patterns, by

staying present and learning to accept their experiences (Kabat-Zinn et al., 1998; Shapiro, Schwartz & Bonner, 1998; Segal, Williams & Teasdale, 2002). The principles of mindfulness as implemented within psychodermatology suggests that psychological difficulties occur in individuals with skin condition, due to the lack–of awareness of one's bodily experiences, cognitions and emotions, the triggering of automatic negative thought patterns, and difficulty in accepting their condition. These in turn generate additional stress and other psychological reactions that exacerbate the physical manifestation of their illness (Kabat-Zinn et al., 1998).

When considering interventions implemented for people with chronic health conditions, the effectiveness of third wave mindfulness interventions have shown promising results (Qureshi et al., 2019; Khoo et al., 2019). A systematic review and meta-analysis was conducted to compare mindfulness- based interventions with CBT for people with chronic pain (Khoo et al., 2019). The authors concluded that there were no significant differences between the mindfulness intervention and the CBT intervention for chronic pain, and both have shown to be effective in reducing pain (Khoo et al., 2019). Other reviews have shown significant effects of mindfulness interventions for people with chronic physical health conditions such as: Irritable Bowel Syndrome (IBS), asthma, fibromyalgia, Tourette syndrome, tic disorder, tinnitus, pain, somatic conditions, insomnia and Multiple Sclerosis (MS) (Reese et al., 2015; Toivonen, Zernicke & Carlson, 2017; Simpson et al., 2014). MS is particularly similar to AA as it is also considered an auto-immune condition and is therefore is caused by the immune system attacking the brain and nerves in the body, which leads to symptoms such as blurred vision and mobility issues. Due to the similarities between these physical health conditions and AA, similar improvements could be expected in the application of both CBT and mindfulness.

Another third wave theory and therapeutic approach that has been previously and successfully implemented for people with chronic health conditions is the Narrative approach (Ncube, 2006; Denborough, 2008). Narrative theory considers that individuals' personal

narratives and stories are central to individuals' experience of psychological distress (White, 2007; White and Epston, 1990). The narrative theoretical approach suggest that people develop life narratives that define and give meaning to their experiences, difficulties and identifies (White, 2007; White and Epston, 1990). Within this theoretical framework, psychological difficulties are viewed as a construct of an individual's life story. Narrative therapy is a therapeutic modality that aims to direct the client's focus from their psychological deficits to their strengths, abilities and skills, to support clients to develop more meaningful and empowering life stories (Lopes et al., 2014; Angus & McLeod, 2004). Narrative therapy also formed the foundation of an approach known as the 'Tree of Life' which supports the individual to use a tree as a metaphor to incorporate their knowledge, skills, experiences, and weather conditions that signify changes that have occurred to their stories, to support and empower the individual (Ncube, 2006; Denborough, 2008).

Within the field of psychodermatology, this theoretical framework and therapeutic modality is prominent, due to the psychological difficulties, identity and life meaning that people with skin conditions and AA often develop with regards to their conditions. As described above, the coping and management of skin conditions can differ significantly between people. Narrative theory claims that their difficulties in coping with their skin condition and experience of psychological distress is due to their focus on their condition and psychological difficulties, rather than their strengths and abilities that would support their improved psychological wellbeing and experience of the skin condition.

Narrative therapy has been found to be effective for people with chronic health conditions (Ncube, 2006; Denborough, 2008). Narrative therapy and the 'Tree of Life' approach was firstly implemented with children who experienced losing their parents in Zimbabwe due to HIV and AIDS (Ncube, 2006; 2007). The 'Tree of Life' narrative therapy has also been implemented for refugee children and families in schools, and has been found to

be beneficial for both parents and children (Hughes, 2014). While Narrative therapy has been implemented in the past for people with chronic health conditions, it has not been implemented for people with skin conditions. Due to the shared experiences of coping with difficult life experiences and chronic health conditions, similar positive results are expected for patients with chronic skin conditions and AA. Importantly, narrative therapy been shown to support individuals with the management and acceptance of chronic health conditions by identifying and contributing to their individual narratives and highlighting patients' strengths and resilience (Ncube, 2006; 2007; Hughes, 2014; Butera-Prinzi, Charles & Story, 2014).

CBT, narrative therapy and mindfulness all incorporate the common theoretical perspective regarding the importance of cognitions and individual narratives, and the impact this has on an individual's emotions, beliefs, perceptions, acceptance, behaviours, and physical experiences (Beck, 1979; Kabat-Zinn et al., 1998: Madigan, 2011; White, 2007; Beck, 1967; Greenberger & Padesky, 1995). These three approaches also highlight the importance of the collaborative therapeutic process, and places the relationship between the client and therapist as central to the work (Morgan, 2000; Richert, 2003; Dattilio & Hanna, 2012; Felder, Dimidjian & Segal, 2012; Greenberger & Padesky, 1995). They also emphasise the use of empathy and compassion, and validation of the clients' strengths and difficulties (Gilbert & Leahy, 2007; Angus & McLeod, 2004). Additionally, these approaches highlight the importance of strength-based narratives and emphasise awareness of the mind and body connection, and an acceptance of their experiences (White, 2007; Kabat-Zinn et al., 1998).

The theoretical perspectives and therapeutic modalities presented above, within the field of counselling psychology, each lend themselves and provide important and unique contributions to the research and interventions implemented within the field of psychodermatology. When considering the theories and therapeutic modalities presented above, the CBT perspective and therapeutic intervention has been given the strongest emphasis

within the field of psychodermatology. This is due to the acknowledgement of the psychological and biological difficulties occurring for people with skin conditions and the prominent connection between the mind and the body. The third wave interventions of mindfulness and narrative approaches provide additions to the CBT approach. As presented below, CBT has been heavily implemented and researched within the field of psychodermatology and has presented the strongest evidence based research for people with skin conditions (Lavda et al., 2012). It is therefore recommended for research and interventions within the field of psychodermatology to continue to focus on the CBT perspective and interventions, while adding third wave interventions to support research evidence and treatment outcomes for people with skin conditions.

1.8. Management of Skin Conditions: Psychological Interventions

Psychological interventions have been implemented alongside medical interventions for individuals suffering with a range of skin conditions: psoriasis, atopic dermatitis, vitiligo and acne (Lavda, Webb & Thompson, 2012). However psychological interventions has been lacking for people with AA. Due to the shared psychophysiological and secondary psychiatric qualities of these disorders, it can be argued that psychological treatments may have similar positive effects for AA.

Lavda and colleagues. (2012) conducted a meta-analysis to review the effectiveness of psychological interventions for treating skin disorders. The authors found that psychological treatments were trialed for the following skin disorders: atopic dermatitis, vitiligo, psoriasis and acne. The psychological treatments that were evaluated were: Habit reversal (aiming to change unhelpful scratching habits), CBT, Arousal Reduction (mindfulness and relaxation

techniques), Combined Group Therapy, Psychotherapy, Emotional disclosure and Imagery (emotional expression in various formats). The review did not include alternative treatments that are not based on psychological theory (aromatherapy, hypnosis and music therapy). The modes of delivery of these interventions varied between individual, group and self-help. The authors concluded that psychological interventions are effective for treating individuals' with these skin conditions and that Habit reversal and CBT were the most effective interventions and did not significantly differ from each other (Lavda et al., 2012). Habit reversal was found to be significantly more effective than arousal reduction and combined interventions. The authors explained that while the interventions were found to be effective for treating skin disorders, the longer the follow-up period, the less the intervention effectiveness was maintained. This suggests that the effects of the treatments were not maintained long-term, but it was found that when booster sessions were offered between the end of treatment and the follow-up assessment, this increased the long-term effectiveness of the treatments (Lavda et al., 2012). Furthermore, the authors compared the psychological interventions with medical interventions for people with individuals with skin disorders with no treatment and active control groups receiving medication. The authors concluded that psychological interventions could be as effective or more effective than medical treatments (Lavda et al., 2012). This finding is also supported by meta-analyses which compared psychological and pharmacological treatment effectiveness in other clinical chronic health disorders such as chronic pain (Dixon et al. 2007), irritable bowel syndrome (Zijdenbos et al., 2009) and chronic fatigue (Sharpe et al., 1996). Findings in this meta-analysis provide strong support for the inclusion of psychological interventions for chronic skin conditions.

As mentioned above, CBT has been found to be the most effective, evidence-based form of psychological intervention for improving skin disorders, in particular in psoriasis and atopic dermatitis (Lavda et al., 2012). This has been further explored and is supported by a

systematic review that explored psychological interventions implemented for people with psoriasis and found that CBT, mindfulness-based interventions, motivational interviewing and interdisciplinary treatments were most effective for supporting this patient group with the findings showing significant improvement in their psychological and physical symptoms (Qureshi et al., 2019). This has been further supported by Hedman-Lagerlof et al. (2019) for people with atopic dermatitis and by Goyonlo et al. (2020) for people with acne. The authors found that CBT showed significant improvements in self-reported physical and psychological symptoms of atopic dermatitis and acne (Hedman-Lagerlof et al., 2019; Goyonlo et al. 2020).

AA tends to be highly associated with psoriasis and atopic dermatitis (Chu et al. 2011) and all conditions present high levels of comorbid psychiatric disorders (Gupta & Gupta, 1998; Han, Lofland, Zhao & Schenkel, 2011; Yaghmaie, Koudelka & Simpson, 2013), traits of alexithymia (Willemsen at al., 2008), low self-esteem (Nguyen, Koo & Cordoro, 2016) and high suicidal risk (Gupta, Pur, Vujcic & Gupta, 2017). Given the similarities in these psychophysical skin disorders and their secondary psychiatric disorders, there is a clear gap in research to evaluate the effectiveness of CBT as adjunct treatment for managing the psychological and physical symptoms of AA. This could maximise the benefits that psychologists and other healthcare practitioners can deliver in the overall management of this patient group and add to the evidence base of the use of counseling interventions in the area of psychodermatology.

CBT, stress reduction and third wave approaches such as mindfulness interventions have been found to be effective for supporting individuals with a range of similar psychodermatological conditions such as: psoriasis, dermatitis and eczema and significantly improved their quality of life, anxiety, depression and the overall condition presented by the participant (Fortune, 2002; Bundy et al., 2013; Lavda, Webb & Thompson, 2012; Kabat-Zinn et al., 1998; Fordman, Griffith & Bundy, 2013; Sijercic, Ennis & Monson, 2019). However,

research has not been implemented as a RCT to explore the impact of CBT and third wave psychological interventions for individuals with AA. Due to the similarities between the role of stress in triggering and maintaining these skin conditions and AA, as well as the association between the mind and the body, there is compelling evidence to expect similar outcomes in people with AA.

Mindfulness meditation and relaxation techniques have been described as approaches that has been most commonly implemented for people with skin conditions, and the findings have suggested that these approaches had moderate effects on improving psychological difficulties and distress associated with the skin condition (Lavda, Webb & Thompson, 2012; Montgomery & Thompson, 2018). Further research studies have been conducted for people with chronic skin conditions and have found improvements in the physical symptoms associated with the skin condition (Kabat-Zinn et al., 1998; Fordham et al., 2015). Additionally, research has also found that higher levels of mindfulness practice was associated with lower levels of anxiety, depression and improvements to the level of the condition impacting the individuals' quality of life (Montgomery, Norman, Messenger & Thompson, 2016).

While the research into mindfulness implemented for people with skin conditions have found promising results, the research has been largely focused on people suffering with psoriasis (Montgomery & Thompson, 2018). Due to the limited research into mindfulness for people with differing chronic skin conditions, further research is needed to investigate the psychological and physical effectiveness of mindfulness meditation for people skin conditions and for people with AA.

Another third wave intervention that has been previously implemented for people with psoriasis is schema therapy (Gojani, Masjedi, Khanleghipour & Behzadi, 2017). Schema therapy is an integrative third wave intervention that is based on the CBT theoretical framework and concepts but also incorporates approaches from object relations, gestalt therapy,

attachment model and psychoanalysis (Young, 1999; Martin & Young, 2010). Schema therapy focuses on three main elements: 'schemas', 'coping styles' and 'modes' (Young et al., 2003). Schemas are identified as internal attributes that influence behaviours and coping mechanisms and therefore schemas are the focus within schema therapy (Young, Klosko & Weishaar, 2003). Maladaptive schemas have been explored for people with chronic skin conditions and found that people with psoriasis and eczema scored significantly higher on presence of maladaptive schemas in comparison to the control group (Mizara, Papadopoulos & McBride, 2011). The research also found that maladaptive schemas were strongly related to psychological distress reported the participants with chronic skin conditions (Mizara et al., 2011).

Research has been conducted to explore the effectiveness of schema therapy for people with psoriasis and this intervention was then compared to the effectiveness of mindfulness or the control group (Gojani et al., 2017). The authors confirmed that schema therapy and mindfulness were equally effective in significantly improving maladaptive schemas, anxiety, depression, social functioning and general health in comparison to the control group (Gojani et al., 2017). This research suggests that both schema therapy and mindfulness were significantly effective in improving psychological symptoms for people with psoriasis, in comparison to the control group, showing no differences between the two interventions (Gojani et al., 2017).

This research has been further supported by research provided for people with vitiligo that compared schema therapy, mindfulness based cognitive therapy and a control group (Shahmoradi, Khaleghipour & Masjedi, 2018). The authors concluded that schema therapy and mindfulness based cognitive therapy were both effective in reducing maladaptive schema's for people with vitiligo and showed no significant difference between the therapeutic modalities (Shahmoradi et al., 2018). These results support the equal effectiveness of schema therapy and mindfulness based cognitive therapy in improving the psychological symptoms experienced by

people with skin conditions. However, these studies did not measure the effectiveness of the psychological interventions on the physical symptoms of the skin condition. Further research is required to confirm the effectiveness of psychological interventions on physical symptoms for people with skin conditions. Furthermore, schema therapy has not been conducted for people with other skin conditions or with AA. Due to the promising results, the similarities of these intervention and the similarities between the skin conditions, similar psychological improvements are expected for people with AA.

Another psychological therapy intervention that has more recently been implemented and investigated for people with chronic skin conditions is reality therapy (Alipour, Oraki & Zarghami 2020). Reality therapy is a therapeutic modality that focuses on supporting the individual to take responsibility for their choices and actions (Wubbolding, 2017). Reality therapy is based on the CBT approach by focusing on the present rather than the individuals past experiences.

Research has been conducted to investigate the effectiveness of CBT and reality therapy for people with seborrheic dermatitis, on the participants' self-reported quality of life measure (Alipour et al., 2019). The authors concluded that both interventions were effective for improving the quality of life ratings for people with skin conditions in comparison to the control group. However, the authors also found that CBT showed to be more effective on improving the participants' quality of life rating (Alipour et al., 2019). This study supports the research evidence into the effectiveness of CBT but reality therapy also presents evidence for improving the quality of life for people with skin conditions. However, reality therapy has not been conducted prior to this study for people with skin conditions and did not present as strong results as the CBT intervention.

Based on the research above, there has been growing and promising evidence into the effectiveness of CBT for people with skin conditions to support the psychological and physical

symptoms associated with skin conditions. Third wave interventions such as mindfulness and schema therapy have also shown promising results that support stress reduction and improvements in psychological and physical difficulties experienced by the condition. However, limited research has been conducted to investigate the effectiveness of psychological interventions for people with AA. Due to the evidence supporting the psychological interventions of CBT, mindfulness and third wave interventions for people with chronic skin conditions and due to the similarities between AA and other skin conditions, similar effective results can be expected for improving the psychological and physical symptoms of AA.

1.9. Clinical Sample: Alopecia Areata

Alopecia Areata (AA) is defined as a stress-related auto-immune skin disorder that is characterised by patchiness, non-scarring hair loss (França & Jafferany, 2016). AA can be presented as more severe forms of hair loss called: Alopecia Totalis (AT) and Alopecia Universalis (AU) (França & Jafferany, 2016; Pratt et al., 2017; Gilhar, Etzioni & Paus, 2012). AA, AT and AU are all auto-immune, inflammatory conditions that occur due to the hair follicles at the beginning stages of hair growth being targeted by the individuals immune system (Harries, Sun, Paus & King, 2010). AT is described as hair loss whereby all the hair on the entire scalp is impacted, and AU is where the hair on scalp and the whole body is lost (França & Jafferany, 2016).

In terms of the incident rates, within dermatology departments in the UK and USA, 2% of new cases are identified with AA (Madani & Shapiro, 2000). A recent study (Mirzoyev at al., 2014) found a rise in AA as the prevalence of AA has been estimated to have a lifetime incidence risk of 2.1% in Olmsted County, Minnesota during a 20 year time frame (1990 – 2009). AA has been found to impact 15 in every 10,000 people in the UK and approximately

2% of the general population (Delamere, et al., 2008; França & Jafferany, 2016; Pratt, 2017; Kalish & Gilhar, 2003; Lee et al., 2019). The incidence rates of AT and AU are more greatly debated with recent studies concluding 0.1% and 0.3% prevalence within the general population, respectively (Lee et al., 2019; Hunt & McHale, 2007). The authors highlight that there are discrepancy from the prevalence in the general population, in medical services and from different regions (Lee et al., 2019). Due to the growing rates presented worldwide, it is crucial to gain a better understanding of the causes and treatment of AA, AT and AU.

Figure 1.3. Alopecia Areata, Alopecia Universalis and Alopecia Totalis

1.9.1. Prognosis of AA

The prognosis for people with AA has been investigated and research has found that approximately 50% of patients with AA experience regrowth within 12 months. However, a reoccurrence risk of 85% has been estimated (Finner, 2011). Furthermore, approximately 25% of patients with AA are reported to gradually experience the more severe forms: AT and AU (Pratt & King, 2017; Tosti, Bellavista & Iorizzo, 2006).

The prognosis of patients with AU and AT has been explored in a longitudinal study which found that 17% of patients with AU and AT experienced complete hair growth and 24% of patients reported some hair growth (over 90% hair growth) (Jang et al., 2017). However, 65% of patients with AU and 20% of patients with AT showed no improvements (Jang et al., 2017). In a recent review exploring the long-term prognosis for patients with AT and AU (Burroway, Griggs & Tosti, 2019), findings revealed that approximately 9% of patients with AT and AU achieved complete hair growth while the majority of patients experienced temporary partial or total hair growth (Burroway et al., 2019). The authors concluded that response to the treatment and long-term prognosis for patients with AT and AU is unpredictable and often disappointing (Burroway et al., 2019).

1.9.2. Aetiology of AA

The aetiology of Alopecia seems to be multifactorial. Genetic factors combined with environmental factors such as stress, hormones, trauma and significant life events are found to be implicated (Madani, 2000; Hunt & McHale, 2007; Dudda-Subramanya, Alexis, Siu & Sinha, 2007; França & Jafferany, 2016). However, the relative contributions of these factors have been debated for decades (McElwee et al., 2013). Jackow et al. (1998) investigated the genetic and environmental factors of AA by assessing identical twins. The authors found 55% concordance rate between the twins. This supports the claim that both genetic and environmental factors contribute to the development of AA. McElwee and colleagues' (2013) findings also supported this conclusion. Additional support for the genetic component in AA comes from studies which have shown that 10– 40% of cases with AA reported positive family histories (Yang et al., 2004; Green & Sinclair, 2000).

Chu and colleagues (2011) conducted a nationwide population study to investigate the comorbid skin disorders that are associated with Alopecia. The authors found that AA was

significantly associated with other auto-immune and inflammatory skin conditions such as vitiligo, atopic dermatitis, psoriasis and thyroid disorders (Chu et al., 2011). This has been supported by multiple researchers that found that 26% of patients with AA also presented with psoriasis (Picardi et al., 2000).

Stress is also proposed as a factor in the aetiology of AA (Gupta, Gupta & Wattel, 1997; Shenefelt, 2011).Trauma and significant life events have been recognised to trigger AA (Hunt & McHale, 2007). In a study by York, Nicholson & Minors (1998) the authors found that women who report high levels of stress have been found to be 11 times more likely to experience hair loss compared to those who do not report high levels of stress.

Research has been conducted to explore the impact of stressful life events on the onset and maintenance of Alopecia. Researchers concluded that higher levels of stressful life events, (such as losing family members or experiencing emotional neglect) may have a significant impact on the onset and worsening of AA (Hunt & McHale, 2004; Sahiner et al., 2014; Taheri et al., 2012). However, it has been debated whether it is the stressful events or the perceived stress and personality traits of patients with Alopecia that is important to explore when considering the causes of AA (Picardi et al., 2003).

The personality traits of people with AA have been explored and researchers have noted that people with AA who present difficulties in adjusting to the condition tend to have a dependent personality trait or antisocial personality trait (Ruiz-Doblado, Carrizosa & Garcia-Hernandez, 2003). Other studies found that patients with AA presented an inability to express emotional experiences or cope with stressful life circumstances (Invernizzi et al., 1987). However, patients with AT and AU were not included in these studies and may present with further personality traits and difficulties than those with AA. In another study patients with AA, AT and AU were measured using the Minnesota Multiphasic Personality Inventory (MMPI-2) (Alfani et al., 2012). The researchers concluded that participants presented high

levels of anxiety, depression, health concerns, hysteria, bizarre thoughts, psychopathic deviance, psychasthenia, schizophrenia and difficult family relationships in comparison to the control group (Alfani et al., 2012). However, other researchers argued that individuals with AA do not have negative personality traits. Using the NEO-Five Factor Inventory (NEO-FFI) questionnaire (Kim, Kim, Ko, Kim & Kim, 2016), the researchers concluded that extraversion and agreeableness were significantly higher in individuals with AA in comparison to the control groups (Kim et al., 2016). Further research found that AA was linked with high avoidance in relationships, high alexithymia and limited social support (Picardi et al., 2003). Alexithymia is a disorder that is characterised by individuals struggling to differentiate and describe feelings (Willemsen, Roseeuw & Vanderlinden, 2008) and can interfere with relationships and therefore reduce social support available for people with it. There is a lack of conclusive evidence on the personality traits that might be implicated in the onset and maintenance of AA.

1.9.3. Physical Symptoms of AA

As described above, AA is usually characterised by small, round patches of baldness or complete hair loss on the scalp and around the body (França & Jafferany, 2016). The physical manifestations of the skin conditions is also manifested in blood abnormalities. Individuals with AA have been found to have irregularities to the thyroid function and ferritin levels (Cerman et al., 2014; Mandani & Shapiro, 2000; Esfandiarpour, Farajzadeh & Abbasadeh, 2008; Lueking et al., 2005). However, limited research has been conducted to explore the effectiveness of psychological interventions for the physical symptoms of AA.

1.9.4. Psychological Symptoms of AA

The psychological wellbeing of individuals with AA is significantly affected by the condition (Kassira, Korta, Chapman & Dann, 2017; Hunt & McHale, 2005). Sufferers usually describe it as a highly distressing disorder as it occurs and re-occurs spontaneously (Hunt & McHale, 2005) and is visibly disfiguring. Studies have been found that sufferers report a reduction in their physical, social and psychological wellbeing (Lorizzo & Tosti, 2015) and have the highest report of suicidal ideation and mortality risk among patients with skin disorders (Layegh et al. 2010). Furthermore, studies have found that 40% of women with AA reported marital problems and roughly 63% reported to have issues with their career (Hunt & McHale, 2004). Both patients and clinicians treating AA consider and describe the disorder as challenging, frustrating and time-consuming (Lorizzo & Tosti, 2015).

Research on the psychiatric disorders that commonly occur in people with AA (Colon et at. 1991; Ruiz-Doblado, Carrizosa & García-Hernández, 2003; Hunt & McHale, 2005; Garcia-Hernandez, Ruiz-Doblado, Rodriguez-Pichardo & Camacho, 1999) found that 74% of patients with AA to have a single or multiple psychiatric disorders in their lifetime with 39% presenting with depression or anxiety. One study explored the psychiatric illnesses of relatives, and found that 58% presented with anxiety disorders, 35% with affective illnesses and 35% with substance dependency disorders (Colon et at. 1991). The authors concluded that patients with AA are at a higher risk for psychiatric disorders and that psychiatric screening should be encouraged for patients with AA. Supporting studies also found AA to be highly comorbid with adjustment disorders (Ruiz-Doblado et al., 2003; Hunt & McHale, 2005; Garcia-Hernandez et al. 1999). Additionally, research has also found that patients with AA reported significantly more physically and emotionally traumatic events in their childhood and lifetime in comparison to individuals without AA (Willemsen et al., 2009). This suggests a significant association between psychiatric disorders and trauma and AA.

It has been suggested that treatment for psychiatric disorders in people with AA may result in improvements of both the psychiatric condition and the physical manifestation of AA (Garcia-Hernandez et al., 1999) and that psychological treatment should be offered to individuals with AA to reduce psychological distress and to support the management and adjustment to the condition (Tucker, 2009).

1.9.5. Quality of Life

Research has been conducted into the impact of the Alopecia on the individual's quality of life (Liu, King & Craiglow, 2016; Rencz et al., 2016; Davis & Callender, 2018). Recent meta-analysis and systematic reviews were conducted into health-related quality of life for individuals with AA between 1946 and 2018 (Liu et al., 2016; Renz et al., 2016; Davis et al., 2018). The authors concluded that individuals with Alopecia experience significant difficulties with regards to their health-related quality of life in comparison to the general population. The authors found that psychological difficulties have a negative impact on the patients' quality of life, and therefore should not be overlooked when treating patients with AA (Davis et al. 2018).

The Dermatology Life Quality Index (DLQI) has been the most commonly implemented measure within the literature when exploring health related quality of life for people with AA (Rencz et al., 2016; Finlay & Khan, 1992). Alopecia specific health-related dermatology of life questionnaires have been created and used in research such as: AA Quality of Life Index, AA Quality of Life and AA Symptom Impact Scale (Rencz et al., 2016; Shi et al. 2013; Endo, Miyachi, Arakawa, 2012; Fabbrocini et al., 2013). However, the authors concluded that none of the questionnaires have been validated (Rencz et al., 2016).

In a study of patients with AA the authors explored whether their rating of their hair loss severity and clinical assessments of the severity by dermatologists were related to their quality of life (Reid et al., 2012). The authors found that the patients' rating on their hair loss

severity was highly correlated to their self-reported quality of life scores, whereas the dermatologists' ratings did not highly correlate to the patients' quality of life scores (Reid et al., 2012). These results suggest that the subjective severity of AA and psychological impact as perceived by the sufferer are crucial and should be addressed when managing individuals with AA (Reid et al., 2012).

1.10. Management of Alopecia: Medical Treatments

Medical treatment is available for people with AA but these treatment methods have not been shown to be consistently or significantly effective in treating the condition and some present long-term adverse effects (Delamere, et al., 2008; Kassira, et al., 2017). The impact of implementing medical interventions with limited effectiveness often leaves sufferers with significant distress (Hunt & McHale, 2005). None of the medical treatments available for AA have been granted approval by Food and Drug Administration (FDA) (Wang, Harris & Christiano, 2017) which starkly demonstrates lack of effective and appropriate treatments available for people with AA.

Delamere and colleagues (2008) conducted a Cochrane review to evaluate the range of medications that have been used to treat AA. The authors collected data from 17 randomised controlled trials and found that the following treatment options have been implemented to treat AA: Corticosteroids, Topical Ciclosporin, Topical Immunotherapy, Photodynamic Therapy, Topical Minoxidil, Cryotherapy, Aromatherapy, Anti-depressants and Anti-virals. The authors concluded that none of the above interventions were found to significantly improve the condition. Furthermore, the authors concluded that they could not find studies where the participants were assessed for their individual perspectives of their hair growth and their quality of life. This indicates that more research and trials are required to assess interventions to treat

AA and that patients' self-assessment of their hair growth and quality of life should also be explored.

A more recent review (Hordinsky & Donati, 2014) found that in addition to the interventions mentioned in the earlier review, more treatments have been explored and implemented, including: Anthralin, biologics, Calvineurin inhibitors, Prostaglandin analogs, Sensitizers, Azelaic Acid, Garlic Gel, Bexarotene, Triiodothyronine, Inosiplex and total Glucosides of Paeony. However, while some of these studies were found to be effective for treating AA, no treatment was found to be completely effective, and the trials conducted have been criticised for the quality of their methodologies (based on small number of participants, and lack of follow up to ensure positive long-term outcomes) (Hordinsky & Donati, 2014; Wang, Harris & Christiano, 2017; Kassira et al., 2017). Alopecia research guidelines have been published to help future studies with their study designs (Olsen et al. 1999; 2004). As there is still no FDA approval for any treatment of AA, it has been argued that further studies are needed to investigate the effectiveness of treatment options for AA, alongside an improvement to the quality of the research (Hordinsky & Donati, 2014; Kassira at al., 2017).

The recognition of the connection between the mind and skin disorders as well as evidence showing that most individuals with AA have experienced stressful life events, psychotropic treatments such as antidepressants have been tested to explore their effectiveness in AA (Hordinsky & Donati, 2014; Willemsen, Vanderlinden, Deconinck & Roseeuw, 2006). Two randomised controlled trials have been conducted to treat AA with two types of selective serotonin reuptake inhibitors (SSRI): Imipramine and Paroxetine (Perini et al., 1994; Cipriani, Perini & Rampinelli, 2001). Individuals with AA who took Imipramine were found to experience significantly more hair growth after 6 months than individuals who were given a placebo (Perini et al., 1994). Cipriani and colleagues (2001) explored the effects of Paroxetine on hair growth in people with AA but reported that individuals did not significantly improve

in comparison to the control group, and therefore improvement could not be directly credited to the Paroxetine. Since this study, the effectiveness of antidepressants in AA have been explored further and it is concluded that they have shown to have some positive effects on people with AA (Abedini, Farshi, Mizabzadeh & Keshavarz, 2014).

The psychological complexities and social difficulties associated with living with AA, highlight the importance of a holistic management, one that treats the physical manifestations of the illness as well as the psychological symptoms associated with the disorder. Structured psychological interventions could also have a pivotal role to play in the effective management of AA.

1.11. Psychological Interventions for AA

The research and literature presented above demonstrates the psychological difficulties presented for people with AA and the impact these difficulties have on their quality of life, stress and psychological difficulties. Surprisingly, psychological treatment interventions for people with AA is very limited. No randomised controlled trials have been conducted to date to investigate the effectiveness of psychological interventions for AA (Hunt & McHale, 2005). Researchers have expressed and emphasized the requirement of randomised controlled trials to be implemented for people with AA (Hunt & McHale, 2005). Psychological interventions for people with AA could potentially have significant improvements to the psychological on the psychological manifestations associated with AA and patients' quality of life, given that such improvements have been registered for people with other skin conditions (Lavda et al., 2012)

To the researchers' knowledge, one experimental pilot study has been conducted into psychological intervention for people with AA. Gallo and colleagues (2017) conducted a pilot study to investigate the effectiveness of a group Mindfulness Based Stress Reduction (MBSR)

programme for people with AA. The authors concluded that people with AA who received the intervention showed significant improvements to their self-reported quality of life and to their self-reported perceived stress. The authors also concluded that there were no significant improvements to the hair condition in terms of hair loss in comparison to the control group (Gallo et al. 2017). However, due to the small sample size and the lack of randomisation to the intervention group and control group, the findings are considered inconclusive.

A systematic review was since conducted to explore additional and complimentary interventions for people with AA (Tkachenko et al., 2019). The review included 15 journal articles and investigated physical and psychological interventions that were provided for AA. When focusing on the psychological interventions, the authors confirmed that hypnosis and mindfulness interventions were found to be effective in improving psychological symptoms of AA and quality of life (Tkachenko et al., 2019). This review provided promising and supporting evidence for the improvement of psychological symptoms for people with AA. However, the authors also caution that further, higher quality research is required to confirm these results.

The impact of psychological treatment in the management of AA remains unclear and further studies are required to explore treatment outcomes (Hunt & McHale, 2005). However, the study by Gallo et al. (2017) and the review by Tkachenko et al. (2019) presents promising results regarding the effectiveness of third wave interventions for AA. To date and to the best knowledge of the author, no other psychological interventions have been implemented for people with AA. Further research is required to further investigate the effectiveness of psychological interventions for people with AA.

1.12. Rationale

AA is one of the most common, universal, auto-immune disorder which significantly impacts patients' wellbeing and quality of life and presents the highest suicidality risk within skin disorders (Layegh et al., 2010). Medical treatments currently available have not been found to be effective in controlling the condition (Delamere et al., 2008). This leaves suffers with an array of Psychological challenges and can impact their quality of life. For example, sufferers report how the condition has adversely impacted their life choices, their experience of high levels of stress, anxiety and depression (Liu et al., 2016; Rencz et al., 2016; Davis et al., 2018; Brajac et al., 2003; Colon et at., 1991). However, research into psychological treatments for people with AA has been limited. Skin disorders such as psoriasis and atopic dermatitis share similar characteristics to AA. Research in other skin conditions suggests that the psychological and physical symptoms associated with these conditions can be effectively reduced through the use of psychological treatment. CBT has been found to be particularly effective for physically and psychologically treating Psoriasis and Atopic Dermatitis (Lavda et al., 2012) which share strong similarities to AA.

To date, no randomized controlled trials have been implemented in evaluating the effectiveness of psychological interventions for people with AA. Only one study has investigated so far the effectiveness of group MBSR for people with AA. Findings showed that improvements were reported by participants in perceived stress and their quality of life (Gallo et al. 2017). These findings suggest that psychological interventions for people with AA can improve the psychological difficulties associated with AA. This has provided the foundation for the rationale, aims and hypotheses of this research trial. However, the study did not find improvements to the physical manifestations of AA following the MBSR training, which does not align with earlier findings which reported that psychological interventions improved the psychological as well as the physical symptoms of a range of other skin conditions. There are

a number of a reasons that may have contributed to these findings. It may be that this finding occurred due to the differences in the nature of the skin conditions, or due to methodological differences in the research, such as the small sample size, the modality and nature of the therapy provided, or due to the lack of randomization to groups in this study. However, the scarcity of research conducted into this field raise questions as to whether psychological and physical symptoms can improve when implementing psychological interventions for people with AA.

1.13. Aims

The aim of this research was to address the current research gap presented with limited research currently implemented for psychological interventions for people with AA. A pilot RCT was implement to investigate the effectiveness of integrative CBT in reducing the physiological and psychological symptoms associated with Alopecia in comparison to the no treatment waitlist control group. To investigate the efficacy of the intervention, the physiological symptoms of AA (irregularities of iron and thyroid functioning) and psychological symptoms of AA (anxiety, depression, quality of life, stress and the impact of the condition) were measured before and after the integrative CBT intervention, due to the existing research on the symptoms experienced for people with AA. One of the main goals of the current research was therefore to alleviate the psychological and physical difficulties experienced by AA suffers and support patients with the management of these symptoms.

Another aim of the research study was to address the research gap by providing a novel psychological intervention that includes elements provided by the earlier research from Gallo and colleagues (2017) of MBCT. CBT has shown strong evidence for supporting people with skin conditions (Lavda et al., 2012) but to date, this modality has not been implemented as a RCT for people with AA, to the researchers' knowledge. Mindfulness was chosen as an

additional theoretical approach and intervention in this trial to support individuals with AA in developing greater awareness of their physical difficulties, to promote acceptance of their skin conditions, and to support the management of their condition. This theoretical approach was chosen as the foundation of this research project, due to the strong emphasis between the connection between the mind and the body and due to the significant research evidence for this therapeutic modality, within the field of psychodermatology and for people with chronic health conditions.

The therapeutic modality chosen aims to add to the literature by also implementing narrative therapy which has shown promising results for people with chronic conditions (Ncube, 2006; 2007). Narrative therapy was also chosen for this trial due to the significance of coping and management difficulties reported for people with the skin conditions and due to the research that has been found effective results for people with chronic health conditions. As narrative therapy has not been implemented for people with skin conditions, the current study aims to evaluate the effectiveness of psychological treatment modality that has not been previously implemented for people with skin conditions but has been implemented for people with chronic conditions and has shown promising results. Therefore, the CBT, mindfulness and narrative theoretical frameworks were chosen to underpin the psychological intervention implemented and this research trial.

Lastly, this research trial also aimed to add valuable knowledge to the literature by providing the intervention as an individual therapy modality rather than a group intervention that has been previously implemented (Gallo et al., 2017). As an individual intervention had not been implemented previously for people with AA, it is crucial for this research to address this gap in the literature.

1.14. Hypotheses

The trial evaluated the effectiveness of the targeted and tailored interventions of integrative CBT for people with AA by measuring and comparing the psychological and physical manifestations of the condition. The psychological manifestations were evaluated using psychological self-reported measures of anxiety, depression, stress and quality of life which are highlighted in the above review to be prominent for people suffering with Alopecia. The physical manifestations of AA were measured using a scalp assessment and medical photography to evaluate hair growth and blood tests measuring thyroid imbalances and Ferritin.

The study investigated two hypotheses that were based on the previous research findings detailed above. Very limited research had been implemented for people with AA, however, the findings from the research indicated the following hypotheses can be predicted.

The first hypothesis predicted that participants receiving the integrative CBT intervention (with and without medication) will present significant improvements to the psychological manifestations of AA in comparison to those on the waitlist control group who had not received psychological intervention.

The second hypothesis predicted that participants receiving the integrative CBT intervention (with and without medication) will present significant improvements to the physical manifestations of AA in comparison to those on the waitlist control group.

CHAPTER 2: METHODOLOGY

2.1. Overview

This chapter describes the research methodology, design and procedures implemented for the investigation of the impact of Integrative Cognitive Behavioural Therapy (CBT) on symptoms associated with Alopecia Areata (AA). The causes of AA are still greatly debated, impacting the effectiveness of treatment methods, with medical treatments not significantly improving the condition (Delamere et al., 2008). Psychological interventions have been successfully employed as adjuncts to medical treatments in other chronic skin conditions such as Psoriasis and Atopic Dermatitis, however such interventions have not been implemented in AA. Cognitive Behavioural Therapy (CBT) has been found to be the most effective evidence-based form of psychological intervention for improving skin disorders, in particular for Psoriasis, Atopic Dermatitis, Vitiligo and Acne (Lavda, Webb & Thompson, 2012). Due to the shared psychophysiological qualities of these disorders, it can be hypothesized that psychological treatments may have similar positive effects for Alopecia. While few studies measured patients' psychological states while undergoing treatment for AA, to date there has only been one study (Gallo et al., 2017) implemented to investigate the effectiveness of a psychological intervention for people with AA. The impact of psychological treatment for AA therefore remains inconclusive.

This chapter describes the research methodology, epistemological position that guided the research and the research procedures implemented for the investigation of the impact of an Integrative Cognitive Behavioural Therapy intervention on symptoms associated with AA. The

study was a randomised controlled trial, which compared two groups of participants with AA: 1) participants who received the intervention and 2) those who were on a waiting list. The study aimed to explore differences between the two groups on the following physical variables: hair loss severity, iron levels and thyroid functioning using blood tests. The group differences were also explored according to psychological measures of anxiety, depression, the impact of the condition of their quality of life and rating scales exploring distress experienced by the condition in order to understand the impact and effectiveness of implementing a psychological intervention for people with AA.

2.2. Epistemology

Epistemology is a philosophical position that underpins research methodologies, and informs the choices that researchers make regarding the strategy, plan of action, process or design of a study. Therefore, it is essential for researchers to consider their ontological and epistemological stance, prior to embarking on a research project. Blaikie (2000) describes ontology as "claims and assumptions that are made about the nature of social reality……Ontological assumptions are concerned with what we believe constitutes social reality." (p. 8). A researcher's ontological position in a particular research project is therefore their response to the question: what is the nature of reality that is investigated? In psychology this could be a complex question since reality is, in most studies, what the participants are experiencing. Blaikie (2000) goes on to describe epistemology as "the possible ways of gaining knowledge of social reality" (p. 8). A researcher's epistemological position is therefore their answer to the question: how can we acquire knowledge of this reality? Ontology and

epistemology are linked because the way we perceive reality informs the way we consider how we can acquire knowledge of this reality.

The theoretical underpinning of this study was guided by the post-positivist paradigm, which is a combination of a positivist scientific and deductive stance, with an acknowledgement of the subjective elements that both the participants and the researcher bring with them to the research endeavor.

The positivist perspective holds the view that the world and people's experiences can be measured and understood by using quantifiable, objective measures (Blaikie, 2007). According to this paradigm, all human phenomena can be captured and identified through the use of scientific hypothetico-deductive methods (Cacioppo, Semin & Berntson, 2004; McGrath & Johnson, 2003; Ponterotto, 2005). This means that the positivistic perspective relies on querying predictions that can be quantified and aiming to explain the relationship between variables (Ponterotto, 2005).

However, there are limitations associated with this theoretical perspective as the lives and personal experiences of the participants and interpretations of the researchers tend to not be explored (Creswell & Cark, 2007). Furthermore, as the personal experience cannot be or may not have been explored and quantified in the research, this may lead the personal experiences of the participants to be overlooked within the research (Ryan, 2006).

Post-positivism which was developed later on (Ponterotto, 2005), acknowledges that gaining knowledge of reality only through quantifiable, objective measures, is often partial since it can never capture all of the details of the reality that is being investigated, and it may also be in some ways biased, due to intervening variables that cannot be measured or controlled (Ponterotto, 2005). Therefore some critical reflection is required on behalf of the researcher to acknowledge the limitations of their research.

Given that the current research explored the effectiveness of a psychological intervention implemented within the counselling psychology field, and the psychological distress that is often experienced by the condition of AA, it was necessary for the theoretical position taken by the researcher to take into account the subjective aspect of the research, and the impact of participants' and the researcher's subjective experience on the ways in which data is collected, and the ways in which that the intervention is applied.

It should be noted however, that while the post-positivist approach is inclusive of the subjective experiences of those taking part in the study, it holds the view that the researcher should remain objective (Ponterotto, 2005). The use of questionnaires and medical tests to collect data is often seen as a main means to ensure the researcher's objectivity. In comparison to the social constructionist and critical realist paradigms, the personal experience of the researcher will not lend itself to the research, but will be used to help them to remain objective, while critically acknowledging their experiences and how they may impact the research (Ponterotto, 2005). The post-positivist stance commonly requires quantitative research methods which is why quantitative methods were chosen for this study.

2.3. Quantitative Methods

A quantitative experimental design was chosen for this study to assess changes in disease severity and psychological distress among participants and therefore investigate the impact of an integrative CBT-focused intervention. Quantitative methods aim to measure the relationships between variables that can be described numerically, and therefore involve collecting data through quantifiable, reliable and validated means (Ponterotto, 2005; Denzin & Lincoln, 2000). Their aim is often to enable to detect causality as well as to generalise from a sample to a larger population (Toomela, 2010).

Within counselling psychology, it has been argued that quantitative methods play a vital role in providing evidence that support developments in the field and recommendations for effective (Gore-Felton, 2005). Quantitative methods are conducted for three purposes: experimentation (trialing new treatment), addressing questions about a phenomenon, and observing (Clark-Carter, 1997). Quantitative methodology meets the first two purposes of this study: it aimed to address unanswered questions regarding AA and to explore the impact of a psychological intervention when used for the care of AA.

When deciding whether to use a quantitative or qualitative research design, several implications were considered. The research design was chosen to involve medical and psychological assessments, which cannot be conducted using qualitative methods (for example: scalp assessments and blood tests). Additionally, the study aimed to investigate and measure the effectiveness of an intervention, and therefore compare measures that have been administered before and after the intervention to determine this impact. Importantly, impact or effectiveness can only be measured using quantifiable, reliable and valid measures that can determine whether a change has occurred along the timeline of the study. While qualitative methods could be potentially used in this context for an in-depth exploration of feedback from the participants receiving the intervention, and the changes they experience, the impact measured in this manner will not be quantifiable nor comparable to other conditions or previous studies, therefore lacking the power to replicable results or generalise them.

It may also be argued that such an intervention may benefit from a mixed method design and joint implementation of quantitative and qualitative methods. However, given that the main researcher was involved in the implementation of the intervention, it would be unethical for them to both deliver an intervention and then also conduct qualitative analyses such as interviews or focus groups with the same participants. Therefore, the only means of separating between the researcher's dual role as therapist and researcher, was to use questionnaires and

other tests that can be collected by other staff, and therefore enable to maintain the researcher's objective stance in the research. Furthermore, given the nature of the therapeutic intervention that is personal and private, it would be unethical to conduct a focus group with these individuals. Given these ethical considerations, quantitative methods were deemed mostly appropriate for this study. The chosen experimental design was therefore a randomised controlled trial (RCT) which is considered the "golden standard" for assessing the impact of interventions, which is also in line with the post-positivist paradigm (Ponterotto, 2005).

2.3.1. Randomised Controlled Trial (RCT)

One of the critiques of early medical research is that it was unable to offer clear answers as to the effectiveness of treatments due to the way that is was designed, therefore research was described as 'unpredictable' (Meldrum, 2000). On the back of this critique, researchers in medicine and statisticians devised a model that would capture the multifaceted reactions experienced by participants when implementing therapeutic treatments (Meldrum, 2000). The model requires making comparisons between two or more groups, one of which must receive the intervention being trialled, while the other group is described as a control group and receives no intervention, treatment as usual or a placebo treatment. The second part of the model involves a statistical analysis which is used to examine the impact of the interventions. This is done by measuring patients' conditions before and after the intervention and then assessing the changes that occur in patients' conditions along this timeline. The combined methods enable researchers to assess changes that are occurring as a result of the intervention against a possibility of a change in participants' condition occurring naturally (Meldrum, 2000). The development of RCT was based on this model and involves the following characteristics: a comparison group (such as control or placebo group), randomisation of participants to the groups, the blinding of the participants to the intervention, and measuring

patients' condition using the same measures several times along the trial timeline (Meldrum, 2000).

Due to the novel and unique intervention implemented within this trial, it was considered whether it would be most appropriate to implement this research as a pilot study or feasibility study. A feasibility study is described as a piece of research that is questioning whether it is possible for the study to be conducted (Eldridge et al., 2016). A feasibility study is often implemented when the researchers are considering the following variables of the study: required sample size, willingness of clinicians and participants to participate, outcome measures chosen and implemented, whether there is sufficient time for the recruitment collection and data analysis (Eldridge et al., 2016). Alternatively, a pilot study is defined as a smaller version of the main research study to test whether it is possible for all the components to be implemented simultaneously and to investigate the initial results of the trial (Eldridge et al., 2016). The results of the pilot study may also be used to contribute to the final larger scale research study (Eldridge et al., 2016).

While it was considered for this trial whether a feasibility study or pilot study would be most suitable, it felt that a pilot study would be most appropriate due to the reasons presented below. Firstly, the previous research designs, findings and implementation of psychological interventions for people with chronic skin conditions with similar psychophysical characteristics to AA provided a strong reason to proceed with a pilot study, as feasibility has already been shown in these earlier studies. The information required for the number of participants using the power analysis below meant that the sample size could be estimated appropriately. Additionally, research and similar types of interventions have been previously conducted within the department that hosted the research project. Therefore it felt it would be possible to recruit and randomise participants effectively to the groups but also receive support from the dermatology department. Lastly, the outcome measures implemented within this trial

are those that have been widely used, researched and validated within the field of psychodermatology. For the reasons specified above, it felt important to implement this research as a pilot study, as earlier research has been conducted in this manner for people with a range of chronic skin conditions. Furthermore, while the intervention that was chosen for this trial was uniquely devised for people with AA, previous research from Gallo et al (2017) implemented MBCT as a pilot study for people with AA. The study showed promising results for the effectiveness of CBT and third wave interventions for people with AA. For these reasons it felt most appropriate to progress with this research trial as a pilot study.

2.4. Design

This pilot study is an experimental RCT which aimed to assess the effectiveness of an integrative CBT intervention in the treatment of a group of AA patients. This experimental design aligns within the theoretical frameworks mentioned above of the biopsychosocial model and implements a quantitative research design that reflects the post-positivist theoretical perspective. Participants were randomly allocated to either an experimental group of 12-weeks individual Integrative CBT-focused intervention, or a wait list control group who received no treatment during the waiting period of 12 weeks.

The randomisation of participants occurred on the timing of their recruitment: once a participant was identified as suitable and deemed willing to participant in the trial, they were allocated to a group based on equal numbers between the two groups and using the randomisation tool provided through the use of Excel Office.

The research design chosen for this study was therefore a mixed method design. The psychological intervention (Integrative CBT-focused) was the between-subjects factor with

two levels: a) intervention (experimental) group, b) waiting list (control) group. The within-subjects factor was time with two levels: a) pre-intervention assessment and b) the 12-week post-intervention assessment. The dependent variables for this research were the outcome measures by which improvement in AA was evaluated. The outcome measures were both medical and psychological. The measures were administered at the outset of the intervention for both groups and at the end of the intervention (after 12 weeks) for the experimental group and after the 12-week waiting period for the control group. Importantly, the participants' pre-existing medication has been considered but medical treatment was not manipulated in this trial.

2.4.1. Power analysis

A power analysis was conducted to explore the required sample size for a larger study design, for a small to medium effect size of 0.4 - 0.5. The power analysis was conducted based on a meta-analysis of psychological interventions for skin conditions with similarities to AA (Lavda, Webb & Thompson, 2012), which reported that psychological interventions had a medium effect size of 0.5 for psychosocial outcomes and a low to medium effect sizes of 0.4 on the skin condition. To achieve effect sizes of 0.4 – 0.5, the power analysis revealed that a total sample size of 39 - 58 participants would be required within a larger study. The power analysis was conducted through the use of the G*Power programme (Faul, Erdfelder, Lang & Buchner, 2007). Based on this assessment, sample size was calculated for this pilot study. It was based on confidence intervals, and on research previously conducted in psychodermatology which calculated that approximately 9% of the total sample size is needed as a minimum for a pilot study (Cocks & Torgerson, 2013). Therefore, as a minimum requirement, the pilot study aimed to recruit 6 participants in total. This was also supported by several earlier pilot studies. In a study that investigated the effectiveness of mindfulness-based

interventions for people with AA (Gallo et al., 2017) the researchers recruited 8 participants for the intervention group and 8 participants for the control group. Similar participant sample sizes were also reported in pilot studies that investigated the effectiveness of psychological interventions for people with atopic eczema and psoriasis (Horne, White & Varigos, 1989; Tausk & Whitmore, 1999). The researcher therefore aimed to recruit a sample size of 16 participants in total, with 8 assigned to the intervention group and 8 assigned to the wait-list control group.

2.5. Participants

Fifteen participants were recruited of which eight participants received the integrative CBT-focused intervention and seven participants were allocated to the waiting list control group. The participants were randomly allocated into these groups. Once the participants in the control group completed the 12-weeks waiting time period, they were then offered the intervention, and their data were added to the experimental group. The participants were blind to their group assignment but the researcher and the other professionals within the team were aware of this allocation.

2.5.1. Inclusion criteria

The inclusion criteria for the study were as follows:

Firstly, the participants were required to have a diagnosis with Alopecia Areata (AA), Alopecia Universalis (AU) or Alopecia Totalis (AT) for a minimum of one year, as assessed by a GP or dermatologist. AA is diagnosed according to the presentation of patchy non-scaring hair loss experienced on the scalp and around the body (Madani & Shapiro, 2000). AT and AU

are more severe forms of Alopecia: patients with AT experience complete hair loss on the scalp, while patients with AU experience complete hair loss both on the scalp and around the body (Madani & Shapiro, 2000). It was decided to include participants with AA, AU and AT as approximately 25% of participants with AA are found to gradually develop the more severe forms Alopecia: AT and AU (Pratt & King, 2017; Tosti, Bellavista & Iorizzo, 2006) which was also evident among patients throughout the trial.

The participants were required to have had a diagnosis of Alopecia for at least 1 year. This is because approximately 50% of patients with AA experience regrowth within 12 months (Finner, 2011; Tosti et al., 2006). In order to examine the impact of the intervention on hair growth, it was essential to recruit patients who had passed the usual re-growth period. The study therefore recruited patients with more severe and lasting forms of AA. This ensured that any changes that occurred following the intervention, were not caused by the conventional progression of the condition.

Secondly, the participants were required to be over the age of 18 and were required to be able to consent to the study.

Lastly, all participants were required to have an appropriate level of spoken language and fluency in English. The reason for this criterion is that participants who do not have a fluency in English may struggle with the language used for the intervention, which could be a confounding variable for the effectiveness of the intervention.

2.5.2. Exclusion criteria

Individuals with another more dominant psycho-dermatological disorder, brain injuries, learning difficulties, dementia, a dominant, severe and enduring mental illness such as psychosis and personality disorders were excluded from the study. This is because the intervention may impact them differently and may require more support for their alternative

condition to patients who are diagnosed with AA as the dominant disorder. A second more dominant disorder would therefore become a confounding variable. Individuals with learning difficulties, brain injuries or dementia were excluded as these conditions may impact the effectiveness of the intervention which could also be a confounding variable.

Individuals who were abusing drugs or alcohol were also excluded due to the potential that they may be intoxicated at times during the treatment, which may impact their participation and hence undermine the intervention.

Another exclusion criterion was being pregnant. This is because pregnant women commonly experience hair loss due to the changes in hormones, and their hair returns to its pre-pregnancy state once hormone levels were restored (Pierard-Franchimont & Pierard, 2013). Therefore if these participants were included in the study, the effectiveness of the intervention on hair re-growth would be unclear as it could be associated with the changes of hormone levels during pregnancy.

Lastly, it was decided to exclude individuals who had participated in therapy within 1 year, as these participants may already have information and knowledge on the therapeutic modality which may impact the effectiveness of the intervention.

2.5.3. Medication

During the study, 9 participants were receiving medical treatment and 6 participants were not on any medical treatment for their AA. Medication was not administered or manipulated through the trial and therefore use and adherence was not monitored. The following medications were used by participant: Topical Corticosteroids, Intra-lesional Steroid Injections, Methotrexate, Topical 5% Minoxidil, Diphencyprone (DPC) and Clobetasol Propionate, Prednisolone or a combination of these (Majid & Keen, 2012; Tosti, Piraccini, Pazzaglia & Vincenzi, 2003).

These medications were either prescribed or bought over the counter. They are available as injections, creams, shampoos and pills. There were also participants who changed their medication throughout the trial due to the lack of effectiveness of the earlier medication. Although the medication was not manipulated in this trial, its impact on the outcome measures was assessed and controlled for.

2.6. Recruitment

Following the ethics approvals received from City University London Ethics Committee, and from the NHS Stanmore Ethics Committee, and the confirmation of capacity and capability from the Royal Free Hospital (See appendix A, B and D), recruitment began in September 2018.

Participants were recruited from the Psychodermatology Department at the Royal Free Hospital NHS Foundation Trust. They were recruited using advertisements placed in the department (Appendix E) or by being contacted if they were on the department's waiting list to receive psychological therapy. Medical professionals identified potential participants who may be interested in the intervention, and agreed for the researcher to contact them to invite them to participate. The researcher assessed whether individuals were suitable for the study using an initial assessment (see details below).

During the recruitment process, dermatologists from the Royal Free site referred 30 participants to the trial in total. However, from those participants only seven participants agreed to participate by March 2019. Nine participants were recruited between April and September 2019 from the Dermatology Service in the Barnet site, which is also part of the Royal Free Hospital NHS Foundation Trust.

2.6.1. Attrition

Overall, 45 patients were referred and approached for participating in the study. Due to various reasons such as lack of interest in participating in the trial, difficulties with work commitments, other personal commitments, psychological difficulties, physical difficulties and complications with contacting the participant, 17 participants were recruited and participated in the trial. During the trial, two participants dropped out from the intervention group. One participant dropped out due to having another more dominant psychological difficulty that worsened during the trial period and the second participant dropped out due to work commitments. Two participants who initially agreed to take part in the trial but prior to consenting to their participation had decided they no longer wanted to participate. None of the participants dropped out from the control group. The flow diagram below presents the recruitment and attrition that occurred within the trial (See Figure 2.1.)

2.6.2. Assessment

Every participant on the trial received an initial assessment to assess their suitability for inclusion in the study. Regarding the AA, the assessment explored the factors that may have contributed to the alopecia aspects of their identity, body image and relationships. The assessment also explored background information, occupation, hobbies, family background and support available for the participant, history of any drug and alcohol dependency and experience of previous therapy. Once the information was gathered, the trainee psychologist and the participant collaboratively set treatment goals to direct the therapeutic work. See Appendix L for the Assessment structure.

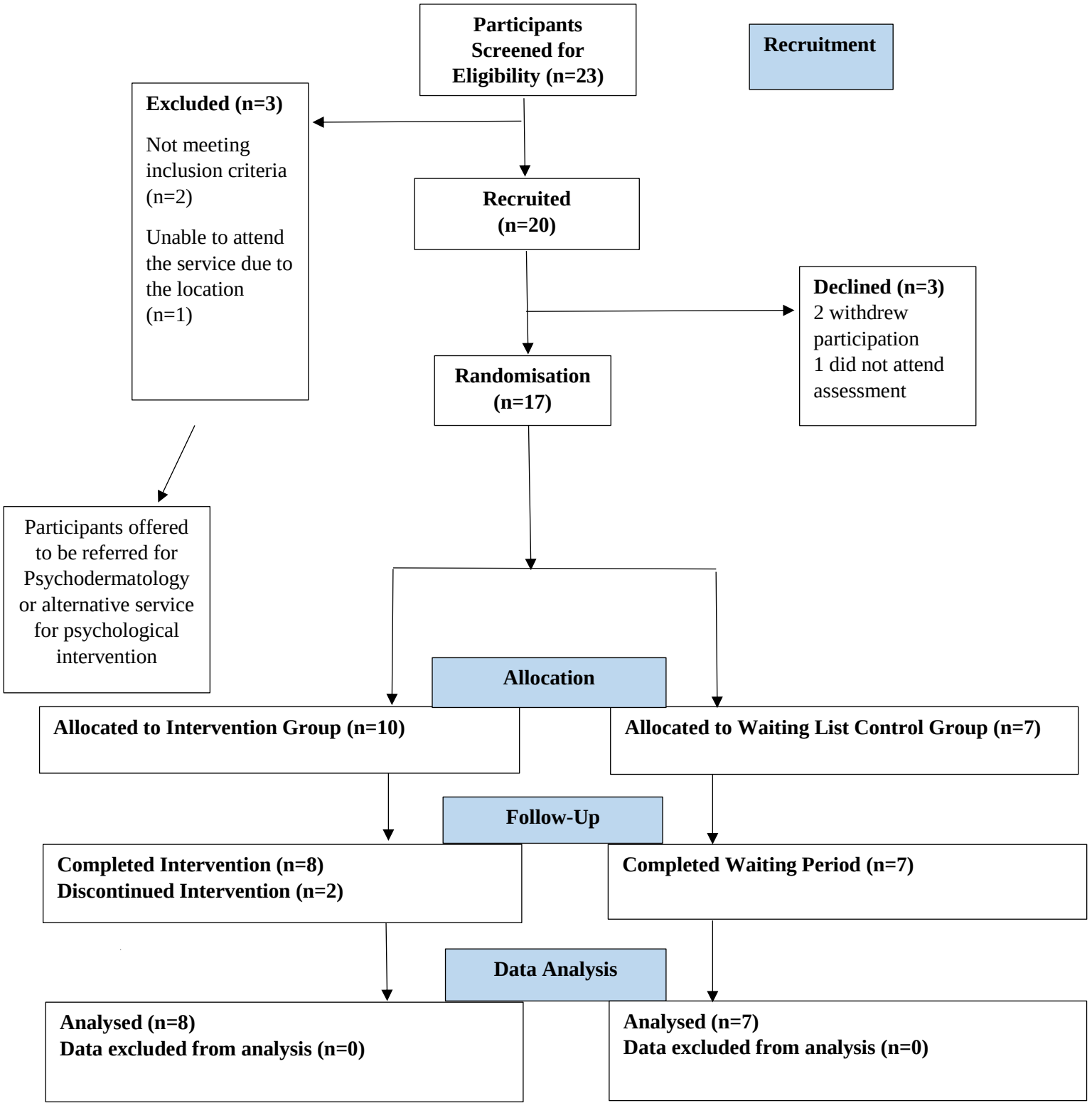

Figure 2.1. Recruitment and Attrition of Trial

2.7. The intervention:

Integrative Cognitive Behavioural Therapy (CBT) focused for AA: Nurturing the Roots

Participants in the Integrative CBT focused intervention group were given 12 weeks of 60-minute individual sessions at the Psychodermatology service at the Royal Free Hospital. The intervention was implemented by the trainee psychologist and principal investigator of the project. The intervention was novel and was created for this trial by the researcher and supervisors tailored for people with AA by drawing on CBT interventions implemented for people with similar skin disorders (such as psoriasis and atopic eczema) (Lavda et al., 2012). The intervention and project was initiated and conceptualised by the Psychodermatology Department at the Royal Free Hospital who had a strong research interest into psychological interventions, particularly CBT and third wave interventions for people with a range of skin conditions. Once the project was initiated, the design of the project and intervention was further chosen, developed and shaped by the joint collaboration between the principal investigator, the research supervisors and medical professionals working with the Dermatology Department at the Royal Free Hospital. As the chosen intervention is a tailored intervention, every participant was assessed for their individual difficulties, treatment goals and needs. Once the participant's individual needs were gathered, the protocolled intervention was implemented.

The chosen modality fits within the Assimilative Integration category. Assimilative Integration refers to the therapeutic modality that implements a main and foundation theoretical model and incorporates additional theories and techniques from other modalities (Messer, 1992; 2001, Lampropoulos, 2001). The chosen foundation theoretical model was CBT, and integrated additional theories and techniques from mindfulness and narrative therapy (Lavda et al., 2012; Ncube, 2006; Hughes, 2014; Kabat-Zinn et al., 1998; Lampropoulos, 2001).

Mindfulness had been chosen to support the participants to develop an awareness and acceptance of their thoughts, beliefs, emotions, behaviours and their body, which has been found to be beneficial for individuals with chronic skin conditions (Kabat-Zinn et al., 1998). The CBT third wave approaches, which incorporate CBT and mindfulness have been found to be effective for individuals with a range of psychodermatological conditions such as: psoriasis, eczema and significantly improved their quality of life, anxiety, depression and the overall condition (Fortune, 2002; 2004; Bundy et al., 2013; Lavda, Webb & Thompson, 2012; Kabat-Zinn et al., 1998; Fordham, Griffith & Bundy, 2013; Wetherell et al., 2011). Lastly, narrative therapy had also been integrated as it has been shown to support individuals with the management and acceptance of chronic health conditions, by identifying and contributing to their life narratives and highlighting their strengths and resilience (Ncube, 2006; 2007; Hughes, 2014; Butera-Prinzi, Charles & Story, 2014).

The intervention implemented targets the following areas: self-esteem, body image, anxiety, low mood, identity, grief, loss and compassion, as research suggests that individuals with AA particularly struggle with these areas (Hunt & McHale, 2005).

The intervention was planned and implemented for 12 sessions. The therapeutic intervention was structured in four phases which mapped onto specific session plans that are presented in the protocol. The general protocol structure of the intervention and a session plan for each session can be viewed in Appendix M. At times during the intervention, the participant may have brought aspects to the sessions that may have diverted from the original phases. The researcher and trainee psychologist was flexible during these instances to ensure the participants needs and specific difficulties were addressed. All aspects of the intervention was implemented for every participant but they may have been covered at different times, in a different order or with greater emphasis on a certain phase than others, depending on the participant and their individual needs. The four phases are presented below:

Phase 1 – **Assessment, goals and building rapport**

The first phase included exploring difficulties and offering the participant the space to discuss their difficulties and acknowledge the direction of the work. This phase included highlighting difficulties with the condition by using the narrative therapy interventions of therapeutic letter writing to the condition and identifying the components that make up their identity using the identity circle to acknowledge and validate their current identity challenges with and without the condition (Kimsey-House et al. 2010; White & Murray, 2002; Morgan, 2000). Goals for the therapy were collaboratively constructed using the SMART goals model (which require goals to be Specific, Measurable, Achievable, Realistic and Timely) (Morrison, 2010; Williams, 2012). This intervention phase therefore focused on and involved: psychoeducation, highlighting and acknowledging difficulties with the condition by letter writing and the identity circle, SMART goals and collaboratively agreed goals for the treatment.

Phase 2 – Cross-sectional formulation and plan

During this phase, the participant and the therapist discussed the cross-sectional formulation, acknowledged the unhelpful coping mechanisms and thinking styles that may be causing distress in their everyday lives. This phase focused on third wave CBT concepts and introducing CBT techniques and therefore introduced breathing exercises, progressive muscle relaxation, thought records, behavioural experiments, graded exposure, postponing worry and SMART goals to challenge unhelpful cognitions and behaviours and worked to implement more supportive coping mechanisms (Beck, 1979: Greenberger & Padesky, 1995).

Phase 3 – CBT tree formulation and plan

The third phase involved discussing and completing the CBT tree formulation to understand the roots, strengths, development and maintenance of their difficulties. The CBT tree also incorporated techniques and tools within narrative therapy by identifying and reframing the individual's narratives and acknowledging their strengths and resilience. During this phase, the therapist and participant continued the treatment plan to implement techniques and methods of challenging negative automatic thoughts (NAT) through thought records, SMART goals and behavioural experiments (Greenberger & Padesky, 1995; Padesky, 1993; Clark & Beck, 2009; Morrison, 2010; Williams, 2012). Furthermore, mindfulness was introduced within this phase. Mindfulness was implemented to support the awareness and acceptance of the condition, stress and emotional regulation and to reinforce the association between the mind and the body (Kabat-Zinn et al., 1998). This phase therefore involved collaboratively completing the CBT Tree Formulation (See Appendix M for CBT Tree Formulation within the protocol) and using the formulation to explore progress in the treatment at this time and reconstructing goals for the remainder of the sessions. This phase also involved introducing and practicing mindfulness.

Phase 4 –Mindfulness and relapse prevention

During this final phase, the therapist and participant worked to prepare the ending of the work with acknowledging progress and difficulties. This phase particularly focused on maintaining the tools learnt, addressing barriers in the therapeutic work and discussing the maintenance of the changes made and maintaining the mindfulness practice. This phase also included relapse prevention, a recap of tools and discussing and highlighting the learning, techniques and progress made. It also incorporated the exploration and highlighting the importance of maintaining the changes made for the future, once therapy is complete. An

additional focus on this phase was to address the ending of the work and therefore the therapeutic relationship.

2.7.1. Waitlist Control Group

The waiting list control group received the physical and psychological measures at the beginning of the trial. Participants were then informed that following the 12-week period of time, they would then be asked to attend the next set of physical and psychological measures. Once the control group participants completed the waiting list period and received their final assessment, these participants were then offered psychological therapy and if they accepted the therapy, they were asked whether they would be willing to continue with the psychological and physical assessments so that this can be assessed after the therapeutic intervention was complete. If they agreed, their data was added to the participant intervention group. This research design has been consistent with other trials in dermatology that following the waiting list period the intervention was offered to the control group and then added the data to the intervention group (Bundy et al., 2013).

2.8. Psychological and Physical Measures

To assess the differences between the participant groups who received the intervention in comparison to the participants who were in the control group, psychological and physical assessments were implemented as detailed below. The participants were all administered measures at two points in time: at the beginning of the trial and at the end of the 12-week intervention for the intervention group or at the beginning of the trial and at the end of the 12-week waiting period for the control group. The psychological and medical measures were all

carried out within the Royal Free Hospital. All the medical measures were administered by the dermatologists at the Royal Free Hospital. For some of the participants, the psychological and medical measures did not occur on the same day but occurred up to a month after the time-period that was scheduled. These time differences occurred due to the patients not attending the physical assessments or due to the lack of resources and time availability from the dermatologists within the service, due to the demands of the service.

2.8.1. Psychological Measures

2.8.1.1. Screening Measure

The participants were initially screened to assess whether they were suitable for the research by the lead investigator of the trial (see Screening questions in Appendix K). This measure was a novel measure that was created for this trial that was based on the exclusion and inclusion criteria of the study. The participants were asked how long they have been diagnosed with Alopecia, whether they have another skin condition and if so, whether they feel the Alopecia is their most dominant skin condition. The participants were also questioned whether they were fluent in written and verbal English, whether they were pregnant and whether they have any learning difficulties, dementia or severe and enduring mental illnesses. The screening also involved an assessment for alcohol and drug dependency. The participants were firstly questioned whether they drink alcohol or use recreational drugs and if they respond positively, they were then screened for alcohol or drug dependency. The tool CAGE – Adapted to Include Drugs (CAGE-AID) was implemented and required asking the following four questions:

"**C** – Have you ever felt you ought to **cut down** on your drinking or drug use?

A – Have people **annoyed** you by criticising your drinking or drug use?

G – Have you ever felt bad or **guilty** about your drinking or drug use?

E – Have you ever had a drink or used drugs first thing in the morning to steady your nerves of to get rid of a hangover? (**Eye-opener**)"

(Dhalla & Kopec, 2007; Brown & Rounds. 1995)

If a participant responded positively to two or more questions, this indicated a potential for alcohol and drug dependency (Fiellin, Reid, Carrington & O'Connor, 2000; Brown & Rounds. 1995). Participants who fulfilled the criteria were spoken to about their alcohol and drug use and their participation in the study was evaluated with the researcher and supervisor on an individual basis. The participants were then notified that their alcohol and drug dependency would be monitored and that if there were any concerns in their engagement in the study, their continued participation in the study would be considered.

2.8.1.2. Demographic Questionnaire

A demographic questionnaire that included 16 questions was implemented to collect information about the participants' gender, age, marital status, ethnicity, psychiatric and physical conditions, current medication or treatment, drug and alcohol use, employment and education status. This measure was a novel questionnaire that was created for this trial. See Appendix F. Participants were asked about their skin condition, including the areas affected, when they first received their diagnosis of Alopecia and to specify if they are using any medication to treat their Alopecia and if so, which type of medication.

The questions also asked about the participants' alcohol intake, smoking and drug use, psychiatric medication and whether they have ever received psychological help. Lastly, the

participants were asked whether they feel they have social support to cope with the condition. The participants were required to respond with an either ‘yes’ or ‘no’ for these questions.

The participants were also asked three questions regarding how distressing their skin condition is to them, how much of a problem their skin condition is to them and how satisfied do they feel with their hair. These three questions were presented on a Likert scale from 0 to 10, 0 indicating ‘no at all’ and 10 indicating ‘extremely’.

2.8.1.3. Hospital Anxiety and Depression Scale (HADS)

The HADS is a 14-item self-reported questionnaire that assess anxiety and depressive symptoms experienced over the previous week and was devised by Zigmond and Snaith (1983). The questionnaire includes 7 items relating to anxiety symptom and 7 questions exploring depressive symptoms. Answers are presented on a Likert scale ranging between 0-3, with the higher score indicating higher severity. The scores are then added for each subcategory and the higher the score, indicates a greater self-reported symptomology of anxiety or depression, with a maximum score of 21. A total score between 0 and 7 for anxiety or depression indicates normal experiences of anxiety or depression, a score between 8 and 10 indicates borderline above average difficulties for anxiety or depression, and a score between 11 and 21 indicates that significant self-reported symptomology of anxiety or depression and therefore above the average population (Zigmond & Snaith, 1983).

The validity and reliability of the HADS has been heavily researched and has found good internal consistency, construct validity and test-retest reliability (Hermann, 1997; Bjelland, Dahl, Haug & Neckelmann, 2002). The internal consistency of the measure using the Cronbach’s alpha score was found to range for anxiety between 0.68 and 0.98 and for depression between 0.67 and 0.90 which indicates an acceptable to high internal consistency

(Bjelland, Dahl, Haug & Neckelmann, 2002). As the current research study has been conducted as a pilot study, the internal consistency could not be calculated for the HADS due to the small sample size. The construct validity has been measured between the HADS and other measures of anxiety and depression (Snaith & Taylor, 1985; Aylard, Gooding, McKenna & Snaith, 1987). The research found that the HADS presents a moderate to strong correlation with other self-report measures of anxiety and depression: The Irritability Depression Anxiety Scale and the General Health Questionnaire (Snaith & Taylor, 1985: Aylard et al., 1987).

Furthermore, research has been conducted to evaluate the criterion validity of HADS by comparing the HADS and the General Health Questionnaire when assessing for psychological difficulties amongst patients with dermatological conditions (Lewis & Wessely, 1990). The findings revealed that no differences were found between the questionnaires in the ability to detect psychological difficulties and therefore the HADS revealed strong criterion validity (Lewis & Wessely, 1990).

2.8.1.4. Dermatology Life Quality Index (DLQI)

The DLQI is a 10-item self-report questionnaire developed by Finlay and Khan (1994) which evaluates the degree to which an individual's skin problem has impacted their quality of life, over the last week. Nine of the questions ask the participant how much their skin condition has impacted their quality of life during the last week, with the following options of severity: Not relevant, not at all, a little, a lot, very much. The results are then calculated based on the responses as 'Not relevant' or 'not at all' scoring 0 with the maximum score of 3 indicating 'very much'. Therefore, the maximum score that can be achieved is 30. Question number 7 asks "Over the last week, had your skin prevented you from working or studying?" with a 'yes', 'no' or 'not relevant' options available for responses. An indication of 'yes' for this question

scores the participant a score of 3 and ‘no’ is scored as 0. The higher the total score indicates a higher impact of the participants’ skin disorder on their quality of life. The total score is then interpreted on a five-point scale from ‘no effect at all on the patient’s life’ if they score between 0 and 1, ‘small effect on patients life’ if they score between 2 and 5, ‘moderate effect on the patient’s life’ for scores between 6 and 10, very large effect between 11 and 20 and extremely large effect is indicated for scores between 21 and 30.

The Cronbach’s alpha score was calculated the investigate the internal consistency of the DLQI for patients with alopecia and the measure revealed a score of 0.881 which indicates strong internal consistency for the DLQI (Qi, Xu, Sheng & Yang, 2015). Due to the small sample size of this research trial, the internal consistency could not be calculated for the DQLI. The DLQI was re-tested and the authors concluded that test-rest reliability was high (Finlay & Khan, 1994). A review was conducted to investigate the content validity, construct validity and criterion validity (Basra et al., 2008). The review concluded that the content validity, construct validity and criterion validity were all established for the DLQI (Basra et al., 2008).

2.8.1.5. The Perceived Stress Scale (PSS)

The PSS is a 10-item questionnaire developed by Cohen, Kamarch and Mermelstein (1983) that measure the participants perceived stress levels over the previous month. The participant is required to score each question with a 4-point scale from 0 indicating that they never experienced the questioned perceived stress or 4 indicating that they experience the particular perceived stress very often. The PSS also had reversed scoring for question 4, 5, 7 and 8 which question positive questions such as “In the last month, how often have you felt things were going your way?”. The minimum score on the PSS is 0 and the maximum score is

40. The total score of the PSS is interpreted within three categories: low stress, moderate stress and high stress for scores between 0-13, 14-26 and 27-40, respectively.

The PSS was investigated and the Cronbach's alpha score was found to range between 0.72 and 0.83 (Ezzati et al., 2014; Khalili et al., 2017). Further research has been conducted and found that the internal consistency and construct validity of the PSS was supported and established (Roberti, Harrington & Storch, 2006). However, due to the small sample size, the internal consistency could not be assessed for the PSS within this trial. A review was conducted to evaluate the validity and reliability of the PSS (Lee, 2012). The researchers concluded that the PSS was moderately or highly correlated with a range of similar measures which indicated a strong criterion validity for the PSS (Lee, 2012). Furthermore, the test-retest reliability was found to be highly correlated and reliable by multiple studies based on a 2-day, 2-week and 6-week time difference (Lee, 2012).

2.8.1.6. Feedback Questionnaire

The 11-item feedback questionnaire was a novel measure that was created for the trial and was implemented to investigate how the participants who received the intervention, evaluated the intervention. The questionnaire was offered only to the experimental group after the intervention was completed. The participants were required to complete the a 5-point Likert scale to indicate the perceived impact the intervention had on their wellbeing, their symptoms and their adjustment to their skin condition and their relationships. A score of 1 indicating 'not at all' and 5 indicating 'definitely' for each question. The participants were also required to complete a short description of what they feel worked well from the intervention, what did not feel worked well from the intervention and what they believe could be improved by the intervention and whether they would recommend the intervention to a friend with hair loss.

There is also a section that allows for the participant to write anything else they would like to add regarding the intervention.

2.8.2. Medical measures

2.8.2.1. Severity of Alopecia Tool (SALT)

To assess the impact on the Alopecia on the participants scalp, the Severity of Alopecia Tool (SALT) Scalp Assessment was implemented by the Dermatologists within the Dermatology Department at the Royal Free Hospital (Olsen et al., 2004). The SALT assessment required for the assessor to visually assess the scalp of the participant, within four viewpoints of the scalp (as demonstrated below) and then the dermatologist was required to score the location a percentage of hair loss presented on the scalp for the participant (Olsen et al., 2004). The higher the percentage, the greater hair loss experienced with 0% indicating no hair loss and 100% indicating that there is no hair on that section of the scalp (Olsen et al., 2004). Once the area is located on the diagram and a percentage is allocated to that location, the percentage score is then multiplied by the number allocated to that area of the scalp. For example, if a participant is assessed by the dermatologist and scored their left side of the scalp '80%' indicating 80% of hair loss, the score is then equated in the following way:

Percentage hair loss scored x percentage of area of scalp = SALT Percentage for that area

80% hair loss in area shown x 18% due to the location of left hand side / 100 = 14.4%

80 x 0.18 = 14.4%

Figure 2.2. Calculation for SALT assessment for each location on the scalp

The results of each location are then added together to present a total SALT score for each participant. Each participant will receive a SALT assessment at the beginning of the assessment and at the end of the 12-week intervention or at the 12-week waiting period. The scores from the baseline and end of trial are then compared. For example, if a participant received a baseline SALT score of 80% and a second SALT score of 55%. The change in SALT scores are equated and the regrowth for that area is also equated. The two calculations are presented below.

For the trial, each participant has been presented the following SALT scored: A baseline SALT score, a Time 2 SALT score following the intervention or waiting time for the control group, a Regrowth SALT score and a Change in SALT scores.

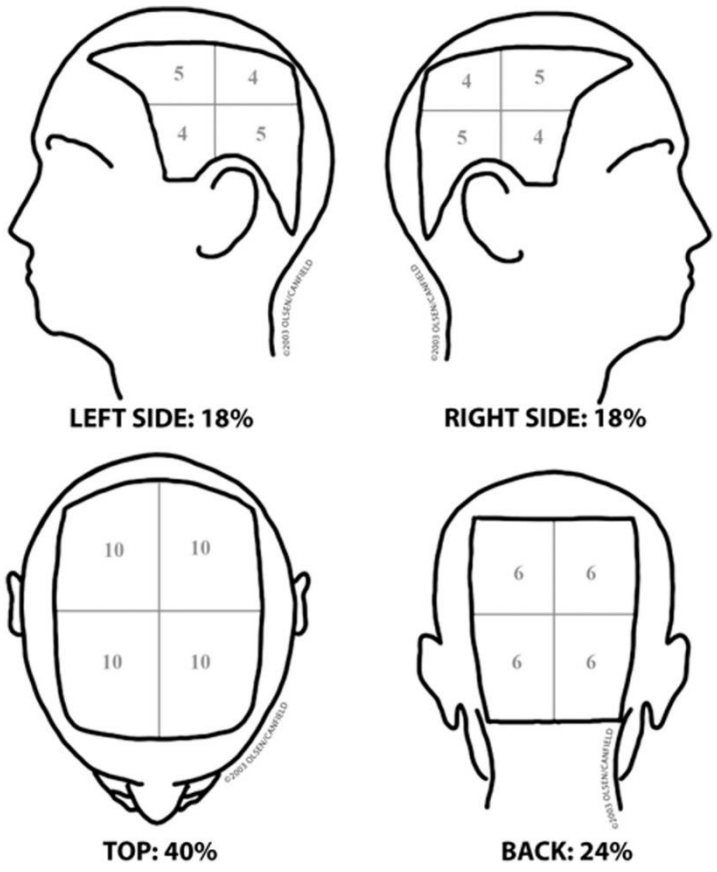

Figure 2.3. Severity of Alopecia Tool (SALT) Assessment View Points (Olsen et al., 2004)

Equation 1: SALT assessment differences:

Second SALT Assessment - Baseline SALT Assessment = Change in SALT Assessment Percentage

For example: 80% - 55% = 25%

Equation 2: SALT Assessment Regrowth:

(Second SALT Assessment - Baseline SALT Assessment) / Baseline SALT Assessment x 100 = Percentage of Regrowth

For example:

(80 – 55)/ 80

25 / 80 x 100 = 31%

Figure 2.4. Calculation for SALT assessment for Change in SALT and Regrowth

2.8.2.2. Medical Photography

Medical photography was implemented by phototherapy team within the Royal Free Hospital. This measure was implemented to visually assess the impact of Alopecia. Due to the subjective element of the SALT assessment, the SALT guidelines recommend for medical photography to also be implemented alongside the SALT assessment to improve the reliability of the measure **(**Olsen et al., 2004).

2.8.2.3. Blood Tests

Blood tests were conducted by the medical staff within the Royal Free Hospital to assess for the following physical manifestations associated with AA: TSH thyroid functioning and Ferritin. The reason these tests were conducted is that people with AA are often found to be experience irregularities to their TSH thyroid functioning and iron levels (Cerman, Solak & Altunay, 2014; Mandani & Shapiro, 2000; Esfandiarpour, Farajzadeh & Abbaszadeh, 2008;

Lueking et al., 2005). Therefore, changes experienced to the condition of AA may also appear in these blood results. If participants received blood test results of thyroid functioning and ferritin within a month period of time, this information was collected so that they did not need to have another blood test.

2.9. Missing Data

Throughout the research, there was missing data that is important to acknowledge and consider. There was missing data for both the psychological measures and the physical measures that were administered and the reasons are considered below.

In terms of the physical measures, there was missing data that occurred for multiple reasons that have been identified. As described above, the physical measures required for the participants to have the following measures: SALT assessment, blood test and medical photography. During the trial, there were some participants that did not have blood tests conducted on the same day as the other measures due to the phlebotomy service being overcrowded. This required for the participants to return on an alternative date and time. It may have been that the participants may have forgotten or did not want to attend the blood test session.

For the medical photography, one of the participants felt that the medical photography was anxiety provoking and exposing of their condition. This was discussed between the researcher and supervisors for this individual case and their continued participation in the study was considered. It was decided that for this participant and others on the trial, they would be allowed to not participate in the medical photography due to the increase of stress and anxiety that the measure was causing. It was considered unethical to exclude the participants from the research for these reasons.

Lastly, there were also SALT assessments which were missing from the data collection. This occurred due to the initial set up of the research when the dermatologists and researchers were considering the exclusion criteria for the study. If participants experienced hair growth at the time of the initial SALT assessment due to the medication, they were included in the study and this caused some confusion amongst the dermatologists. This led to missing data with the SALT assessment for one participant.

When considering the psychological measures, there were two cases whereby the demographic questionnaire was not completed for some sections. Due to the questionnaire being double sided, it was considered whether the participants missed these pages by accident. Another reason for this missing data may have been that the participants may have found this section particularly difficult to complete due to the questions regarding their feelings regarding the Alopecia which may have evoked difficult emotional responses for these participants.

2.10. Procedure

The participants were recruited from September 2018 until September 2019. The participants were recruited by being offered the study by their allocated dermatologist or they were contacted by the researcher. The participants were then given verbal information regarding the study and asked whether they are interested in joining the study. Once they were deemed interested to participate in the study, the participants were screened for the intervention using a phone call from the researcher to determine their suitability for the study according to the inclusion and exclusion criteria. They were allowed a month to decide whether they would like to participate in the study, if they felt unsure if they wanted to participate in the study.

Once the participant was considered suitable and interested in participating in the study, the participants were then required to attend an initial assessment for one hour to assess their difficulties and to enable an individual and tailored Integrative CBT intervention for the participants. The participants were then given verbal information about the trial, a written information sheet and were given a consent form to sign regarding their participation in the study and the interventions as well as details of next of kin in case there were concerns and gave their consent to be able to contact their next of kin in these circumstances (see Appendix G, H and I).

The participants were randomly allocated into one of the following groups, depending on their pre-existing medication: Integrative CBT intervention group or waiting list group. Participants allocated to the Integrative CBT intervention groups were required to take part in 12 weekly 60-minute individual sessions of integrative CBT. All participants in the experimental group and in the control group were required to undergo the psychological and medical assessments described above at the beginning of the study and after the 12-week intervention or the 12-week waiting list. Once the study was complete, the participants were then debriefed to the aims of the study (Appendix J) and asked whether they would like to be contacted in the future for the findings of the study. The participants who received the intervention were given a feedback questionnaire to evaluate the intervention. Participants in the control group were then offered the intervention and asked whether they would be willing to continue the medical and physical assessments. If the participants agreed, their information was added to the data.

2.11. Ethical Considerations

There were several ethical considerations within the current study. One consideration was that individuals undertaking this study may have experienced psychological or emotional discomfort difficulties due to the nature and sensitivity of the Integrative CBT intervention being trialled. To mitigate this, their psychological and emotional distress was monitored by the researcher and trainee psychologist who delivered the intervention. During the trial and intervention, two participants experienced psychological difficulties which led to their disengagement from the intervention. In these instances, their continued participation with the study was considered with the participant, researcher and supervisors. These participants were offered and referred to psychological support from the Psychodermatology service or to a local psychology service.

Another consideration was for the participants within the control group, who may have felt that they were not receiving sufficient treatment and hence emotional and psychological difficulties may have arose. Similar to the above case, their continued participation would have been considered if these difficulties arose. Once the intervention was complete, the participants within the control group were offered the psychological intervention to manage this ethical concern.

A third concern was the participants' right of withdrawal. Participants were all informed of their right to withdraw from the study at any point. Once the participants withdrew from the study, their medical data was not included in the study, and their questionnaires were destroyed.

Confidentiality of the participants' data was another important ethical consideration. The participants' names were anonymised using ascending numerical values. The participants were therefore identified using their date of birth, gender and intervention group. The data collected was stored using a locked cabinet in the Psychodermatology department at the Royal Free Hospital. The anonymised database was stored and will continue to be stored using a

password protected computer belonging to the student researcher. The data will be stored for up to 3 years and once the research is complete, the data will be destroyed. The reason for the 3-year time period is that the study may want to be extended into a larger randomised controlled trial in the future.

The participants all signed an informed consent and were informed and debriefed of the process required for their participation. The researcher ensured all participants received a participant information sheet and that the participants understood their agreed consent and their involvement in the research. During the research, the participants were blind to their allocation of intervention group or control group. Once the research is complete, the participants were debriefed on the purpose and their involvement in the study.

2.12. Ethical Approval

The study required both City University London ethical approval and National Health Service (NHS) ethical approval as the participants were recruited and the intervention was implemented within the Royal Free Hospital NHS Foundation Trust. The study received approval by the City University London Ethics Committee on 29th June 2018, reference number: PSYETH (P/F) 17/18 117 and received NHS ethics approval by Stanmore London Ethics Committee, IRAS reference number: 231865 and REC Code: 18/LO/0366 on 21st May 2018. City University London were the acting sponsors for this research. See Appendix A, B and C.

2.13. Reflexivity

My interest in this particular research topic began due to my experience of working with people with eating disorders and those with significant body image concerns. The concept of body image deeply interests me, and in both eating disorders and living with hair loss this is a key aspect of the disorder. I feel that women experience strong societal pressures around appearance, and indeed at times I feel this pressure too. I believe that my passion for this topic stemmed from my own awareness of these societal pressures and my desire to be able to support individuals who feel this pressure and in particular those who have AA and cope with hair loss, which is a dominant feature in women's body image.

I am also particularly interested in medical disorders that can be treated by psychological therapy. I was particularly struck by the lack of trials on AA that test the efficacy of psychological interventions. Also, research indicates that current medical treatments for Alopecia are not highly effective which suggests that alternative treatments should be tested. I feel that this research was very fulfilling for me, as I felt a strong sense of commitment to be able to address the research gap and create an integrative CBT treatment protocol for people with AA with the overall aim of improving the effectiveness of treatment interventions for this population.

It has been argued that when conducting research within clinical health, there are three roles that are required of the research practitioner, these are the following: incorporating the research into their own work and practice, investigating the efficacy of the practice implemented and the required combined role of the researcher and practitioner (Hayes, Barlow & Nelson-Grey, 1999). I feel that these roles strongly represent the roles that I undertook within my research project. Within the trial, I held these multiple roles as I was managing and conducting the research trial, implementing the therapeutic intervention within the trial, implementing my own practice alongside the trial and investigating the effectiveness of the

intervention that I was providing within the trial and with the use of the trial. The research also involved my combined role of researcher and trainee counselling psychologist. I believe these multiple roles are important to acknowledge, to be able to highlight and learn from the strengths and challenges that arose regarding the subjectivity and objectivity of the trial. I felt it was important to remain as objective as possible when managing the trial but I also felt a tension and conflict at times due to the requirement of subjectivity within the psychological intervention that I was delivering. However, I also believe that these combined roles were very unique for me and had a strong impact on my determination and passion for my work. I believe it was important for me to make sure I could also distance myself from the research to be able to remain objective in my work as this was challenging at times but these challenges and conflict is something that I continually explored with my supervisors, colleagues and therapist.

2.14. Data Analysis

The data collected through the questionnaires and medical tests was inputted into SPSS Version 25 for Windows. Alpha levels of significance were established as $p<0.05$. As previously described, all questionnaire scores were calculated according to their individual methods. All scores were entered and analysed by the researcher. The data was analysed by comparing the results of the medical and psychological measures from beginning of the trial to the end of the trial. Participants who received the intervention were compared to those who did not receive the intervention.

2.14.1. Analytic Strategy

To investigate which methods of analyses were suitable for the data presented, met the assumptions of the analyses and did not contain outliers, preliminary analyses were conducted and presented below.

Normality tests and descriptive statistical analyses were conducted for each measure and presented below. For the measures that met the assumption of normal distribution, multiple mixed design analyses of variance (MANOVA) testing were conducted and mixed design ANOVA testing were implemented. The mixed ANOVA test was chosen to investigate the differences in the outcome measures between the two groups as well as between the two-time points. Effect sizes had also been calculated for each measure to indicate the impact of the intervention. For the measures that did not meet the assumption of normality, non-parametric Mann Whitney U testing was implemented. It was considered whether to transform the data to enable the data to meet the assumptions of normality. However, researchers have recommended that when analysing data with small sample sizes within RCTs, non-parametric analyses are preferred to manage violations in the assumptions of normality, rather than data transformations (Vickers, 2005).

Further investigations have also been conducted to assess whether number of years with the AA diagnosis, type of AA, gender and medication impacted the effect of the intervention on the outcome measures. All descriptive and inferential statistics have been conducted using the SPSS software package.

CHAPTER 3: RESULTS

3.1. Preliminary Analysis

Preliminary analyses were conducted to investigate whether the data was normally distributed and to assess the skewness and kurtosis of the data. To assess whether the data was normally distributed, the Shapiro-Wilk test was chosen as it has been recommended for small sample sizes (Elliott & Woodward, 2007; Kim, 2013). Tables 3.1 and Table 3.11 indicate that the measures of HADS, PSS and DLQI were all normally distributed for both time points and that the skewness and kurtosis of these measures was not significantly directed and was therefore not problematic for the data. The participants were also asked to rate how distressing they found the AA and their hair satisfaction. These measures were also found to be normally distributed and the skewness and kurtosis was also not significantly directed. However, the participants' self-reported scores of how problematic they find the AA was also not normally distributed. These results are presented by Table 3.2 and Table 3.21 below.

The preliminary analyses showed that the blood test measure for TSH Thyroid functioning and the SALT scalp assessments, SALT regain and SALT regrowth were found to not be normally distributed and were significantly directed. The blood test results for TSH Thyroid Functioning and Ferritin also showed to be significantly skewed and directed. These results are presented in Table 3.3 and Table 3.31. For these reasons, non-parametric tests were performed when the assumption of normality was not met and the data was shown to be significantly directed and skewed. The parametric statistics were performed when the normality assumption has been met and when the data was not significantly directed or skewed.

Table 3.1. *Shapiro-Wilk test findings for Psychological Measures at the two time points*

Measure and time-point	Group	Shapiro-Wilk Normality Testing
HADS Anxiety Time 1	Intervention Group	D(4) = 0.899, p=.425
	Control Group	D(4) = 0.863, p=.272
HADS Anxiety Time 2	Intervention Group	D(4) = 0.941, p=.659
	Control Group	D(4) = 0.905, p=.458
HADS Depression Time 1	Intervention Group	D(4) = 0.944, p=.677
	Control Group	D(4) = 0.945, p=.683
HADS Depression Time 2	Intervention Group	D(4) = 0.895, p=.406
	Control Group	D(4) = 0.984, p=.926
PSS Time 1	Intervention Group	D(4) = 0.948, p=.702
	Control Group	D(4) = 0.829, p=.164
PSS Time 2	Intervention Group	D(4) = 0.853, p=.235
	Control Group	D(4) = 0.863, p=.271
DLQI Time 1	Intervention Group	D(4) = 0.831, p=.172
	Control Group	D(4) = 0.840, p=.195
DLQI Time 2	Intervention Group	D(4) = 0.895, p=.406
	Control Group	D(4) = 0.984, p=.926

Note: p indicates significance with a significance level of p<.05

Table 3.11. Skewness and Kurtosis found for Psychological Measures at the two time points

Measure and time-point	Skewness	Skewness Standard Error	Kurtosis	Kurtosis Standard Error
HADS Anxiety Time 1	-0.094	0.580	-0.599	1.121
HADS Anxiety Time 2	-0.002	0.580	-1.162	1.121
HADS Depression Time 1	0.046	0.580	-0.593	1.121
HADS Depression Time 2	1.079	0.580	0.598	1.121
PSS Time 1	0.059	0.580	-0.034	1.121
PSS Time 2	-0.629	0.580	-0.125	1.121
DLQI Time 1	0.727	0.580	-0.762	1.121
DLQI Time 2	1.238	0.580	0.654	1.121

Table 3.2. *Shapiro-Wilk test findings for the Distress Experienced by AA at the two time points*

Measure and time-point	Group	Shapiro-Wilk Normality Testing
AA Problem Time 1	Intervention Group	D(4) = 0.828, *p*=.163
	Control Group	D(4) = 0.865, *p*=.279
AA Problem Time 2	Intervention Group	D(4) = 0.993, *p*=.972
	Control Group	D(4) = 0.630, *p*=.001
AA Distressing Time 1	Intervention Group	D(4) = 0.971, *p*=.850
	Control Group	D(4) = 0.895, *p*=.406
AA Distressing Time 2	Intervention Group	D(4) = 0.895, *p*=.406
	Control Group	D(4) = 0.945, *p*=.683
Hair Satisfaction Time 1	Intervention Group	D(4) = 0.993 *p*=.972
	Control Group	D(4) = 0.982, *p*=.911
Hair Satisfaction Time 2	Intervention Group	D(4) = 0.848 *p*=.220
	Control Group	D(4) = 0.953, *p*=.734

Note: p indicates significance with a significance level of p<.05

Table 3.21. *Skewness and Kurtosis found for Distress Experienced by AA at the two time points*

Measure and time-point	Skewness	Skewness Standard Error	Kurtosis	Kurtosis Standard Error
AA Problem Time 1	-0.815	0.616	0.466	1.191
AA Problem Time 2	-0.767	0.580	0.242	1.121
AA Distressing Time 1	-0.646	0.616	0.843	1.191
AA Distressing Time 2	-0.706	0.580	-0.889	1.121
Hair Satisfaction Time 1	-0.016	0.616	-1.029	1.191
Hair Satisfaction Time 2	-0.022	0.580	-0.682	1.121

Table 3.3. *Shapiro-Wilk test findings for the Physical Measures at the two time points*

Measure and time-point	Group	Shapiro-Wilk Normality Testing
SALT Time 1	Intervention Group	D(4) = 0.749, p=.038
	Control Group	D(5) = 0.658, p=.003
SALT Time 2	Intervention Group	D(4) = 0.692, p=.009
	Control Group	D(5) = 0.792, p=.019
SALT Difference Score	Intervention Group	D(4) = 0.721, p=.020
	Control Group	D(5) = 0.757, p=.035
SALT Regrowth Score	Intervention Group	D(4) = 0.756, p=.044
	Control Group	D(5) = 0.891, p=.362
Ferritin Time 1	Intervention Group	D(4) = 0.931, p=.601
	Control Group	D(5) = 0.996, p=.995
Ferritin Time 2	Intervention Group	D(4) = 0.784, p=.076
	Control Group	D(5) = 0.952, p=.752
TSH Time 1	Intervention Group	D(4) = 0.729, p=.024
	Control Group	D(5) = 0.858, p=.220
TSH Time 2	Intervention Group	D(4) = 0.988, p=.949
	Control Group	D(5) = 0.822, p=.121

Note: p indicates significance with a significance level of p<.05

Table 3.31. *Skewness and Kurtosis found for Physical Measures at the two time points*

Measure and time-point	Skewness	Skewness Standard Error	Kurtosis	Kurtosis Standard Error
SALT Time 1	0.634	0.597	-1.832	1.154
SALT Time 2	0.109	0.580	-2.258	1.121
SALT Difference Score	-2.170	0.597	3.424	1.154
SALT Regrowth Score	-1.444	0.597	0.759	1.154
Ferritin Time 1	3.370	0.616	11.724	1.191
Ferritin Time 2	2.225	0.687	5.812	1.334
TSH Time 1	1.174	0.616	2.634	1.191
TSH Time 2	0.914	0.661	0.091	1.279

3.2. Outliers

Outliers were explored to limit the errors within the dataset. Box plots statistical analyses were conducted to explore whether there were outliers in the data that needed to be accommodated and managed. The results indicated some data outside of the box plots. For this reason, further analyses were conducted to assess whether these outliers needed to be removed. Outliers were identified by checking the z-scores for each measure at each time point and ensuring that the z-score is not greater than a score of 3.29 (Tabachnick & Fidell, 2007). Table 3.4, Table 3.41 and Table 3.42 below present the highest and lowest z-scores found for each measure and time point. The results revealed that the z-scores for each measure were found to not exceed a score of 3.29 and that there were no outliers within the data that needed to be removed.

Table 3.4. *z-scores for the psychological measures at two-time points*

Measure and time-point	Minimum z-score	Maximum z-score
HADS Anxiety Time 1	-1.647	1.776
HADS Anxiety Time 2	-1.354	1.636
HADS Depression Time 1	-1.384	1.918
HADS Depression Time 2	-1.263	2.032
PSS Time 1	-1.852	2.009
PSS Time 2	-2.282	1.480
DLQI Time 1	-1.168	1.983
DLQI Time 2	-0.938	2.372

Table 3.41. *z-scores for Distress Experienced by AA measures at two-time points*

Measure and time-point	Minimum z-score	Maximum z-score
AA Problem Time 1	-2.147	1.502
AA Problem Time 2	-2.282	1.480
AA Distressing Time 1	-2.262	1.349
AA Distressing Time 2	-1.976	1.238
Hair Satisfaction Time 1	-1.323	1.687
Hair Satisfaction Time 2	-1.463	1.564

Table 3.42. *z-scores for the physical measures at two-time points*

Measure and time-point	Minimum z-score	Maximum z-score
SALT Time 1	-0.859	1.288
SALT Time 2	-1.031	1.030
SALT Difference Score	-2.374	0.696
SALT Regrowth Score	-2.261	0.783
Ferritin Time 1	-0.474	3.263
Ferritin Time 2	-0.899	2.594
TSH Time 1	-0.754	2.532
TSH Time 2	-1.040	2.075

3.3. Demographics

Descriptive statistics shown in Table 3.5 present the participants' gender, marital status, ethnicity and employment status for the intervention and control groups. The numbers indicate the frequency of the demographic characteristic in the given group and the percentage of those participants out of the total participants in the study. Descriptive statistical analyses of participants' demographic data found that the 15 participants were between the ages of 20 and 63, with a mean age of 41. Their diagnosis duration varied between 3 and 56 years with a mean of 11 years. Table 3.6 presents the means and standard deviations of participants' age and chronicity for each group. Levene's statistical homogeneity of variances test indicated that the assumption of equality of variances was met for age ($F = 2.389$, $p = 0.146$), gender ($F = 0.141$, $p = 0.713$) and chronicity ($F = 0.022$, $p = 0.885$). Therefore, a one-way t-test was chosen to investigate whether there were significant differences between the two groups. Analyses revealed that there were no significant differences between the groups in their age and chronicity. The results are presented in Table 3.6.

The descriptive statistics for AA characteristics of the type of AA diagnosis, age of AA onset and medication type for the two groups (the integrative CBT intervention group vs the waiting-list control group) are presented in Table 3.7 below.

Table 3.5: *Frequency and percentages of demographic characteristics of participants'*

	Intervention Group	Control Group
Gender		
Male	3 (20%)	3 (20%)
Female	5 (33%)	4 (27%)
Marital Status		
Single	4 (27%)	3 (20%)
In Relationship	1 (7%)	1 (7%)
Married	3 (20%)	3 (20%)
Ethnicity		
White British	2 (13%)	2 (13%)
White Other	4 (27%)	2 (13%)
Asian British	2 (13%)	3 (20%)
Employment Status		
Full-time Employment	3 (20%)	6 (40%)
Part-time Employment	3 (20%)	1 (7%)
Unemployed	1 (7%)	0
Student	1 (7%)	0

Table 3.6: *Comparison of means and standard deviations of participants' age and number of years with diagnosis of AA*

	Intervention Group	Control Group	Group statistics
Age (years)	37.50 (4.95)	44.25 (18.84)	t(13)=-1.983 p=.069
Chronicity (years)	4.50 (2.12)	17.50 (25.68)	t(13)=-0.202 p=.843

Note. Values present above: Mean (standard deviation).
Group statistics present results from t-test.
p indicates significance with a significance level of $p<0.05$

Table 3.7: *Frequency and percentages of characteristics of participants' Alopecia and treatment*

	Intervention Group	Control Group
Diagnosis		
Alopecia Areata	5 (33%)	5 (33%)
Alopecia Universalis	2 (13%)	1 (7%)
Alopecia Totalis	1 (7%)	1 (7%)
Age of Onset		
0 – 13 years	7 (47%)	6 (40%)
14 – 19 years	0	0
20 – 29 years	0 1 (7%)	0 1 (7%)
Medication		
Steroid Injections	2 (13%)	0
Topical Corticosteroid	2 (13%)	2 (13%)
Methotrexate	0	1 (7%)
Minoxydil	0	1 (7%)
Prednisolone	1 (7%)	0
Combination	1 (7%)	1 (7%)
None	3 (20%)	2 (13%)

3.4. Effectiveness of the Intervention on Psychological Well-being

The study predicted that individuals in the group that received the intervention will present a significant improvement in the psychological measures: HADS, DLQI and PSS in comparison to the waitlist control group when compared at the initial assessment (Time 1) and the 12-week end time (Time 2). These measures were also compared between the two groups across the two time points.

To investigate these effects, a two-way mixed MANOVA was conducted to explore the impact of the group allocation over time. Mauchly's test indicated that the assumption for sphericity was met for all the measures. Using the Pillai's Trace test, the results of the main effect revealed that there was a not a significant main effect of time ($F(4,10)= 1.136$, $p= .394$, $\eta p^2 = 0.312$) and group ($F(4,10)= 1.961$, $p= .117$, $\eta p^2 = 0.440$) on the psychological measures. However, there was found to be a main significant effect presented between the two groups when comparing the initial assessment and 12-week assessment for the psychological measures, $F(4,10)= 4.047$, $p= .033$, $\eta p^2 = 0.618$. To explore where the differences are presented in the data, mixed two-way ANOVA analyses were conducted for each measure.

To investigate whether the duration of living with the diagnosis, the type of AA and medication had a significant impact on the outcome measures, the years of AA, the diagnoses of AA and the medication were entered in the ANOVA as covariates. The results revealed that all variables did not have a statistically significant impact on any of the psychological measures.

3.4.1. Anxiety and Depression

The descriptive and inferential statistics for HADS Anxiety and HADS Depression scores for the intervention group and the control group are presented in Table 3.8 below, presenting the key findings of the study.

Further comparative analyses were implemented to compare the participants' mean HADS scores for the initial assessment (Time 1) and 12-week end assessment (Time 2) for the two groups. The results are presented in Table 3.6. The higher scores on the HADS indicate higher presence of symptomology of anxiety and depression. The results revealed that there was a significant difference between the two groups in the HADS depression scores both in time 1 and 2: the intervention group scored higher than the control group in time 1, but lower in time 2. A moderate effect was found of the integrative CBT intervention on the HADS depression scores, revealing that while the intervention group depression levels improved, the control group depression scores slightly worsened. These findings support the initial prediction that the integrative CBT intervention group will show significant improvements in their depression symptoms in comparison to the control group.

The analyses of the HADS anxiety scores showed that there was not a significant difference between the intervention group and the control group. These results do not support the initial prediction which predicted improvements in HADS anxiety scores in the intervention group.

3.4.2. Quality of Life

The descriptive and inferential statistics for DLQI quality of life mean total scores are presented in Table 3.8. The higher scores on the DLQI indicate higher negative impact of AA on the participants' quality of life. Comparisons of participants' mean DLQI scores for the

initial assessment (Time 1) and 12-week end assessment (Time 2) are presented in Table 3.8 below.

A two-way mixed-ANOVA design was conducted to investigate whether there were significant differences between the two groups at the two-time points. The results indicate that there were significant differences between the groups in their quality of life scores when comparing in the two time points: The intervention group scored higher than the control group in time 1, but lower in time 2. A moderate effect was found of the intervention on the quality of life scores, revealing that while the intervention group quality of life improved, the control group's scores worsened.

These results support the initial prediction that the participants in the integrative CBT intervention group will have significantly improved on the DLQI from Time 1 to Time 2 compared to the control group.

3.4.3. Perceived Stress

Descriptive statistics were conducted for PSS perceived stress mean total scores, and presented below in Table 3.8. The higher scores indicate higher stress levels. To compare the participants mean PSS scores between the initial assessment (Time 1) with the 12-week end assessment (Time 2), a mixed-design ANOVA was conducted. The findings are presented in Table 3.8. The findings revealed there was not a significant difference between the intervention group and control group on PSS scores from the initial assessment and 12-week assessment. These results therefore do not support the initial prediction that the participants the integrative CBT intervention group will show improved PSS scores from Time 1 to Time 2 in comparison to the control group.

Table 3.8. *Key findings for the comparisons of Psychological Measures, Distress from AA and Physical Measures for the initial assessment and 12-week end assessment for the intervention and the control groups*

		Time 1	Time 2	Group statistics
Anxiety	Intervention Group Control Group	8.69 (5.40) 8.71 (4.11)	6.88 (4.36) 8.07 (3.81)	F (1,13) = .425, *p*= .526, ηp^2 = 0.032
Depression	Intervention Group Control Group	7.00 (4.90) 4.57 (3.21)	3.88 (3.86) 5.43 (3.60)	F (1, 13) = 6.025, *p*= .029, ηp^2 = 0.317
Quality of Life	Intervention Group Control Group	8.88 (7.86) 5.71 (3.90)	2.25 (1.98) 9.57 (6.88)	F (1, 13) = 7.788, *p*= .015, ηp^2 = 0.375.
Perceived Stress	Intervention Group Control Group	20.00 (4.63) 21.36 (4.96)	14.25 (5.65) 21.00 (3.27)	F (1, 13) = 3.291, *p*=.093, ηp^2= 0.202.
Distress of Condition	Intervention Group Control Group	M=8.00 M=7.00	M=5.00 M=9.00	U= 1.00, *p*= .005, z=2.801 r=-0.78
Problematic Assessment	Intervention Group Control Group	M=6.50 M=7.00	M=4.50 M=8.00	U= 12.50, *p*= .266, z=-1.112 r=-0.31
Hair Satisfaction	Intervention Group Control Group	2.38 (2.26) 4.20 (2.17)	4.63 (2.62) 3.40 (2.70)	F (1, 11) = 4.610, *p*=.055. ηp^2= 0.295.
Thyroid Functioning	Intervention Group Control Group	M=1.08 M=1.02	M=2.34 M=1.06	U= 9.00, *p*= .610, z=-0.64 r=-0.20
Iron	Intervention Group Control Group	M=69.50 M=51.00	M=65.00 M=49.00	U= 8.00, *p*= .730, z=-.49 r=-0.16

Note. Values presented above: Mean (standard deviation or M=Median
Group statistics present results from ANOVA testing and Mann Whitney U testing.
p indicates significance with a significance level of $p<0.05$
r or ηp^2 indicates the effect size presenting the impact of intervention on the measure

3.5. Reported Distress

Each participant was asked to rate the degree to which they found AA problematic, and the degree to which they found AA distressing. They were also asked how satisfied they were with their hair. These ratings were collected at the initial assessment and at the 12-week end assessment. As the assumption of normality was only met by the results of the hair satisfaction, therefore a mixed MANOVA could not be conducted. The data was analysed using the mixed method ANOVA for the parametric methods and using the Mann-Whitney U test for those variables that did not meet the assumption of normality.

3.5.1. AA Experienced as Problematic

Descriptive statistics were conducted for the median scores of the degree to which they found AA problematic, these results are presented in Table 3.8 above. Higher scores indicate that the participant is experiencing AA as more problematic.The preliminary tests indicated that this variable was not normally distributed, and therefore the data was analysed using the Mann Whitney U testing to accommodate violation of the assumption of normality. The results showed that there was not a significant difference between the intervention group and the control group from Time 1 to Time 2. However, the results showed a moderate effect size indicating a moderate impact of the intervention on the problematic rating of AA. The lack of significance found for these results may have occurred due to the small sample size of this study. The findings are presented above in Table 3.8. As the results were not significant, these results do not support the initial prediction that the participants in the integrative CBT intervention group will show significantly improved scores on how problematic they experienced the condition from Time 1 to Time 2, in comparison to the control group.

3.5.2. AA Experienced as Distressing

Descriptive and inferential statistics were conducted for reported mean scores of distress, and are presented above in the key findings Table 3.8. The higher scores on the descriptive statistics indicate that the participants' experienced higher distress levels due to their AA condition. The preliminary analyses revealed that the distress assessment met all assumptions of normality, however, these assumptions were not met when conducting the mixed-design ANOVA. For this reason, the Mann Whitney U testing was implemented to manage these violations. The results shown in Table 3.8 indicate that there was a statistically significant difference between the intervention group and control group from Time 1 to Time 2 for the reported distress level scores experienced due to their condition. The results show that the participants in the intervention group improved on their distress levels while the distress scores of control group worsened from Time 1 to Time 2. The results indicated a large effect size of the integrative CBT intervention on the distress that participants experienced due to the condition. These results support the prediction that the intervention will significantly improve the distress experienced by people with AA in the treatment group in comparison to the control group in Time 2 when compared to Time 1.

3.5.3. Hair Satisfaction

Descriptive analyses were conducted for self-reported scores of how satisfied the participants were with their hair (see Table 3.8). The higher scores indicate higher satisfaction with their hair. To compare the participants mean scores from the initial assessment (Time 1) and 12-week end assessment (Time 2), a mixed-design ANOVA was conducted. The results revealed that there was not a significant main effect of time ($F (1, 11) = 1.042$, $p=.329$. $\eta p^2= 0.087$) or the group allocation ($F (1, 11) = 0.062$, $p=.807$. $\eta p^2= 0.006$) on the results of hair

satisfaction. The results shown in Table 3.8 indicate that there was not a statistically significant difference between the intervention group and control group from Time 1 to Time 2 for their self-reported hair satisfaction. Nevertheless a moderate effect size was revealed for the impact of the integrative CBT intervention on hair satisfaction in the intervention group in comparison to the control group. These results may have therefore been impacted by the small sample size of this pilot study.

3.6. Effectiveness of Intervention on Physical Aspects of the Condition

The study predicted that individuals in the intervention group will present a significant improvement in the physical measures: SALT Assessment and the blood testing for Ferritin (Iron) and Thyroid functioning (TSH) in comparison to the waitlist control group when comparing the initial assessment (Time 1) with the 12-week assessment (Time 2). The data for the physical measures did not meet the normality assumptions. To investigate the effect of the intervention on these measures, the non-parametric Mann Whitney U testing was implemented.

To investigate whether the duration of living with the diagnosis, the type of AA diagnosis and receiving medication had any significant impact on the physical outcome measures (SALT and blood testing for Ferritin and Thyroid Functioning), the years of living with AA, the diagnosis of AA and the type of medication were entered into Spearman's correlational analyses and Chi-Squared analyses. The results revealed that these variables did not have a significant correlation with any of the physical measures.

Table 3.9 *Comparisons of physical measures of AA of the Scalp assessment for time 1 and time 2 for the intervention group and the control group*

	Group	Median	Group statistics
Scalp Assessment Difference	Intervention Group Control Group	-0.12 -12.28	U= 5.00, z=-2.503 *p*= .012 , r=-0.67
Scalp Assessment Regain	Intervention Group Control Group	-25.00 -229.00	U= 9.00, z=-1.989 *p*= .047, r=-0.53

Note. Values present above: M=median.
Group statistics present results from Mann Whitney U testing.
p indicates significance with a significance level of p<0.05
r indicates the effect size presenting the impact of intervention on the measure

3.6.1. Scalp Assessment

Descriptive statistics were conducted on the SALT scalp assessment results and these are presented in Table 3.9 above and Figure 3.1 below. The higher scores on this assessment indicate higher percentages of hair loss. Scores were assessed and documented by a dermatologist. The data for the SALT assessment difference and SALT regain were found to not meet the assumptions for normality. For this reason, the Mann Whitney U testing was implemented. Comparisons of the median SALT scores difference and SALT regain percentages from the two groups are presented in Table 3.9 above.

The Mann-Whitney U Test results indicated there were significant differences between the two groups for the SALT assessment difference and SALT regain scores with significantly greater hair loss and differences indicated in the control group in comparison to the intervention

group. The results show a large effect of the intervention of the SALT difference and SALT regain scores.

These results support the initial prediction that the participants in the integrative CBT intervention group will score significantly improved scores on the SALT assessment from Time 1 to Time 2 in comparison to the control group. Participants in the intervention group showed significant differences in comparison to the control group and were found to experience less hair loss in comparison to the control group.

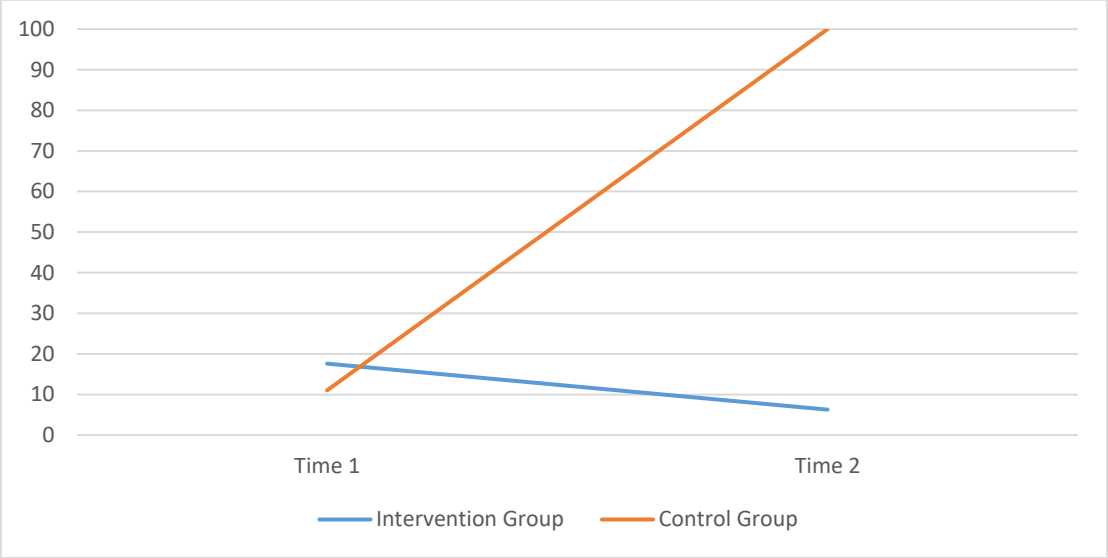

Figure 3.1. Median SALT scores (hair loss) for participants at Time 1 and Time 2 for the intervention and control groups

3.6.2. Thyroid Functioning

The blood tests examined thyroid (TSH) functioning for the participants at the two-time points. A healthy range of TSH thyroid functioning is between 0.34 – 5.6 mlU/L and as people with AA are often found to have thyroid dysfunction, their scores may be either above or below this range (Kasumagic-Halilovic, 2008; Lyakhovitsky, Shemer & Amichai, 2014). The improvement that was predicted is that the participants' scores will become closer to the normal

range. The descriptive statistics for the median scores of thyroid functioning blood tests are presented in Table 3.8 above. Further comparisons were conducted to compare the two groups at the two-time points, and these are presented in Table 3.8 above.

The results revealed to not be normally distributed. The data was therefore analysed using Mann Whitney U testing. The results showed that the groups did not significantly differ in their scores on thyroid TSH functioning at the two-time points. The initial prediction was not supported as the participants receiving the integrative CBT intervention did not differ significantly to the control group at the two-time points in their TSH scores.

3.6.3. Iron Deficiency

Descriptive analyses were conducted on the blood testing for Iron (Ferritin), and these are presented in Figure 3.2 and 3.21 below. The healthy range of Ferritin is reported between 10 – 250 ng/ml for adult males and 10 – 150 ng/ml for adult females (Leggett et al., 1990). As people with AA are found to have dysfunctions to their Ferritin levels in comparison to the healthy population (Kantor, Kessler, Brooks & Cotsarelis, 2003; Esfandiarpour, Farajzadeh & Abbaszadeh, 2008), this may be either above or below this range. Due to the assumption of normality that was not met for the results of Ferritin, the data was analysed using the Mann Whitney U testing. The improvement that was predicted is that the participants' scores will become closer to the normal range presented which would indicate less dysfunction of their Ferritin levels. Comparisons of participants' median Ferritin results for the two-time points are presented in Table 3.8 above.

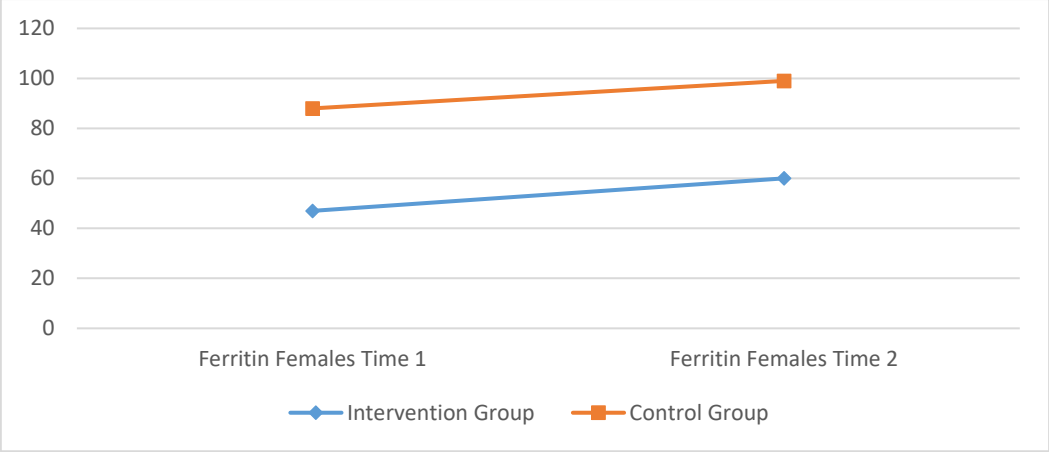

Figure 3.2. Median Ferritin scores for Female participants at time 1 and time 2 for the intervention and control groups

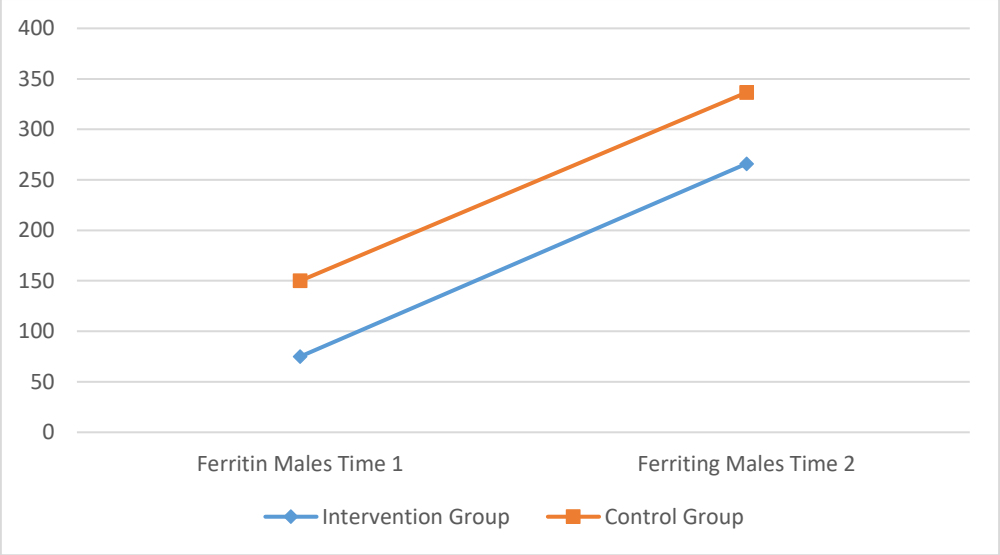

Figure 3.21. Median Ferritin scores for Male participants at time 1 and time 2 for the intervention and control groups

The results revealed found that the intervention group did not significantly differ in their scores on the blood test for Ferritin in comparison to the control group from Time 1 to Time 2. There was found to be a small effect of the integrative CBT intervention on the results for Ferritin. These results do not support the prediction that participants in the intervention group would show significant improvements from Time 2 in comparison to Time 2 when compared to the control group. Due to the difference in the healthy ranges between males and

females for Ferritin scores, Spearman's correlational analyses were conducted to explore the association between gender and the Ferritin results. The results revealed that gender was not significantly associated with the results of Ferritin.

3.7. Patient Feedback on Effectiveness of the Intervention

Participants were asked to rate the impact they felt the intervention had on their wellbeing, stress management, condition, relationships and management of AA. Ratings were between 0 and 5, with 0 indicating the intervention did 'not at all' have an impact on the above areas and 5 indicating that the participant 'definitely' felt the intervention had an impact on the above areas. The participants were also asked to rate how well they feel the intervention worked. Ratings were between 0 and 5, with 0 indicating that the intervention 'did not work well' and 5 indicating that the intervention 'worked well'. Descriptive statistics are presented below for all participants who completed the intervention (see Figure 3.3). The findings suggest that the patients who completed the intervention on average rated a score of 4 or 5 on the impact of the intervention on their wellbeing, stress management, relationships and management of AA and whether the intervention worked well. The results also suggest that patients on average rated a score of 3 on how they found the intervention impacted the condition.

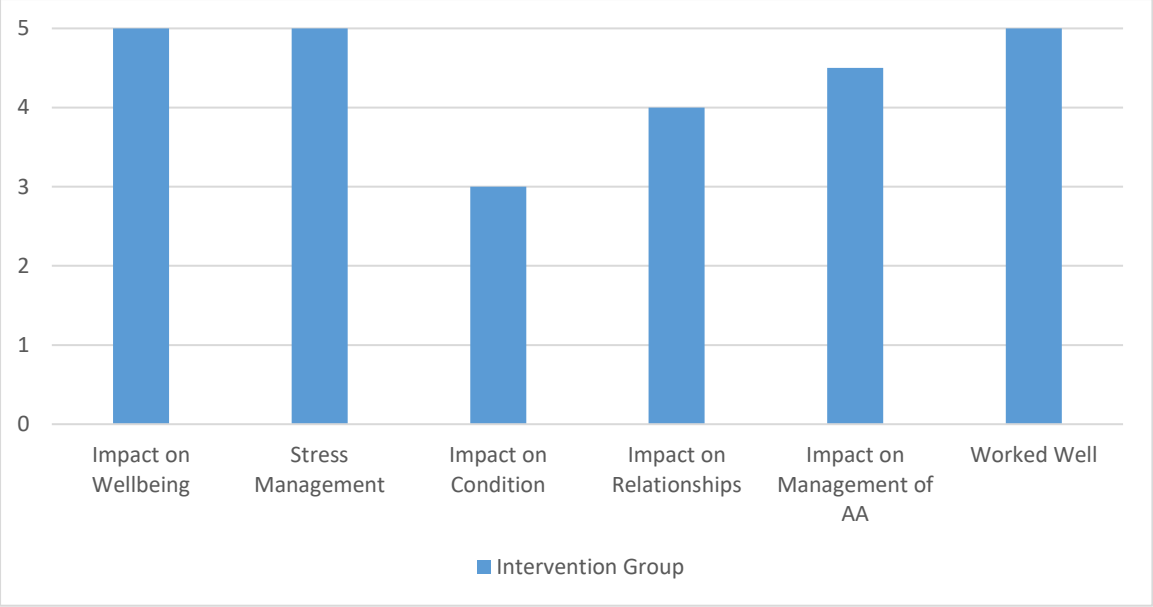

Figure 3.3. Mean Feedback scores for Intervention group at the 12-week assessment

Lastly, the participants were also asked whether they would recommend the intervention to a friend with AA. The findings revealed that 100% of participants who took part in the intervention rated that they would recommend the intervention to a friend with AA.

CHAPTER 4: DISCUSSION

4.1. Overview

The main aim of this study was to investigate the effectiveness of a psychological intervention for people with Alopecia Areata (AA). To date, no randomised controlled trial (RCT) has been conducted to investigate the impact of implementing a psychological intervention for people with AA (Lavda et al., 2012). To address this research gap, a pilot study was conducted to assess a novel individual, 12 week Integrative CBT (ICBT) intervention. The effectiveness of the intervention was evaluated through the use of validated and widely implemented psychological and physical measures. The measures were collected before and after the intervention, from participants in the intervention group, and in a waitlist control group.

Overall the findings for this study suggest that depressive symptoms and patients' quality of life significantly improved for the intervention group compared to the control group, showing a moderate effect size of the intervention on both measures. The rating scale of how distressing the participants experienced the AA were also found to significantly differ between the intervention group and control group, with the intervention group scoring lower distress after the intervention compared to the control group who presented greater distress. Lastly, the physical measure of the scalp assessment (SALT) showed significantly less hair loss for the intervention group in comparison to the control group a strong effect size. Several other measures did not present statistically significant differences between the two groups and time points. Further discussions and the implications of these results are explored below.

4.2. Management of Psychological symptoms of AA

The study predicted that participants receiving the ICBT intervention will present significant improvements for psychological symptoms (stress, depression, anxiety, and quality of life) associated with AA in comparison to participants within the control group.

The present study showed that participants in the intervention group presented poorer quality of life at the initial assessment, compared to the control group. In the second assessment, the intervention group presented significantly improved quality of life scores in comparison to the control group whose quality of life results have significantly worsened from the initial assessment to the second assessment. The results also revealed a moderate effect of the intervention on participants' quality of life results.

When previous research is considered, reviews and meta-analyses conclude that people with AA experience significant difficulties and report a negative impact on their quality of life in comparison to the general population (Liu et al., 2016; Rencz et al., 2016; Davis et al., 2018). The current study supports these findings, as participants both in the intervention and control group presented moderate to severe impact of the condition on their quality of life at the outset. These findings indicate that psychological interventions can improve health related quality of life symptoms experienced by people with AA, and that without psychological support, the quality of life for people with AA may worsen.

The present research also found that all participants presented average to above average mean scores for anxiety and depression, with most participants showing borderline scores for clinical depression and anxiety. Following the intervention the experimental group presented with significantly improved scores for depressive symptoms in comparison to the control group, who were found to have worsened when comparing the initial assessment with the 12-week assessment. As for anxiety scores, these scores did not present a statistically significant improvement when comparing between the groups and the two measurement points.

Research shows that the majority of people with AA present with a single or multiple psychiatric disorders, with anxiety disorders or depression being the most prevalent (Ruiz-Doblado et al., 2003; Hunt & McHale, 2005; Layegh et al., 2010). The results of this study therefore align with earlier studies showing that participants in this study began with borderline clinical symptoms of depression and anxiety. Earlier research found that psychological interventions improved symptoms of anxiety for people with AA but did not improve symptoms of depression (Gallo et al. 2017). However similar improvements of anxiety and depressive symptoms have been found when implementing psychological interventions for people with a range of other skin conditions (Lavda et al., 2012). The findings of this research therefore do not align with the previous research with regards to anxiety scores but do align and expand the research with regards to depressive symptoms.

The finding that anxiety scores did not differ significantly between the two groups may be due to several reasons. Firstly, the small sample size implemented in this study may have impacted the lack of significance. Additionally, research has previously found that individuals with AA experience a higher prevalence of trauma in their lifetimes, which are proposed to impact the onset and exacerbation of AA (Hunt & McHale, 2007; Willemsen et al., 2009). It may have been that participants in this study experienced higher incidents of trauma which may have in turn impacted their anxiety results, however the intervention did not focus on supporting patients with trauma, which could offer an explanation to the lack of significance of the findings.

As mentioned above, the present findings showed improvement in depressive symptoms for people with AA which was supported by research into psychological interventions for people with a range of skin conditions. However this was not supported by previous research for people with AA as depressive symptoms were not found to significantly improve (Gallo et al., 2017). These differing results may be due to the differences in the

intervention implemented. It may be that the addition of narrative therapy and the format of the intervention may have contribute to these results. The findings provide important contributions to the knowledge of the impact of psychological interventions for people with AA.

Participants in both groups reported moderate level of stress at the first assessment. These results are in aligned with previous research which reported that people with AA experience significantly more stressful events, family difficulties and personal problems, and researchers have emphasised the central role of stress in the exacerbation of the condition (Brajac, Tkalcic, Dragojevic & Gruber, 2003; Alsamaeai & Aljubori, 2010; Manolache & Benea, 2007). However, the differences between the groups from time 1 and time 2 assessment were not statistically significant. The lack of significance for these results could be explained multiple reasons. One reason for these findings may be due to the small sample size.

Given that participants in the waitlist control group worsened their quality of life and depression during the 12 week period, an intriguing question is why participants in the control group did not report worsening stress levels. One explanation could be a placebo effect due to the design of the study. All participants were seen for two assessments by the researcher and trainee psychologist to complete psychological and physical assessments. It may be that during these meetings, the control group experienced a placebo effect: improvements to their stress levels prompted by discussing their condition and perhaps feeling heard and validated, and knowing that they will soon be offered psychological treatment. To improve the study design for future research, it would be useful to include a no-treatment control group who do not anticipate any further meetings, support or treatments, to enable further comparisons and explorations into the placebo effect.

Further research is needed to understand the relationship between anxiety, stress and AA. Present findings highlight the importance of psychological therapy in supporting people with AA to alleviate depressive symptoms. Psychological difficulties associated with AA have

been found to be significant for AA patients reporting the highest level of suicidal ideation and suicidal attempts amongst patients with skin conditions (Layegh et al., 2010). These findings highlight the crucial role of psychological interventions for supporting people with AA, and the importance of conducting further research to explore the impact of–psychological interventions for people with AA.

As noted, to date, no RCT has been conducted to investigate the effectiveness of individual psychological interventions for people with AA. Only one experimental pilot study has been conducted to evaluate the effectiveness of an 8-week group Mindfulness Based Cognitive Therapy (MBCT) programme for people with mild to moderate AA (Gallo et al., 2017). The authors reported that the participants in the intervention group presented significant improvements in the Quality of Life index and improved their anxiety levels as measured on the Brief Symptom Inventory for Anxiety, compared to the control group. The authors did not find significant improvements to depressive symptoms. The results of the present study support these findings as similar improvements in participants' quality of life were found and added to this research by finding significant improvements to depressive symptoms. However, the current study could not fully support Gallo et al.'s (2017) findings on anxiety.

While RCTs investigating the effectiveness of psychological interventions have not been implemented for people with AA, RCTs have been conducted for people with a range of other skin conditions. A meta-analysis (Lavda, et al., 2012) found that psychological interventions for people with atopic dermatitis, vitiligo, psoriasis and acne were effective for improving the psychological and physical symptoms associated with these skin conditions. The authors concluded that psychological interventions may be as effective as or more effective than medical treatments (Lavda et al., 2012). Similar findings were reported for other chronic health conditions such as chronic pain and irritable bowel syndrome, which highlights the important contribution of psychological interventions for people with chronic health conditions

(Zijdenbos et al., 2009; Dixon et al. 2007). The findings of this pilot study therefore support previous research by showing improvements in both psychological and physical measures for people with AA.

4.3. Management of Reported Distress Experienced by People with AA

Participants were asked to rate their experience of hair satisfaction and the degree they experienced distress from the condition and the level they experience the condition as problematic at the initial assessment and after the 12-week intervention. The findings revealed that participants in the intervention group improved significantly on their rating of distress from the first to the second assessment point in comparison to the control group who were found to worsen in their reported distress levels. These results showed a strong effect of the intervention on these scores.

The findings for participants scoring on how problematic they experience the condition and on hair satisfaction did not show a significant improvement from the initial assessment to the 12-week assessment and when comparing the two groups. The rating scales questioned the level of 'distress' experienced by the condition, how 'problematic' they find the condition and the hair satisfaction experienced by the participants. It may be that participants rating of distress improved according to their emotional responses and difficulties with the condition. This may have also improved alongside their rating of improvement in stress management which was taught within in the intervention implemented.

However, the rating of 'problematic' may have not improved as significantly as they may have related this question to the level of inconvenience or difficulty they feel from the

condition such as wearing a wig, taking medication or needing to apply creams which may be the reason that the groups did not differ significantly on this measure.

When the question of hair satisfaction is considered more closely, it is important to consider how people with AA may also perceive this question. It may be difficult for people with AA to feel they can rate this highly as they may wish they no longer experienced AA and so they may only rate the highest score of '10' if they no longer have AA. Therefore it may be that even if participants experience a greater acceptance of the condition, this may not impact their hair satisfaction. However, the moderate effect sizes indicated by the problematic scores and hair satisfaction scores suggest that the small sample size may have impacted the significance of these results. It has been argued that effect sizes is more of a reliable assessment of differences between groups than p value, due to the impact of sample size on significance levels (Sullivan & Feinn, 2012). For this reason, the moderate effect size has been considered a reliable and important finding for this research. Further research with larger scale studies are required to confirm these results.

4.4. Management of Physical Symptoms of AA

The present study aimed to investigate the physical symptoms of AA and whether these manifestations were found to significantly change by receiving the psychological intervention in comparison to the control group. The study predicted that participants in the intervention group will present significantly improved physical symptoms of AA in comparison to the control group from the initial assessment to the 12-week assessment. To investigate these changes, the physical symptoms of AA were investigated using a SALT scalp assessment to assess hair loss, and two blood tests: TSH thyroid functioning and Ferritin levels.

The scalp assessment for hair loss results found that participants in the intervention group lost significantly less hair in comparison to participants in the control group from the first assessment to the end of the trial. A strong effect size indicated that the intervention had a significant impact on the hair condition. Furthermore, medication was also accounted for with these findings and found that medication did not contribute to these results. Future research is recommended to explore the impact of psychological interventions on hair growth as the large effect size presented indicates promising results.

These findings do not align with Gallo et al.'s (2017) findings, as the authors reported that the patients with AA receiving a mindfulness group intervention did not improve their hair loss. The results of this trial therefore provide important clinical implications for the management and treatment of AA with psychological and medical interventions to be implemented alongside each other.

Previous research into psychological interventions for people with other skin conditions found psychological as well as physical improvements in the manifestations of these conditions (Lavda et al., 2012). The results of the present study support these findings and suggest that further longitudinal and larger scale studies are required to validate these results.

Another investigation within this research was for the blood tests of TSH thyroid functioning and Ferritin. The TSH thyroid functioning and ferritin blood test found that there were no significant differences between the intervention group and control group. When the results of the Ferritin and TSH scores are explored more thoroughly, it was identified that the participants in the beginning of the intervention did not present with irregularities to the thyroid functioning TSH scores or in their Ferritin levels. This may be due to the location of the recruitment. As the participants were recruited from the Royal Free Hospital NHS Foundation Trust, they were recruited from dermatologists who had seen these patients prior to being referred to the trial. This meant that participants were supported medically, and may have been

given health recommendation or medications to regulate their TSH and Ferritin levels. These results do not support previous research as the patients on the trial were not found to present irregularities to the thyroid functioning or Ferritin levels.

4.5. Efficacy of an Integrative CBT Intervention for AA

The intervention implemented within this research was a novel intervention protocol that was designed for the purpose of this research. As noted earlier, the only other research to date for a psychological intervention for people with AA implemented a group MBCT intervention that incorporates mindfulness and CBT (Gallo et al., 2017). This suggests that the current intervention has added important research knowledge into benefits for people with AA, and that the addition of narrative therapy and implementing the intervention in an individual format rather than group format may have contributed to the further improvements presented within the study. This research found additional clinical findings in comparison to the Gallo et al. (2017) study which results in a moderate impact of the intervention to the hair loss which suggests that the addition of narrative therapy and the individual format may have contributed to these clinical findings.

The underpinning of the therapeutic intervention within this research and within counselling psychology field stems from a person-centred approach which emphasises the importance of active listening, empathy, unconditional positive regards and congruence which supports the individual develop a more internalised locus of evaluation and reduce emotional distress (Mearns, Thorn & McLeod, 2013). These key elements may have heightened the differences between the group therapy and individual therapy format.

Research has been conducted into experiences of group therapy and suggested that adverse effects can occur due to the limitations of group interventions (Roback, 2000). While adverse effects are also reported in individual therapy, group therapy has been suggested to have limitations and considerations regarding the group dynamic and confidentiality issues (Roback, 2000). The authors emphasise that research is limited into the qualitative differences between individual and group therapy (Roback, 2000). Research has since been conducted to investigate the differences and preferences for the format of therapeutic interventions (Shechtman & Kiezel, 2016). The authors confirmed that the participants expressed a preference for individual therapy in comparison to group therapy due to reasons such as feeling safer and more privacy, and also expressed limitations such as feeling that they would be dependent on the therapist, the length of the therapy feeling longer than group therapy and the cost (Shechtman & Kiezel, 2016). This suggests that there may be a preference for individual therapy in comparison to group therapy which may have impacted the differences found in this research compared to previous studies. The present research did not investigate the advantages and limitations of the intervention experienced by participants in this trial due to the ethical considerations (discussed below). Valuable information of what elements of the therapy were particularly important, would have enabled a greater understanding into which elements were felt to be more effective and beneficial to the participants.

4.8. Clinical Implications

The present research findings provide important implications for the field of psychodermatology. These findings highlight the positive impact of psychological interventions on people with AA. They highlight the use of integrative psychological interventions and incorporating evidence based interventions of CBT but also third wave

interventions of mindfulness and narrative therapy. The clinical implications of this study are as followed:

The first important clinical implication of this research is that this is the first study to investigate the effectiveness of a psychological intervention for people with AA using a RCT. Furthermore, this trial also contributed to the research literature by implementing a novel psychological intervention.

The psychological impact of AA for people managing the condition has been reported to be significantly distressing, and results in reduced psychological wellbeing and quality of life (Renz et al., 2016; Davis et al., 2018). Stress has been shown to have a significant impact on the onset and exacerbation of the condition (Brajac, et al., 2003; Alsamaeai & Aljubori, 2010). Furthermore, people with AA have been found to present significant psychological difficulties with majority of patients found to meet the clinical benchmark for diagnosis for anxiety and depression (Ruiz-Doblado et al., 2003; Hunt & McHale, 2005; Layegh et al., 2010). People with AA have been found to show the highest suicidal mortality rate amongst people with skin conditions (Layegh et al., 2010). Therefore, it is clear that psychological therapy could significantly support people with AA. However, psychological interventions have mainly been implemented and researched for people with chronic skin conditions such as psoriasis and dermatitis (Lavda et al., 2012). The results suggest that by treating people with AA with Integrative CBT, patients with AA experience significant improvements to their psychological wellbeing as well as in the physical symptoms of their condition. Further larger scale studies are necessary in order to expand the research knowledge into the psychological and physical benefits of the intervention for people with AA.

The results also contribute to the field of psychodermatology by supporting the association between the mind and the body. The relationship between psychological distress and medical conditions, in particular in dermatology, is one that has been emphasised in the

literature (Moon, Mizara & McBride, 2013; Lavda et al., 2012). This research highlights and strongly supports the work implemented within psychodermatology, by providing further evidence that improving the psychological distress and overall psychological wellbeing of patients can lead to improvement in dermatological conditions.

The research findings of this trial support and highlight the need for multidisciplinary input within dermatology services. While the input of psychology within health services have increased in the last decade, the rates of psychologists in the UK working in healthcare services has been reported to be 4% (BPS, 2007). The current findings present evidence and promising results into the support and impact that psychological interventions can provide for people with AA and within psychodermatology. To support the increased employment of psychologists in health care services, it is recommended that universities and other training institutions for clinical and counselling psychology should consider providing more extensive knowledge and training into the psychological work with people with chronic health conditions. It is also recommended for the clinicians, dermatologists and medical staff within dermatology and clinical health departments to strongly consider multidisciplinary input, as this research highlights the further need for this in health services. Previous research has reported that best outcomes are found from multidisciplinary input and when psychosocial factors are considered for the patients accessing services (Jafferany, 2007). This research support these findings which recommend to further expand the psychological services across dermatology and health services. Furthermore, this research also encourages embedding psychological input into medical specialisation training for those working with dermatology patients and other chronic health conditions.

The findings from this study also provide important directions for medical and psychological staff. People with AA have been reported to experience a range of psychiatric disorders and difficulties such as anxiety and depression, high suicidality risk and a high

incidents of trauma which is an important consideration for anyone working with people with AA (Lavda et al., 2012; Gupta et al., 2017; Willemsen et al., 2009). Due to the limited research available on psychological interventions for people with AA, the knowledge that was gained from this research is that psychological interventions are an important component of the management of AA, and should be offered to patients to support their psychological and physical symptoms of AA. It should also be considered whether other psychological interventions and modalities may be more suitable and effective to support people with AA with their histories of trauma. Therefore the findings of this trial provide important considerations for choosing the modality and format of a psychological intervention within this field.

4.9. Contributions to Counselling Psychology

This research trial provides important contributions to the field of counselling psychology given its emphasis, focus and rationale on psychological wellbeing and health. The scope of counselling psychology has been explicitly extended to cater for health conditions, by the American Psychological Association (APA) (Division 17) by presenting the field of Counselling Health Psychology (Richardson, 2009). However, historically the work of counselling psychologists in health care was considered non-traditional (Kagan et al., 1988), Although today the contributions of counselling psychological in health care have been acknowledged, in the UK it has found that only 4% of psychologists were working with clients with physical health problems (BPS, 2007). This suggests the growing need to expand the field of counselling psychology in health care.

The field and role of counselling psychology focuses on the implementation of research and therapeutic practice (Karademas, 2009). However, as noted earlier, research provided by

counselling psychologists in health care is still limited (Mrdjenovich & Moore, 2004; Karademas, 2009). Furthermore, the authors noted that the majority of the research within the field of counselling psychology has provided theoretical work or reviews rather than empirical research and experimental designs (Mrdjenovich & Moore, 2004). Researchers therefore emphasized the necessity to expand the research within the field of counselling psychology into health care (Mrdjenovich & Moore, 2004). Furthermore, the core underpinning of counselling psychology is focused on the therapeutic delivery and the therapeutic relationship that are key within any psychological intervention (Paul & Charura, 2014).

This trial therefore contributes significantly to the expansion of empirical counselling psychology research within health care, by providing research in the form of an experimental RCT design. The trial also implemented a novel psychological intervention for people with a chronic skin condition to support their coping and management of the condition, and hence this trial has important contributions to the field of counselling psychology. The underpinning of this research and novel intervention implemented is placed firmly within the counselling psychology discipline by the emphasis that counselling psychologists should keep their psychotherapeutic training as a foundation for their work by a continuous focus on the client as a 'person', while keeping updated with new knowledge and skills and integrating their specialties to provide the most effective interventions and care (Hudson-Allez, 2000; Karademas, 2009). The intervention evaluated in this research therefore contributes to the field of counselling psychology by presenting and evaluating the core principles of counselling psychology and contributing to the valuable field of counselling psychology in health care.

This trial has important contributions to and several implications for the field of counselling psychology which are necessary to consider.

The present study contributes to the field of counselling psychology by adding to the knowledge for people with AA and other skin conditions. This research therefore widens the

research that has been conducted for people with skin conditions and the ways that people with AA can be supported and treated to help manage the condition more effectively.

This research widens the scope of what is considered to be the normative remit of counselling psychology. It therefore has implications for training in counselling psychology. As noted earlier, the application of counselling psychology treatment and research within healthcare was non-existent until 1980s with the presence of counselling psychologists increasing in hospitals only in the past two decades (Karademas, 2009; Foster, 2000 Mrdjenovich & Moore, 2004). Therefore this research emphasises the important contribution that counselling psychologist could make in healthcare services and the impact that these interventions can have on the quality of life and wellbeing of people accessing health services, and particularly for people with chronic health conditions, AA and a range of other skin conditions.

The underpinning of this research and novel intervention implemented is placed firmly within the counselling psychology discipline by implementing a psychological intervention that emphasises the foundation of therapeutic work of focusing on the client as a 'person' while implementing and integrating newly developed interventions to support the individual in the most effective way (Hudson-Allez, 2000; Karademas, 2009). The study therefore provides important learnings for future counselling psychologists working within the clinical health field to apply the core principles of counselling psychology and at the same time tailor the work to the condition being targeted and the individual.

4.10. Limitations

4.10.1. Sample

An important limitation of the study was that the research was implemented as a pilot study containing a small sample of participants. Sample size is a known factor that can influence the statistical significance levels found for various analyses (Sullivan & Feinn, 2012). The findings indicated significant differences between the groups for quality of life, depressive symptoms, rating of distress experience by AA and hair loss. Other analyses did not present statistically significant differences between the two groups, despite mostly showing changes in the hypothesised direction. This may be due to the small sample size of this study. Recent claims have been made by scholars that the *p* value is not always an adequate means to assess impact of interventions without effect size as small sample sizes can render the *p* value insignificant (Sullivan & Feinn, 2012). The authors strongly recommend that the effect size is more of a reliable method to interpret results due to these difficulties. Despite these limitations, the findings provide an important foundation for larger scale studies.

4.10.2. Selection Bias

This research was implemented within the Royal Free Hospital NHS Foundation Trust. Participants were therefore recruited from Dermatology services which meant that a larger proportion of participants were receiving medical support for the AA. While this study provides important insights, it also highlights the difficulties and benefits of implementing psychological support for patients with AA alongside medical treatment, as the results cannot be readily generalised to people with AA who are not receiving medical support within dermatology services. Some of the participants within this study were not receiving medication but

continued to have appointments within the service to be monitored and supported. It may be that the participants chosen for this study were more supported than those who are not accessing services which may indicate that either other patients with AA may be experiencing greater difficulties than those who participated in this trial or that those who participated in this trial were more distressed and experienced more difficulties than other people with AA who were not accessing services.

Another important consideration for selection bias is the participants who agreed to participate in the intervention and the participants who dropped out of the research. It may have been that those who agreed to participant and completed the trial may have been more motivated to engage in the intervention or may have presented with greater difficulties with regards to the AA in comparison to those who declined their participation in the trial. For this reason, the research presented may not represent the patients with AA who are not as motivated to make changes and engage in the intervention, and those who are not interested in receiving a psychological intervention. The recruitment process found that out of the 46 participants who were referred to the study 26 declined to participate and 2 dropped out. This may have been due to a lack of interest in the intervention, or aim of the investigation of the trial.

Another consideration of the study is that it required participants to commit either to the 12-weekly individual sessions of psychological therapy and commit to attending further meetings to conduct the psychological and physical assessment sessions. These were offered during the usual working hours which clashes with work and other life commitments for most of the participants. Furthermore, the participants who declined may not have been interested in attending psychological therapy and may have considered this to be emotionally difficult which may add to their emotional distress experienced by the condition. There were also two participants who dropped out of the intervention before it was completed. This might be an indicator of the difficulties that can be experienced for people undergoing psychological

therapy. Psychological therapy can be demanding in terms of time commitment and psychological demands. The drop out of participants during the intervention suggests that as they were volunteering and did not seek a referral from a medical professional for psychological therapy, this may have led to challenges for these participants with perhaps them not being as prepared for this or not feeling as motivated or committed to engaging in the intervention.

4.10.3. Researcher bias

One of the limitations that the Integrative CBT intervention was conducted by a trainee counselling psychologist. This meant that the person conducting the intervention had not fully completed their training at the time of the intervention which may have been a confounding variable and impacted the effectiveness of the trial. This was managed by the trainee psychologist receiving regular supervision by counselling and clinical psychologists. While the benefits of the intervention and the feedback rating scales suggest that this limitation was not problematic, it may be that further benefits or improvements may have been found if the therapy was provided by a fully qualitied psychologist.

The trainee counselling psychologist that implemented the intervention was also the researcher of this research trial. This dual role led to some difficulties by having to lead the research as well as conduct the intervention. This may have also lead to an increased motivation of the researcher and trainee counselling psychologist for the research to succeed which may have impacted the intervention in comparison to having a psychologist implement the intervention who was not also involved in the management of the trial.

4.10.4. Physical Assessments

4.10.4.1 Blood Tests

During the trial, the participants were required to undertake blood tests for Ferritin and TSH Thyroid functioning at the beginning of the study and after the 12-week intervention or 12-week waiting period. To receive this blood test, participants were asked by the Dermatologists to attend the phlebotomy department within the hospital and were told that if there was a queue, they may find it easier to return another day. However, this led to limitations in the trial as it required the participant to leave the hospital and perhaps return another day or time. At times the results were not available for participants which lead to missing data. The missing data indicates that there may have been participants who did not wish to have the blood tests and may have avoided it due to the discomfort of the test. Throughout the trial, the researcher tried to manage this limitation by reminding participants to undertake the blood test.

4.10.4.2. SALT Assessment

The SALT assessment is a scalp assessment that requires the Dermatologists to visually assess the scalp and place a percentage score of the area based on their clinical judgement. As the rating provided are based on the subjective opinion of the scalp, this may cause variability between the dermatologists who conducted the SALT assessments. The variability that occurs between the assessors has been noted by the authors and creators of the SALT assessment (Olsen et al., 2014). To manage this limitation, the authors suggest to implement teaching sessions amongst the dermatologists to increase the reliability of the scores. Furthermore, the authors also recommend for assessors to implement the SALT assessment for one patient by two assessors so that this can be used for cross-referencing and interrater reliability. However,

due to the limited time and resources of the project, this could not be facilitated in the current study. For future research this would be an effective method to ensure the subjectivity of the assessments are considered and controlled for within the research.

4.10.4.3. Medical Photography

Medical photography was implemented within the trial to increase the reliability and validity of the SALT assessment. However, there was one participant in the trial who reported that this assessment was particularly anxiety provoking and asked to not participate in this assessment. The researcher and supervisors discussed and considered this case and whether to enable the participant to continue with the trial due to this lack of measure. The researcher decided that this could be managed within the trial and accepted that this measure was not collected for this participant.

4.10.5. Medical Adherence

The medications that were taken by participants were not measured or monitored within this trial. For this reason, it may have been that participants did not continue to take their medication consistently. This may have had an impact on their physical and psychological symptoms of AA. However, within the research analyses conducted, medication was explored as a covariate. The results indicate that the medication did not contribute to the measures investigated and did not contribute to the significant findings between the two groups and time-points. Therefore, medication adherence did not significantly impact the results of this study.

4.10.6. Response Bias

Participants in the intervention group were asked to complete a feedback questionnaire at the end of the intervention to consider the impact of the intervention on various aspects of their wellbeing with regards to the AA. As the researcher was also the trainee counselling psychologist that delivered the intervention, the feedback questionnaire was handed to the researcher which may have led to the participants responding in a favourable way as they were aware this would be seen by the person who delivered the intervention. This could have been managed by appointing another member of the research team to collect the feedback questionnaires to manage this potential response bias. However, this may have led to missing data as it was collected following the last session of the intervention. Due to the limited resources of this study, this could not be facilitated. Another alternative to manage this limitation may have been to implement the use of online feedback questionnaires to reduce the potential of response bias from the participants. Furthermore, to reduce the possibility of missing data, reminders and prompts could have been implemented.

4.10.7. Intervention

4.10.7.1. Intervention Delivery

The intervention was delivered with consistency and following a protocol to direct the researcher and trainee psychologist in the delivery of the intervention. However, as the intervention was a novel and tailored intervention to each participant, this lead to the researcher delivering the intervention with greater flexibly. While all components of the intervention were delivered to each participant, the order of the protocol was at times adjusted to suit the needs of the participants accessing the trial and their individual needs. At times, there were some aspects of the therapeutic modality that may have been more greatly emphasised in the work,

depending on the needs of the participants. This may have led to inconsistencies in the delivery of the intervention and therefore led to confounding variables regarding the delivery and consistency in the intervention delivered.

4.10.7.2. Participant Adherence

The intervention was delivered across 12-weeks of 60 minutes individual therapy. However, there were times when participants were unable to attend due to illness or unforeseen circumstances. This led to variability in the adherence to the intervention. While all participants in the intervention group completed the 12-week intervention, this may have been over a longer period of time for some participants in comparison to others.

4.11. Reflexivity

Within the field of counselling psychology and within research, it is important to consider the impact and role of the researcher and be able to explore the researchers own subjective experiences, thought processes, hopes and responses as these can also significantly contribute to the research process and findings (Seale, 2004). The ability and implementation of reflection for a psychologist is considered key in the field of counselling psychology to improve and build on the researchers' investigation and for psychological practice (Brewer, 1994). For this reason, it felt important to reflect on my experience and process throughout this research trial as I feel it contributed significantly to my overall development and learning for the field of psychodermatology and as a counselling psychologist.

I feel that one of the most prominent aspects of this research has been the dual role that I faced as a trainee counselling psychologist implementing the psychological intervention and as a Researcher implementing the trial. I felt very proud of the research that I was implementing

contributing the first RCT for people with AA. Simultaneously, I felt I was very motivated for the research to succeed but I was also very aware that I was a Trainee and felt this was a weakness of mine within this trial and that this may contribute to the downfall of the trial and that the intervention may therefore not be successful. These concerns were at times exacerbated when there were understandable challenges throughout the research or when participants dropped out. While I felt this sense of concern, in particular during the beginning of the trial, I found that as the trial progressed and the participants reported positive improvements and I built strong therapeutic relationships with the participants, my concern for this lessened. I feel that I developed a sense of confidence in myself and my abilities in this trial which I feel is also very reflective of my general progress and process to the development as a counselling psychologist.

The dual role of the researcher and trainee psychologist within this project was also particularly challenging when implementing the therapeutic modality for the participants on the trial. I feel it is important to reflect on these conflicting roles and the difficulties of remaining objective as a researcher, while being involved in the subjective experience of the therapeutic relationship. I feel that at first, this was a particularly challenging and felt that the two roles were conflicting. I also felt that I was conscious and aware of the need for the therapeutic modality to be a subjective and relational experience but also the need for me to remain objective as the lead researcher of the trial. This tension was particularly reflecting the want I had for the therapeutic modality to be successful but also the want I had for the trial to be managed successfully. As the trial progressed, I felt that this dual role became easier to manage. I feel that this evolved and improved as I developed in my practice, my confidence and my ability to manage the roles. I felt that the roles eventually did not feel as conflicting and felt to gradually merge into one role. I feel that this process significantly reflects my journey as a counselling psychologist and my personal and professional development. As with

becoming a counselling psychologist, eventually I realised that my most congruent self was the most important aspect to the successful management of these roles.

During the research project, I felt and noticed that my confidence increased over time. However, I felt that my expectations and hopes for the research to succeed were consistent throughout. I felt I was certainly motivated for the research and intervention to succeed as I strongly wanted positive changes to be experienced by the participants who kindly agreed to participate in the trial but also for my trial to succeed to feel a sense of achievement at the end of the research. This sense of hope and expectations for the trial may have consciously or unconsciously also been passed onto the participants and researchers in the trial. The participants of the trial were all explained the aims of the trial and previous research conducted into psychological interventions for people with skin conditions. Throughout the research I held the concern of building hope for the participants in the trial which may in turn lead to disappointment if they did not achieve physical and psychological improvements for difficulties they experience due to the condition. To manage my concerns for this, I worked to emphasise to the participants the fact that the trial is the first to be conducted for people with AA and explained that it is not clear if the trial will present improvements. I realise this would have continued to build hope for them for potential improvements from the trial. However, reflecting on this process enables me to realise that when participants volunteer for research or a trial of this kind, there are often expected benefits which encourage their participation. Similarly to when clients attend therapy with a psychologist and expect benefits. I realise that my trial mirrors and reflects important process in counselling psychology and within therapeutic work.

When I continue to reflect on my journey within the Professional Doctorate in Counselling Psychology and within this trial, I also felt that this trial contributed significantly to my understanding of working with people with skin conditions and AA in particularly. I was

particularly struck by the level of trauma that the participants that received the trial had experienced. I had previously considered the work within psychodermatology to be more focused on supporting people to manage the condition and stress that exacerbates the condition. However, the trial and working with people with AA has significantly altered my view. I found that participants often reported underlying trauma which also took time to uncover in the therapeutic work. I have wondered and reflected on this process and whether there is a link between people with AA and trauma but also their process of managing trauma. I have noted that people with skin conditions and AA in particular have presented similarities between them as the clients and participants often presented difficulties with emotional regulation and emotional expression. For this reason, it may be that psychological therapy supported these individuals to develop skills of emotional regulation which is why they experienced psychological and physical benefits to the condition.

While I faced challenges throughout the research and trial, I feel that the research significantly contributed to my personal and professional development as a counselling psychologist. I feel that the research mirrored and reflected on challenges that I experienced as a psychologist and within my therapeutic work and enabled me to learn about myself, my work with clients and the way I would like to continue and progress as a counselling psychologist.

4.12. Implications for Future Research

The research findings presented above and the discussion of the previous findings alongside this research have provided important implications and recommendations for future research in the field of AA and psychodermatology that are important to discuss.

The present study found psychological and physical improvements for the intervention group in comparison to the control group from the first assessment to the second assessment.

In particular depression, quality of life and hair loss was found to significantly improve while stress, thyroid functioning and iron were not shown to significantly improvement. The ratings of how problematic participants experienced the condition and hair satisfaction was not found to significantly improve for the intervention group in comparison to the control group but there was a moderate effect size indicating a moderate impact of the intervention on these measures. The small sample size implemented in this research was a limitation to this study. Further larger scale psychological interventions are necessary to implement to progress research knowledge into the psychological and physical benefits for people with AA.

It is recommended for future research to implemented larger scale studies to determine whether the sample size impacted the results of the present findings and to further expand the limited research currently implemented for psychological intervention for people with AA. Furthermore, it is also recommended for future studies to implemented longitudinal studies to investigate whether these changes were maintained long term. As the condition of AA and other skin conditions are frequently changing, the long-term effectiveness of the intervention is important to explore.

Another important consideration for future research is the impact of the intervention and explore qualitatively the impact of the intervention. While the psychological and physical measures present the symptoms associated with AA, further exploration into the experience of the intervention would be valuable to be able to understand whether there are alternative psychological interventions that may be implemented in the future to further support people with AA. As discussed above, people with AA are reported to experience a range of psychiatric disorders such as anxiety, depression, high suicidality risk and a high incident rating of trauma (Lavda et al., 2012; Colon et at. 1991; Ruiz-Doblado et al., 2003; Gupta et al., 2017; Willemsen et al., 2009). It is therefore recommended to focus future research on psychological

interventions which may support individuals with a range of presenting difficulties such as trauma which was not targeted in this research trial.

4.13. Conclusion

The present research study aimed to investigate the effectiveness of a novel, integrative CBT intervention designed for people who live with AA. It is the first RCT to explore the effectiveness of a psychological intervention for people with AA and explore psychological and physical benefits for people with AA. The findings showed that the psychological intervention resulted in improvements with regards to symptoms of depression and the participants' quality of life in comparison to participants who did not receive the intervention. The study also showed the physical symptoms of AA of hair loss was significantly less for the participants who received the intervention in comparison to those in the control group with a strong effect size. This means that the physical manifestations of the AA were significantly and strongly impacted by the psychological intervention. Lastly, the study showed significant improvements and a strong impact of the intervention on the experience of distress due to the AA. Hair satisfaction and the experiences of AA as problematic was also found to be moderately effected by the intervention. These measures were not found to be significantly different between the intervention group and control group. However, the effect size has been argued to be a more reliable form of analysis as it is not impacted by the sample size. Larger scale studies are required to confirm these findings.

These results indicate significant implications for the management and treatment of AA and the impact of psychological therapy that supports patients with AA with being able to manage the condition. Findings should be considered with caution as there were limitations to

the research mainly with the assessment methods implemented for the physical assessments and the small sample size. Further research is needed to explore the impact of the intervention for psychological and physical difficulties with AA. As this study was a pilot study, further larger scale studies and RCTs are required to confirm these results and further deepen the research literature into psychological interventions for people with AA. These findings promote and support the expansion of counselling psychology in healthcare, to more effectively support patients suffering with chronic health conditions.

APPENDICIES

This section has been removed for data protection purposes

REFERENCES

Abedini, H., Farshi, S., Mirabzadeh, A., & Keshavarz, S. (2014). Antidepressant effects of citlopram on treatment of alopecia areata in patients with major depressive disorder. *Journal of Dermatological Treatment, 25*(2), 153-155.

Alipour, A., Oraki, M., & Zarghami, M. (2020). Comparative effectiveness of cognitive-behavioral group therapy and reality therapy on the quality of life of patients with seborrheic dermatitis. *Journal of Nursing and Midwifery Sciences*, *7*(1), 36.

Alfani, S., Antinone, V., Mozzetta, A., Pietro, C. D., Mazzanti, C., Stella, P., Desanka, R., & Abeni, D. (2012). Psychological status of patients with alopecia areata. *Acta Dermato-Venereologica*, *92*(3), 304-306.

Alsamarai, A. M., & Aljubori, A. M. (2010). Association between stress and skin disease. *Middle East Journal of Internal Medicine*, *3*(1), 12-19.

American Psychological Association (1996). *Guidelines and principles of accreditation for programs in professional psychology.* Washington: American Psychological Association.

Anagnostopoulou, T. (2005). Health psychology: A critical review of the field. *Hellenic Journal of Psychology*, *2*(2), 114.

Angus, L. E., & McLeod, J. (Eds.). (2004). *The handbook of narrative and psychotherapy: Practice, theory and research*. California: Sage Publications.

Arbabi, N., Salami, F., Forouzesh, F., Gharehbeglou, M., Riyahin, A., & Shahrzad, M. (2013). Effects of stress and stressful events on alopecia areata. *Life Science Journal, 10*(6), 43-48.

Argyle, M. (1988). *Bodily communication*. London: Routledge.

Aylard, P. R., Gooding, J. H., McKenna, P. J., & Snaith, R. P. (1987). A validation study of three anxiety and depression self-assessment scales. *Journal of Psychosomatic Research*, *31*(2), 261-268.

Basra, M. K. A., Fenech, R., Gatt, R. M., Salek, M. S., & Finlay, A. Y. (2008). The Dermatol ogy Life Quality Index 1994–2007: a comprehensive review of validation data and clinic al results. *British Journal of Dermatology*, *159*(5), 997-1035.

Beck, A. T. (1967) *Depression – Clinical Experimental and Theoretical Aspects.* New York: Harper and Row

Bjelland, I., Dahl, A. A., Haug, T. T., & Neckelmann, D. (2002). The validity of the Hospital Anxiety and Depression Scale: An updated literature review. *Journal of psychosom atic research*, *52*(2), 69-77.

Blaikie, N. (2000). *Designing social research*. Cambridge: Polity Press.

Blaikie, N. (2007). *Approaches to social enquiry: Advancing knowledge*. Cambridge: Polity Press.

Bohlmeijer, E., Prenger, R., Taal, E., & Cuijpers, P. (2010). The effects of mindfulness-based stress reduction therapy on mental health of adults with a chronic medical disease: a meta-analysis. *Journal of Psychosomatic Research*, *68*(6), 539-544.

Brajac, I., Tkalčić, M., Dragojević, D. M., & Gruber, F. (2003). Roles of stress, stress perception and trait-anxiety in the onset and course of alopecia areata. *The Journal of Dermatology*, *30*(12), 871-878.

British Psychological Society (2007). *New Ways of Working for Applied Psychologists in Health and Social Care. Organising, Managing, and Leading Psychological Services.* Leicester: BPS.

Brown, R. L., & Rounds, L. A. (1995). Conjoint screening questionnaires for alcohol and other drug abuse: Criterion validity in a primary care practice. *Wisconsin medical journal*, *94*(3), 135-140.

Buford, T. W., & Willoughby, D. S. (2008). Impact of DHEA (S) and cortisol on immune function in aging: a brief review. *Applied Physiology, Nutrition, and Metabolism*, *33*(3), 429-433.

Bundy, C., Pinder, B., Bucci, S., Reeves, D., Griffiths, C. E. M., & Tarrier, N. (2013). A novel, web-based, psychological intervention for people with psoriasis: the electronic T argeted I ntervention for P soriasis (e TIP s) study. *British Journal of Dermatology*, *169*(2), 329-336.

Burroway, B., Griggs, J., & Tosti, A. (2019). Alopecia totalis and universalis long-term outcomes: a review. *Journal of the European Academy of Dermatology and Venereology*. Advanced online publication. https://doi: 10.111/jdv.15994.

Butera-Prinzi, F., Charles, N., & Story, K. (2014). Narrative family therapy and group work for families living with acquired brain injury. *Australian and New Zealand Journal of Family Therapy*, *35*(1), 81-99.

Cacioppo, J. T., Semin, G. R., & Berntson, G. G. (2004). Realism, instrumentalism, and scientific symbiosis: Psychological theory as a search for truth and the discovery of solutions. *American Psychologist*, *59*(4), 214-223.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of personality and social psychology*, *56*(2), 267-283.

Cerman, A. A., Solak, S. S., & Altunay, I. K. (2014). Vitamin D deficiency in alopecia areata. *British Journal of Dermatology*, *6*(170), 1299-1304.

Choi, J., & Koo, J. Y. (2003). Quality of life issues in psoriasis. *Journal of the American Academy of Dermatology*, *49*(2), 57-61.

Chu, S., Chen, Y., Tseng, W., Lin, M., Chen, T., Hwang, C., Chen, C., & Lee, D, Chang, Y., Wang, W., & Liu, H. (2011). Comorbidity profiles among patients with alopecia areata: The importance of onset age, a nationwide population-based study. *Journal of the American Academy of Dermatology*, *65*(5), 949-956.

Cipriani, R., Perini, G. I., & Rampinelli, S. (2001). Paroxetine in alopecia areata. *International Journal of Dermatology*, *40*(9), 600-601.

Clark-Carter, D. (1997). *Doing quantitative psychological research: From design to report*. England: Taylor & Francis.

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, *38*(5), 300-314.

Cocks, K., & Torgerson, D. J. (2013). Sample size calculations for pilot randomized trials: A confidence interval approach. *Journal of clinical epidemiology*, *66*(2), 197-201.

Coelho, M. M. V., & Apetato, M. (2016). The dark side of the light: Phototherapy adverse effects. *Clinics in dermatology*, *34*(5), 556-562.

Cohen, S., Janicki-Deverts, D., & Miller, G. E. (2007). Psychological stress and disease. *Jama*, *298*(14), 1685-1687.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of health and social behavior*, 24(4), 385-396.

Colon, E. A., Popkin, M. K., Callies, A. L., Dessert, N. J., & Hordinsky, M. K. (1991). Lifetime prevalence of psychiatric disorders in patients with alopecia areata. *Comprehensive Psychiatry*, *32*(3), 245-251.

Creamer, P., Singh, B. B., Hochberg, M. C., & Berman, B. M. (2000). Sustained improvement produced by nonpharmacologic intervention in fibromyalgia: results of a pilot study. *Arthritis Care & Research*, *13*(4), 198-204.

Creswell, J. W., & Clark, V. L. P. (2007). Designing and conducting mixed methods research. *Australian and New Zealand Journal of Public Health*, *31*(4), 388-389.

Dattilio, F. M., & Hanna, M. A. (2012). Collaboration in cognitive-behavioral therapy. *Journal of Clinical Psychology*, *68*(2), 146-158.

Davis, D. S., & Callender, V. D. (2018). Review of quality of life studies in women with alopecia. *International journal of women's dermatology*, *4*(1), 18-22.

DeKeyser, F. (2003). Psychoneuroimmunology in critically ill patients. *AACN Advanced Critical Care*, *14*(1), 25-32.

Delamere, F. M., Sladden, M. J., Dobbins, H. M., & Leonardi-Bee, J. (2008). Interventions for alopecia areata. *Cochrane Database of Systematic Reviews, 2008* (2), 1-51. doi: 10.1002/14651858.CD004413.pub2

Denborough, D. (2008). *Collective narrative practice: Responding to individuals, groups, and communities who have experienced trauma*. Adelaide: Dulwich Centre Publications.

Denzin, N.K. & Lincoln, Y. S. (2000). Introduction: The Discipline and Practice of Qualitative Research. In *Handbook of Qualitative Research* (pp. 1-29). Thousand Oaks: Sage Publications.

Dhalla, S., & Kopec, J. A. (2007). The CAGE questionnaire for alcohol misuse: A review of reliability and validity studies. *Clinical and Investigative Medicine*, *30*(1), 33-41.

Dieris-Hirche, J., Milch, W. E., Kupfer, J., Leweke, F., & Gieler, U. (2012). Atopic Dermatitis, Attachment and Partnership: A Psychodermatological Case-control Study of Adult Patients. *Acta Dermato-venereologica*, *92*(5), 462-466.

Dixon, K. E., Keefe, F. J., Scipio, C. D., Perri, L. M., & Abernethy, A. P. (2007). Psychological interventions for arthritis pain management in adults: A meta-analysis. *Health Psychology, 26*(3), 241-250.

Dudda-Subramanya, R., Alexis, A. F., Siu, K., & Sinha, A. A. (2007). Alopecia areata: Genet ic complexity underlies clinical heterogeneity. *European Journal of Dermatology, 17*(5), 367-374.

Eldridge, S. M., Lancaster, G. A., Campbell, M. J., Thabane, L., Hopewell, S., Coleman, C. L ., & Bond, C. M. (2016). Defining feasibility and pilot studies in preparation for randomi sed controlled trials: development of a conceptual framework. *PloS one, 11*(3), e0150205

Elliott, A. C., & Woodward, W. A. (2007). *Statistical analysis quick reference guidebook: Wi th SPSS examples*. London: Sage.

Endo, Y., Miyachi, Y., & Arakawa, A. (2012). Development of a disease-specific instrument t o measure quality of life in patients with alopecia areata. *European Journal of Dermatolo gy*, *22*(4), 531-536.

Engel, G. L. (1977). The need for a new medical model: a challenge for biomedicine. *Science, 196*(4286), 129-136.

Esfandiarpour, I., Farajzadeh, S., & Abbaszadeh, M. (2008). Evaluation of serum iron and fer ritin levels in alopecia areata. *Dermatology online journal, 14*(3). Retrieved from https:// escholarship.org/uc/item/3681b2mm

Ezzati, A., Jiang, J., Katz, M. J., Sliwinski, M. J., Zimmerman, M. E., & Lipton, R. B. (2014). Validation of the Perceived Stress Scale in a community sample of older adults. *Internati onal journal of geriatric psychiatry, 29*(6), 645-652.

Fabbrocini, G., Panariello, L., De Vita, V., Vincenzi, C., Lauro, C., Nappo, D., Ayala, F., & T osti, A. (2013). Quality of life in alopecia areata: a disease-specific questionnaire. *Journa l of the European Academy of Dermatology and Venereology*, *27*(3), e276-e281.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Re search Methods*, *39*(2), 175-191.

Felder, J. N., Dimidjian, S., & Segal, Z. (2012). Collaboration in mindfulness-based cognitive therapy. *Journal of Clinical Psychology*, *68*(2), 179-186.

Fiellin, D. A., Reid, M. C., & O'connor, P. G. (2000). Screening for alcohol problems in primary care: A systematic review. *Archives of internal medicine*, *160*(13), 1977-1989.

Finlay, A. Y., & Khan, G. (1994). Dermatology Life Quality Index (DLQI)—a simple practical measure for routine clinical use. *Clinical and experimental dermatology*, *19*(3), 210-216.

Finner, A. M. (2011). Alopecia areata: Clinical presentation, diagnosis, and unusual cases. *Dermatologic Therapy*, *24*(3), 348-354.

Fordham, B., Griffiths, C. E., & Bundy, C. (2013). Can stress reduction interventions improve psoriasis? A review. *Psychology, Health and Medicine*, *18*(5), 501-514.

Fortune, D. G., Richards, H. L., Griffiths, C. E., & Main, C. J. (2002). Psychological stress, distress and disability in patients with psoriasis: consensus and variation in the contribution of illness perceptions, coping and alexithymia. *British Journal of Clinical Psychology*, *41*(2), 157-174.

Foster, J. (2000). Counselling in primary care and the new NHS. *British Journal of Guidance and Counselling*, *28*(2), 174-189.

França, K. and Jafferany, M. (2016). *Stress and skin Disorders: Basic and clinical aspects*. Miami: Springer.

Gallo, R., Chiorri, C., Gasparini, G., Signori, A., Burroni, A., & Parodi, A. (2017). Can mindfulness-based interventions improve the quality of life of patients with

moderate/severe alopecia areata? A prospective pilot study. *Journal of the American Academy of Dermatology*, *76*(4), 757.

García-Hernández, M. J., Ruiz-Doblado, S., Rodriguez-Pichardo, A., & Camacho, F. (1999). Alopecia areata, stress and psychiatric disorders: A review. *The Journal of Dermatology, 26*(10), 625-632.

George, E., & Engel, L. (1980). The clinical application of the biopsychosocial model. *American journal of Psychiatry*, *137*(5), 535-544.

Gilbert, P., & Leahy, R. L. (Eds.). (2007). *The therapeutic relationship in the cognitive behavioral psychotherapies*. New York: Routledge.

Gilhar, A., Etzioni, A., & Paus, R. (2012). Alopecia areata. *New England Journal of Medicine, 366*(16), 1515-1525.

Glaser, R., & Kiecolt-Glaser, J. K. (2005). Stress-induced immune dysfunction: implications for health. *Nature Reviews Immunology, 5*(3), 243-251.

Goh, C., Finkel, M., Christos, P. J., & Sinha, A. A. (2006). Profile of 513 patients with alopecia areata: Associations of disease subtypes with atopy, autoimmune disease and positive family history. *Journal of the European Academy of Dermatology and Venereology, 20*(9), 1055-1060.

Gojani, P. J., Masjedi, M., Khaleghipour, S., & Behzadi, E. (2017). Effects of the schema therapy and mindfulness on the maladaptive schemas hold by the psoriasis patients with the psychopathology symptoms. *Advanced biomedical research, 6*, 4.

Goodkin, K., & Visser, A. P. (Eds.). (2008). *Psychoneuroimmunology: stress, mental disorders, and health* (Vol. 59). London: American Psychiatric Pub.

Gore-Felton, C. (2005). Understanding quantitative research in counseling psychology: An elusive endeavor in an increasingly diverse discipline. *The Counseling Psychologist, 33*(3), 367-374.

Goyonlo, M. V., Saeidi, S. M., Tavalaei, M. A., Khoshnevisan, Z., & Razmara, M. (2020). Cognitive behavioral therapy as an adjuvant therapy in Acne excoriée: a randomized controlled clinical trial. *Journal of Dermatological Treatment*, 1-23. https://doi.org/10.1080/09546634.2020.1776207

Green, J., & Sinclair, R. D. (2000). Genetics of alopecia areata. *Australasian Journal of Dermatology, 41*(4), 213-218.

Greenberger, D., & Padesky, C. A. (1995). *Mind over mood: A cognitive therapy treatment manual for clients*. New York: Guilford Press.

Gupta, G., Long, J., & Tillman, D. M. (1999). The efficacy of narrowband ultraviolet B phototherapy in psoriasis using objective and subjective outcome measures. *British Journal of Dermatology*, *140*(5), 887-890.

Gupta, M. A., & Gupta, A. K. (1998). Depression and suicidal ideation in dermatology patients with acne, alopecia areata, atopic dermatitis and psoriasis. *British Journal of Dermatology, 139*, 846-850.

Gupta, M. A., Gupta, A. K., & Watteel, G. N. (1997). Stress and alopecia areata: A psychodermatologic study. *Acta Dermatovenereologica, 77,* 296-298.

Gupta, M. A., Pur, D. R., Vujcic, B., & Gupta, A. K. (2017). Suicidal behaviors in the dermatology patient. *Clinics in Dermatology.*

Han, C., Lofland, J. H., Zhao, N., & Schenkel, B. (2011). Increased prevalence of psychiatric disorders and health care-associated costs among patients with moderate-to-severe psoriasis. *Journal of Drugs in Dermatology, 10*(8), 843-850.

Han, C., Lofland, J. H., Zhao, N., & Schenkel, B. (2011). Increased prevalence of psychiatric disorders and health care-associated costs among patients with moderate-to-severe psoriasis. *Journal of Drugs in Dermatology, 10*(8), 843-850.

Harries, M. J., Sun, J., Paus, R., & King, L. E. (2010). Management of alopecia areata. *British Medicine Journal*, *341*, c3671.

Hayes, S. C. (2004). Acceptance and Commitment Therapy, Relational Frame Theory, and the Third Wave of Behavioural and Cognitive Therapies. *Behaviour Therapy, 35*, 665.

Hayes, S. C., Barlow, D. H., & Nelson-Gray, R. O. (1999). *The scientist practitioner: Research and accountability in the age of managed care*. Needham Heights, MA: US: Allyn & Bacon.

Hedman-Lagerlöf, E., Bergman, A., Lindefors, N., & Bradley, M. (2019). Exposure-based cognitive behavior therapy for atopic dermatitis: an open trial. *Cognitive Behaviour Therapy*, *48*(4), 300-310.

Herrmann, C. (1997). International experiences with the Hospital Anxiety and Depression Scale-a review of validation data and clinical results. *Journal of Psychosomatic Research*, *42*(1), 17-41.

Hofmann, S. G., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research*, *36*(5), 427-440.

Holt-Lunstad, J., & Uchino, B. N. (2015). Social support and health. In K. Glanz, B. K. Rimer & K. Viswanath (Eds.), *Health behaviour, research and practice* (pp. 183-204). San Francisco, CA: Jossey-Bass Public Health.

Hordinsky, M., & Donati, A. (2014). Alopecia areata: An evidence-based treatment update. *American Journal of Clinical Dermatology, 15*(3), 231-246.

Horne, D. J. D. L., White, A. E., & Varigos, G. A. (1989). A preliminary study of psychological therapy in the management of atopic eczema. *British Journal of Medical Psychology*, *62*(3), 241-248.

Hudson-Allez, G. (2000). What makes counsellors working in primary care distinct from counsellors working in other settings?. *British Journal of Guidance & Counselling*, *28*(2), 203-213.

Hughes, G. (2014). Finding a voice through 'The Tree of Life': A strength-based approach to mental health for refugee children and families in schools. *Clinical Child Psychology and Psychiatry*, *19*(1), 139-153.

Hunt, N., & McHale, S. (2004). Reported experiences of persons with alopecia areata. *Journal of Loss and Trauma, 10*(1), 33-50.

Hunt, N., & McHale, S. (2005). The psychological impact of alopecia. *British Medical Journal, 331*(7522), 951-953.

Hunt, N., & McHale, S. (2007). The psychological impact of alopecia. *The Psychologist, 20*(6), 362-364.

Invernizzi, G., Gala, C., Russo, R., & Polenghi, M. (1987). Life events and personality factors in patients with alopecia areata. *Medical Science Research*, 15 (17-20), 1219-1220.

Iorizzo, M., & Tosti, A. (2015). Treatments options for alopecia. *Expert Opinion on Pharmac otherapy, 16*(15), 2343-2354.

Jackow, C., Puffer, N., Hordinsky, M., Nelson, J., Tarrand, J., & Duvic, M. (1998). Alopecia areata and cytomegalovirus infection in twins: Genes versus environment? *Journal of the American Academy of Dermatology*, *38*(3), 418-425.

Jafferany, M. (2007). Psychodermatology: a guide to understanding common psychocutaneous disorders. *Primary Care Companion to the Journal of Clinical Psychiatry*, *9*(3), 203.

Jafferany, M., Ferreira, B. R., & Patel, A. (2020). *The Essentials of Psychodermatology*. London: Springer Nature.

Jafferany, M., & França, K. (2016). Psychodermatology: basics concepts. *Acta Dermato-Venereologica*, *96*(217), 35-37.

Jang, Y. H., Hong, N. S., Moon, S. Y., Eun, D. H., Lee, W. K., Chi, S. G., Lee, W. J., & Lee, S. J. (2017). Long-term prognosis of alopecia totalis and alopecia universalis: A longitudinal study with more than 10 years of follow-up: better than reported. *Dermatology*, *233*(2-3), 250-256.

Jones Nielsen, J. D., & Nicholas, H. (2016). Counselling psychology in the United Kingdom. *Counselling Psychology Quarterly*, *29*(2), 206-215.

Jonsen, K., & Jehn, K. A. (2009). Using triangulation to validate themes in qualitative studies. *Qualitative Research in Organizations and Management: An International Journal*, *4* (1), 123-150.

Jowett, S., & Ryan, T. (1985). Skin disease and handicap: an analysis of the impact of skin conditions. *Social Science and Medicine*, *20*(4), 425-429.

Julious, S. A. (2005). Sample size of 12 per group rule of thumb for a pilot study. *Pharmaceutical Statistics*, *4*(4), 287-291.

Kabat-Zinn, J., Wheeler, E., Light, T., Skillings, A., Scharf, M. J., Cropley, T. G., Thomas, G., & Bernhard, J. D. (1998). Influence of a mindfulness meditation-based stress reduction intervention on rates of skin clearing in patients with moderate to severe psoriasis undergoing photo therapy (UVB) and photochemotherapy (PUVA). *Psychosomatic Medicine*, *60*(5), 625-632.

Kalick, M. S., Goldwyn, R. M., & Noe, J. M. (1981). Social issues and body image concerns of port wine stain patients undergoing laser therapy. *Lasers in Surgery and Medicine*, *1*(3), 205-213.

Kalish, R. S., & Gilhar, A. (2003). Alopecia areata: Autoimmunity—the evidence is compelling. *Journal of Investigative Dermatology Symposium Proceedings*, *8*(2), 164-167.

Karademas, E. C. (2009). Counselling psychology in medical settings: The promising role of counselling health psychology. *The European Journal of Counselling Psychology*, *1*(1). 18-37.

Kassianos, A.P., Symeou, M., & Ioannou, M. (2016). The health locus of control concept: Factorial structure, psychometric properties and form equivalence of the Multidimensional Health Locus of Control scales. *Health Psychology Open*. doi: 10.1177/2055102916676211

Kassira, S., Korta, D. Z., W Chapman, L., & Dann, F. (2017). Review of treatment for alopecia totalis and alopecia universalis. *International Journal of Dermatology. 56*(8), 801-810.

Kasumagić-Halilović, E. (2008). Thyroid autoimmunity in patients with alopecia areata. *Acta Dermatovenerologica Croatica*, *16*(3), 123-125.

Khalili, R., Ebadi, A., Tavallai, A., & Habibi, M. (2017). Validity and reliability of the Cohen 10-item Perceived Stress Scale in patients with chronic headache: Persian version. *Asian Journal of Psychiatry*, *26*, 136-140.

Khoo, E. L., Small, R., Cheng, W., Hatchard, T., Glynn, B., Rice, D. B., Skidmore, B., Kenny, S., Hutton, B., & Poulin, P. A. (2019). Comparative evaluation of group-based mindfulness-based stress reduction and cognitive behavioural therapy for the treatment and management of chronic pain: A systematic review and network meta-analysis. *Evidence-Based Mental Health*, *22*(1), 26-35.

Kiecolt-Glaser, J. K., McGuire, L., Robles, T. F., & Glaser, R. (2002). Psychoneuroimmunology: Psychological influences on immune function and health. *Journal of consulting and clinical psychology*, *70*(3), 537.

Kim, H. Y. (2013). Statistical notes for clinical researchers: Assessing normal distribution using skewness and kurtosis. *Restorative Dentistry and Endodontics*, *38*(1), 52-54.

Kim, J. M., Kim, H. S., Ko, H. C., Kim, B. S., & Kim, M. B. (2017). Analysis of personality trait in patients with alopecia areata. *Annals of dermatology*, *29*(6), 815-816.

Kimsey-House, H., Kimsey-House, K., Sandahl, P., & Whitworth, L. (2010). *Co-active coaching: Changing business, transforming lives*. Hachette UK.

Komen, M. M., van den Hurk, C. J., Nortier, J. W., van der Ploeg, T., Smorenburg, C. H., & van der Hoeven, J. J. (2018). Patient-reported outcome assessment and objective evaluation of chemotherapy-induced alopecia. *European Journal of Oncology Nursing*, *33*, 49-55.

Koo, J., & Lebwohl, A. (2001). Psychodermatology: The mind and skin connection. *America n Family Physician*, *64*(11), 1873-1878.

Krasuska, M., Lavda, A. C., Thompson, A. R., & Millings, A. (2018). The role of adult attach ment orientation and coping in psychological adjustment to living with skin conditions. *British Journal of Dermatology*, *178*(6), 1396-1403.

Krohne, H. W. E. (1993). *Attention and avoidance: Strategies in coping with aversiveness*. Seattle: Hogrefe and Huber Publishers.

Lahousen, T., Kupfer, J., Gieler, U., Hofer, A., Linder, M. D., & Schut, C. (2016). Differences between psoriasis patients and skin-healthy controls concerning appraisal of touching, shame and disgust. *Acta Dermato-venereologica*, *96*(217), 78-82.

Lampropoulos, G. K. (2001). Bridging technical eclecticism and theoretical integration: Assimilative integration. *Journal of Psychotherapy Integration*, *11*(1), 5-19.

Lavda, A. C., Webb, T. L., & Thompson, A. R. (2012). A meta-analysis of the effectiveness of psychological interventions for adults with skin conditions. *British Journal of Dermatology, 167*(5), 970-979.

Layegh, P., Arshadi, H. R., Shahriari, S., Pezeshkpour, F., & Nahidi, Y. (2010). A comparative study on the prevalence of depression and suicidal ideation in dermatology patients suffering from psoriasis, acne, alopecia areata and vitiligo. *Iranian Journal of Dermatology, 13*(4), 106-111.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.

LeDoux, J. (1998). *The emotional brain: The mysterious underpinnings of emotional life*. New York: Simon and Schuster Paperbacks.

LeDoux, J. E. (1994). Emotion, memory and the brain. *Scientific American, 270*(6), 50-57.

Lee, E. H. (2012). Review of the psychometric evidence of the perceived stress scale. *Asian Nursing Research, 6*(4), 121-127.

Lee, S., Lee, H., Lee, C. H., & Lee, W. S. (2019). Comorbidities in alopecia areata: A systematic review and meta-analysis. *Journal of the American Academy of Dermatology, 80*(2), 466-477.

Leggett, B. A., Brown, N. N., Bryant, S. J., Duplock, L., Powell, L. W., & Halliday, J. W. (1990). Factors affecting the concentrations of ferritin in serum in a healthy Australian population. *Clinical Chemistry, 36*(7), 1350-1355.

Leventhal, H., Meyer, D., & Nerenz, D. (1980). The common sense model of illness danger. *Medical Psychology, 2*, 7-30.

Lewis, G., & Wessely, S. (1990). Comparison of the general health questionnaire and the hospital anxiety and depression scale. *The British Journal of Psychiatry, 157*(6), 860-864.

Liu, L. Y., King, B. A., & Craiglow, B. G. (2016). Health-related quality of life (HRQoL) among patients with alopecia areata (AA): a systematic review. *Journal of the American Academy of Dermatology, 75*(4), 806-812.

Liu, Z., Xie, Z., Zhang, L., Jin, Y., Guo, H., Jiang, Z., Chen, X. and Yuan, J. (2013). Reliability and validity of dermatology life quality index: Assessment of quality of life in human

immunodeficiency virus/acquired immunodeficiency syndrome patients with pruritic papular eruption. *Journal of Traditional Chinese Medicine, 33*(5), 580-583.

Locala, J. A. (2009). Current concepts in psychodermatology. *Current Psychiatry Reports, 11*(3), 211-218.

Lopes, R. T., Gonçalves, M. M., Machado, P. P., Sinai, D., Bento, T., & Salgado, J. (2014). Narrative Therapy vs. Cognitive-Behavioral Therapy for moderate depression: Empirical evidence from a controlled clinical trial. *Psychotherapy Research*, *24*(6), 662-674.

Lorizzo, M., & Tosti, A. (2015). Treatments options for alopecia. *Expert Opinion on Pharmacotherapy, 16*(15), 2343-2354.

Lovallo, W. R. (2005). Cardiovascular reactivity: mechanisms and pathways to cardiovascular disease. *International Journal of Psychophysiology*, *58*(2-3), 119-132.

Lovallo, W. R. (2015). *Stress and health: Biological and psychological interactions*. California: Sage Publications.

Lueking, A., Huber, O., Wirths, C., Schulte, K., Stieler, K. M., Blume-Peytavi, U., Kowald, A., Hensel-Wiegel, K., Tauber, R., Lehrach, H., & Meyer, H. E. (2005). Profiling of alopecia areata autoantigens based on protein microarray technology. *Molecular & Cellular Proteomics, 4*(9), 1382-1390.

Lyakhovitsky, A., Shemer, A., & Amichai, B. (2015). Increased prevalence of thyroid disorders in patients with new onset alopecia areata. *Australasian Journal of Dermatology*, *56*(2), 103-106.

Madani, S., & Shapiro, J. (2000). Alopecia areata update. *Journal of the American Academy of Dermatology, 42*(4), 549-566.

Madigan, S. (2011). *Narrative therapy*. Washington: American Psychological Association.

Majid, I., & Keen, A. (2012). Management of alopecia areata: an update. *British Journal of Medical Practitioners, 5*(3). A530.

Manolache, L., & Benea, V. (2007). Stress in patients with alopecia areata and vitiligo. *Journal of the European Academy of Dermatology and Venereology*, *21*(7), 921-928.

Marshall, C., Taylor, R., & Bewley, A. (2016). Psychodermatology in clinical practice: main principles. *Acta Dermato-venereologica*, *96*(217), 30-34.

Martin, R., & Young, J. (2010). Schema therapy. In K. S. Dobson (Ed.), *Handbook of cognitive-behavioral therapies* (3rd ed., pp. 317-346). New York: Guilford Press.

Mazzotti, E., Mastroeni, S., Lindau, J., Lombardo, G., Farina, B., & Pasquini, P. (2012). Psychological distress and coping strategies in patients attending a dermatology outpatient clinic. *Journal of the European Academy of Dermatology and Venereology*, *26*(6), 746-754.

McElwee, K. J., Gilhar, A., Tobin, D. J., Ramot, Y., Sundberg, J. P., Nakamura, M., Bertolini, M., Inui, S., Tokura, Y., King, L. E., Duque-Estrada, B., Tosti, A., Keren, A., Itami, S., Shoenfeld, Y., Zlotogorski, A., & Paus, R. (2013). What causes alopecia areata? *Experimental Dermatology*, *22*(9), 609-626.

McEwen, B. S. (2017). Neurobiological and systemic effects of chronic stress. *Chronic stress*, *1*, 2470547017692328.

McGrath, J. E., & Johnson, B. A. (2003). Methodology makes meaning: How both qualitative and quantitative paradigms shape evidence and its interpretation. In P. M. Camic, J. E. Rhodes, & L. Yardley (Eds.), *Qualitative research in psychology: Expanding perspectives in methodology and design* (pp. 31-48). Washington, US: American Psychological Association.

Mearns, D., & Cooper, M. (2017). *Working at relational depth in counselling and psychotherapy*. London: Sage Publications.

Mearns, D., Thorne, B., & McLeod, J. (2013). *Person-centred counselling in action*. London: Sage Publications.

Meldrum, M. L. (2000). A brief history of the randomized controlled trial: From oranges and lemons to the gold standard. *Hematology/Oncology Clinics, 14*(4), 745-760.

Messer, S. B. (1992). A critical examination of belief structures in integrative and eclectic psychotherapy. In J. C. Norcross & M. R. Goldfried (Eds.), *Handbook of psychotherapy integration* (p. 130–165). Basic Books.

Messer, S. B. (2001). Introduction to the special issue on assimilative integration. *Journal of Psychotherapy Integration, 11*(1), 1-4.

Mirzoyev, S. A., Schrum, A. G., Davis, M. D., & Torgerson, R. R. (2014). Lifetime incidence risk of alopecia areata estimated at 2.1 percent by rochester epidemiology project, 1990–2009. *The Journal of Investigative Dermatology, 134*(4), 1141-1142.

Mizara, A., Papadopoulos, L., & McBride, S. R. (2012). Core beliefs and psychological distress in patients with psoriasis and atopic eczema attending secondary care: the role of schemas in chronic skin disease. *British Journal of Dermatology*, *166*(5), 986-993.

Montgomery, K., & Thompson, A. R. (2018). Developing sensitivity to the psychological burden associated with skin conditions: a call for training. *British Journal of Dermatology*, *179*(2), 237-238.

Montgomery, K., Norman, P., Messenger, A. G., & Thompson, A. R. (2016). The importance of mindfulness in psychosocial distress and quality of life in dermatology patients. *British Journal of Dermatology*, *175*(5), 930-936.

Moon, H. S., Mizara, A., & McBride, S. R. (2013). Psoriasis and psycho-dermatology. *Dermatology and Therapy, 3*(2), 117-130.

Morgan, A. (2000). *What is narrative therapy?*. Adelaide: Dulwich Centre Publications.

Mrdjenovich, A. J., & Moore, B. A. (2004). The professional identity of counselling psychologists in health care: A review and call for research. *Counselling Psychology Quarterly, 17*(1), 69-79.

Mulinari-Brenner, F., & Bergfeld, W. F. (2001). Hair loss: an overview. *Dermatology Nursing*, *13*(4), 269.

Ncube, N. (2006). The tree of life project. *International Journal of Narrative Therapy and Community Work*, *2006*(1), 3.

Ncube, N. (2007). The Tree of Life project: Using narrative ideas in work with vulnerable children in Southern Africa. *International Journal of Narrative Therapy and Community Work*, (1), 3–16.

Neigh, G. N., & Ali, F. F. (2016). Co-morbidity of PTSD and immune system dysfunction: opportunities for treatment. *Current opinion in pharmacology*, *29*, 104-110.

Nguyen, C. M., Koo, J., & Cordoro, K. M. (2016). Psychodermatologic effects of atopic dermatitis and acne: A review on self-esteem and identity. *Pediatric Dermatology*, *33*(2), 129-135.

Olsen, E. A., Hordinsky, M. K., Price, V. H., Roberts, J. L., Shapiro, J., Canfield, D., Duvic, M., King, L. E., McMichael, A. J., Randall, V. A., Turner, M. L., Sperling, L., Witting, D. A., & Norris, D. (2004). Alopecia areata investigational assessment guidelines–Part II. *Journal of the American Academy of Dermatology*, *51*(3), 440-447.

Olsen, E., Hordinsky, M., McDonald-Hull, S., Price, V., Roberts, J., Shapiro, J., & Stenn, K. (1999). Alopecia areata investigational assessment guidelines. *Journal of the American Academy of Dermatology*, *40*(2), 242-246.

Orlans, V., & Van Scoyoc, S. (2008). *A short introduction to counselling psychology*. London: Sage Publications.

Öst, L. G. (2008). Efficacy of the third wave of behavioral therapies: A systematic review and meta-analysis. *Behaviour Research and Therapy*, *46*(3), 296-321.

Oxington, K. V. (2005). *Psychology of stress*. New York: Nova Publishers.

Paul, S., & Charura, D. (2014). *An introduction to the therapeutic relationship in counselling and psychotherapy*. London: Sage Publications.

Perini, G., Zara, M., Cipriani, R., Carraro, C., Preti, A., Gava, F., Coghi, P., & Peserico, A. (1994). Imipramine in alopecia areata. *Psychotherapy and Psychosomatics, 61*(3-4), 195-198.

Picardi, A., & Pasquini, P. (2007). Toward a biopsychosocial approach to skin diseases. *Advances in Psychosomatic Medicine, 28*, 109-126.

Picardi, A., Abeni, D., Melchi, C. F., Puddu, P., & Pasquini, P. (2000). Psychiatric morbidity in dermatological outpatients: An issue to be recognized. *British Journal of Dermatology, 143*(5), 983-991.

Picardi, A., Pasquini, P., Cattaruzza, M. S., Gaetano, P., Baliva, G., Melchi, C. F., Papi, M., Camaioni, D., Tiago, A., & Gobello, T. (2003). Psychosomatic factors in first-onset alopecia areata. *Psychosomatics, 44*(5), 374-381.

Piérard-Franchimont, C., & Piérard, G. E. (2013). Alterations in hair follicle dynamics in women. *BioMed Research International*, *2013*, 957432.

Pigeon, W. R., Moynihan, J., Matteson-Rusby, S., Jungquist, C. R., Xia, Y., Tu, X., & Perlis, M. L. (2012). Comparative effectiveness of CBT interventions for co-morbid chronic pain & insomnia: A pilot study. *Behaviour Research and Therapy*, *50*(11), 685-689.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, *52*(2), 126-136.

Pratt, C. H., King Jr, L. E., Messenger, A. G., Christiano, A. M., & Sundberg, J. P. (2017). Alopecia areata. *Nature Reviews Disease Primers, 3*, 17011.

Qi, S., Xu, F., Sheng, Y., & Yang, Q. (2015). Assessing quality of life in alopecia areata patients in China. *Psychology, Health and Medicine*, *20*(1), 97-102.

Qureshi, A. A., Awosika, O., Baruffi, F., Rengifo-Pardo, M., & Ehrlich, A. (2019). Psychological Therapies in Management of Psoriatic Skin Disease: A Systematic Review. *American Journal of Clinical Dermatology*, 20, 607-624.

Rabung, S., Ubbelohde, A., Kiefer, E., & Schauenburg, H. (2004). Attachment security and quality of life in atopic dermatitis. *Psychotherapie, Psychosomatik, Medizinische Psychologie*, *54*(8), 330-338.

Rapp, S. R., Cottrell, C. A., & Leary, M. R. (2001). Social coping strategies associated with quality of life decrements among psoriasis patients. *British Journal of Dermatology*, *145*(4), 610-616.

Reese, H. E., Vallejo, Z., Rasmussen, J., Crowe, K., Rosenfield, E., & Wilhelm, S. (2015). Mindfulness-based stress reduction for Tourette syndrome and chronic tic disorder: A pilot study. *Journal of Psychosomatic Research*, *78*(3), 293-298.

Reid, E. E., Haley, A. C., Borovicka, J. H., Rademaker, A., West, D. P., Colavincenzo, M., & Wickless, H. (2012). Clinical severity does not reliably predict quality of life in women with alopecia areata, telogen effluvium, or androgenic alopecia. *Journal of the American Academy of Dermatology*, *66*(3), e97-e102.

Rencz, F., Gulácsi, L., Péntek, M., Wikonkál, N., Baji, P., & Brodszky, V. (2016). Alopecia areata and health-related quality of life: A systematic review and meta-analysis. *British Journal of Dermatology*, *175*(3), 561-571.

Richardson, T. Q. (2010). Society of Counseling Psychology (SCP), Division 17, American Psychological Association (APA). *The Counseling Psychologist*, *38*(1), 129-141.

Richert, A. J. (2003). Living stories, telling stories, changing stories: Experiential use of the relationship in narrative therapy. *Journal of Psychotherapy Integration*, *13*(2), 188-210.

Rivers, J. (2013). Why psychodermatology is gaining ground. *Journal of Cutaneous Medicine*, 17 (1), 1-2.

Roback, H. B. (2000). Adverse outcomes in group psychotherapy: Risk factors, prevention, and research directions. *The Journal of Psychotherapy Practice and Research*, *9*(3), 113-122.

Roberti, J. W., Harrington, L. N., & Storch, E. A. (2006). Further psychometric support for the 10-item version of the perceived stress scale. *Journal of College Counseling*, *9*(2), 135-147.

Rogers, C. R. (1959). *A theory of therapy, personality, and interpersonal relationships: As developed in the client-centered framework*. New York: McGraw-Hill.

Roth, A., & Fonagy, P. (2006). *What works for whom?: a critical review of psychotherapy research*. New York: Guilford Press.

Rotter, J.B. (1954). *Social learning and clinical psychology.* New York: Prentice-Hall.

Ruiz-Doblado, S., Carrizosa, A., & García-Hernández, M. J. (2003). Alopecia areata: Psychia tric comorbidity and adjustment to illness. *International Journal of Dermatology, 42*(6), 4 34-437.

Ryan, A. B. (2006). Post-positivist approaches to research. *Researching and Writing your The sis: a guide for postgraduate students*, 12-26.

Rzepa, T., Jakubowicz, O., Witmanowski, H., & Żaba, R. (2013). Disease-induced level of shame in patients with acne, psoriasis and syphilis. *Advances in Dermatology and Allergology*, *30*(4), 233.

Safavi, K. (1992). Prevalence of alopecia areata in the first national health and nutrition examination survey. *Archives of Dermatology, 128*(5), 702.

Safavi, K. (1992). Prevalence of alopecia areata in the first national health and nutrition examination survey. *Archives of Dermatology, 128*(5), 702.

Sahiner, I. V., Taskintuna, N., Sevik, A. E., Kose, O. K., & Atas, H. (2014). The impact role of childhood traumas and life events in patients with alopecia aerate and psoriasis. *Journal of Psychiatry, 17*(6), 115-121.

Sampogna, F., Tabolli, S., & Abeni, D. (2013). Impact of different skin conditions on quality of life. *Giornale Italiano di Dermatologia Venereologia, 148*(3), 255-261.

Sampogna, F., Tabolli, S., Abeni, D., & IDI Multipurpose Psoriasis Research on Vital Experiences (IMPROVE) investigators. (2007). The impact of changes in clinical severity on psychiatric morbidity in patients with psoriasis: a follow-up study. *British Journal of Dermatology, 157*(3), 508-513.

Scharloo, M., Kaptein, A. A., Weinman, J., Bergman, W., Vermeer, B. J., & Rooijmans, H. G. M. (2000). Patients' illness perceptions and coping as predictors of functional status in psoriasis: a 1-year follow-up. *British Journal of Dermatology, 142*(5), 899-907.

Schmidt, S., Nachtigall, C., Wuethrich-Martone, O., & Strauss, B. (2002). Attachment and coping with chronic disease. *Journal of Psychosomatic Research, 53*(3), 763-773.

Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002*). Mindfulness-based cognitive therapy for depression*. New York. Guilford Press.

Segerstrom, S. C., & Miller, G. E. (2004). Psychological stress and the human immune system: A meta-analytic study of 30 years of inquiry. *Psychological Bulletin, 130*(4), 601.

Shahmoradi, Z., Khaleghipour, S., & Masjedi, M. (2018). Comparing effectiveness of "schema therapy" and "mindfulness-based cognitive therapy" on maladaptive schemas and general health in patients with vitiligo. *Journal of Health Promotion Management, 7*(6), 41-51.

Shapiro, S. L., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine, 21*(6), 581-599.

Sharpe, M., Hawton, K., Simkin, S., Surawy, C., Hackmann, A., Klimes, I, Peto, T., Warrell, D., & Seagroatt, V. (1996). Cognitive behaviour therapy for the chronic fatigue syndrom e: A randomised controlled trial. *British Medical Journal, 312*(7022), 22-26.

Shechtman, Z., & Kiezel, A. (2016). Why do people prefer individual therapy over group ther apy?. *International Journal of Group Psychotherapy*, *66*(4), 571-591.

Shenefelt, P. D. (2011). Psychodermatological disorders: Recognition and treatment. *Internat ional Journal of Dermatology, 50*(11), 1309-1322.

Shi, Q., Duvic, M., Osei, J. S., Hordinsky, M. K., Norris, D. A., Price, V. H., Amos, C., Chris tiano, A. M., & Mendoza, T. R. (2013). Health-related quality of life (HRQoL) in alopec ia areata patients—A secondary analysis of the National Alopecia Areata Registry Data. *Journal of Investigative Dermatology Symposium Proceedings*, *16*(1), S49-S50.

Sijercic, I., Ennis, N., & Monson, C. M. (2019). A systematic review of cognitive and behavi oral treatments for individuals with psoriasis. *Journal of Dermatological Treatment*, 1-8.

Simpson, R., Booth, J., Lawrence, M., Byrne, S., Mair, F., & Mercer, S. (2014). Mindfulness based interventions in multiple sclerosis-a systematic review. *BMC Beurology*, *14*(1), 15.

Skrok, A., & Rudnicka, L. (2017). Stress related hair disorders. In K. França & M. Jafferany (Eds.), *Stress and skin disorders* (pp. 155-164). Switzerland: Springer.

Snaith, R. P., & Taylor, C. M. (1985). Rating scales for depression and anxiety: a current pers pective. *British Journal of Clinical Pharmacology*, *19*(S1), 17S-20S.

Sullivan, G. M., & Feinn, R. (2012). Using effect size—or why the P value is not enough. *Jo urnal of graduate medical education*, *4*(3), 279-282.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics*. Bosto: Pearson.

Taheri, R., Behnam, B., Allavi Tousi, J., Azizzade, M., & Rafiee Mehrdad Sheikhvatan, M. (2012). Triggering role of stressful life events in patients with alopecia areata. *Acta Dermatovenerol Croat*, 246-250.

Tausk, F., & Whitmore, S. E. (1999). A pilot study of hypnosis in the treatment of patients with psoriasis. *Psychotherapy and Psychosomatics*, *68*(4), 221-225.

Thompson, A., & Kent, G. (2001). Adjusting to disfigurement: processes involved in dealing with being visibly different. *Clinical Psychology Review*, *21*(5), 663-682.

Toivonen, K. I., Zernicke, K., & Carlson, L. E. (2017). Web-based mindfulness interventions for people with physical health conditions: systematic review. *Journal of Medical Internet Research*, *19*(8), e303.

Toomela, A. (2010). Quantitative methods in psychology: inevitable and useless. *Frontiers in Psychology*, *1*, 1-14.

Torales, J., Echeverría, C., Barrios, I., García, O., O'Higgins, M., Castaldelli-Maia, J. M., Ventriglio, A., & Jafferany, M. (2020). Psychodermatological mechanisms of psoriasis. *Dermatologic Therapy*. e13827.

Tosti, A., Bellavista, S., & Iorizzo, M. (2006). Alopecia areata: A long term follow-up study of 191 patients. *Journal of the American Academy of Dermatology*, *55*(3), 438-441.

Tosti, A., Piraccini, B. M., Pazzaglia, M., & Vincenzi, C. (2003). Clobetasol propionate 0.05% under occlusion in the treatment of alopecia totalis/universalis. *Journal of the American Academy of Dermatology*, *49*(1), 96-98.

Trüeb, R. M. (2002). Molecular mechanisms of androgenetic alopecia. *Experimental Gerontology*, *37*(8-9), 981-990.

Tucker, P. (2009). Bald is beautiful? the psychosocial impact of alopecia areata. *Journal of Health Psychology*, *14*(1), 142-151.

Tuckman, A. (2017). The potential psychological impact of skin conditions. *Dermatology and therapy*, *7*(1), 53-57.

Vickers, A. J. (2005). Parametric versus non-parametric statistics in the analysis of randomized trials with non-normally distributed data. *BMC Medical Research Methodology*, *5*(1), 35.

Walker, C., & Papadopoulos, L. (Eds.). (2005). *Psychodermatology: The psychological impact of skin disorders*. New York: Cambridge University Press.

Walker, J. G., Littlejohn, G. O., McMurray, N. E., & Cutolo, M. (1999). Stress system response and rheumatoid arthritis: a multilevel approach. *Rheumatology*, *38*(11), 1050-1057.

Wallston, K. A., Strudler Wallston, B., & DeVellis, R. (1978). Development of the Multidimensional Health Locus of Control (MHLC) Scales. *Health Education Monographs*, *6*, 160-170. doi: 10.1177/109019817800600107

Wang, E. C., Harris, J. E., & Christiano, A. M. (2017). Topical JAK inhibitors for the treatment of alopecia areata and vitiligo. *Current Dermatology Reports*, *6*(1), 1-6.

Wetherell, J. L., Afari, N., Rutledge, T., Sorrell, J. T., Stoddard, J. A., Petkus, A. J., Solomon, B, C., Lehman, D., H., Liu, L., Lang, A. J., & Atkinson, J. H. (2011). A randomized, controlled trial of acceptance and commitment therapy and cognitive-behavioral therapy for chronic pain. *Pain*, *152*(9), 2098-2107.

White, M. & Epston, D. (2007). *Narrative means to therapeutic ends.* New York: Norton.

White, M. K. (2007). *Maps of narrative practice*. WW Norton & Company.

White, V. E., & Murray, M. A. (2002). Passing notes: The use of therapeutic letter writing in counseling adolescents. *Journal of Mental Health Counseling*, *24*(2). 166-176.

Willemsen, R., Roseeuw, D., & Vanderlinden, J. (2008). Alexithymia and dermatology: The state of the art. *International Journal of Dermatology*, *47*(9), 903-910.

Willemsen, R., Vanderlinden, J., Roseeuw, D., & Haentjens, P. (2009). Increased history of childhood and lifetime traumatic events among adults with alopecia areata. *Journal of the American Academy of Dermatology*, *60*(3), 388-393.

Williams, C. (2012). *Management – 5*. USA: South Western College Publishing.

Wong, C. M. (2002). Post-traumatic stress disorder: advances in psychoneuroimmunology. *The Psychiatric clinics of North America*, *25*(2), 369-83.

Woolfe, R., Dryden, W., & Strawbridge, S. (Eds.). (2003). *Handbook of Counselling Psychology*. London: Sage Publications.

Wubbolding, R. (2017). *Counselling with reality therapy*. London: Taylor & Francis.

Yaghmaie, P., Koudelka, C. W., & Simpson, E. L. (2013). Mental health comorbidity in patients with atopic dermatitis. *Journal of Allergy and Clinical Immunology, 131*(2), 428-433.

Yaghmaie, P., Koudelka, C. W., & Simpson, E. L. (2013). Mental health comorbidity in patie nts with atopic dermatitis. *Journal of Allergy and Clinical Immunology, 131*(2), 428-433.

Yang, S., Yang, J., Liu, J. B., Wang, H. Y., Yang, Q., Gao, M., Liang, Y. H., Lin, G. S., Lin, D., Hu, X. L., Fan, L., Zhang, X. J. (2004). The genetic epidemiology of alopecia areata in china. *British Journal of Dermatology, 151*(1), 16-23.

Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach*. Professional Resource Press/ Professional Resource Exchange.

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy.* New York: Guilford.

York, J., Nicholson, T., Minors, P., & Duncan, D. F. (1998). Stressful life events and loss of hair among adult women, a case-control study. *Psychological Reports, 82*(3), 1044 - 1049.

Zachariae, R. (2009). Psychoneuroimmunology: A bio-psycho-social approach to health and disease. *Scandinavian Journal of Psychology, 50*(6), 645-651.

Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica*, *67*(6), 361-370.

Zijdenbos, I. L., de Wit, N. J., van der Heijden, Geert J, Rubin, G., & Quartero, A. O. (2009). Psychological treatments for the management of irritable bowel syndrome. *Cochrane Database of Systematic Reviews, 2009 (1), 1-69. doi:* 10.1002/14651858.CD006442.pub2

Part B: Client Study and Process Report

Psychodermatology

The Psychological Impact of Alopecia: An Integrative Approach

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PART C: PUBLISHABLE JOURNAL ARTICLE

This article has been prepared for submission for the British Journal of Dermatology

A Randomised Controlled Trial of Integrative Cognitive Behavioural Therapy for patients with Alopecia-Areata: A Pilot Study.

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Abstract

Background

Alopecia Areata (AA) is a stress-related autoimmune condition. The causes of the condition remain unknown thus impacting the design and potential efficacy of medical interventions. Psychological interventions have been trialled with other stress-related skin conditions and were found to be effective in improving both physical and psychological symptoms. However, to date, no randomised controlled trial has designed and evaluated psychological interventions for people with AA.

Objectives

To examine the effectiveness of a tailored Integrative Cognitive Behavioural Therapy (ICBT) on the psychological and physical manifestations of AA.

Methods

15 adults with AA participated in a randomised controlled trial and were randomly allocated to the intervention group or control group. All participants completed psychological and physical assessments at the beginning of the trial and 12-weeks after the intervention or at the end of the 12-week waiting list.

Results

Multiple mixed analysis of variance tests were implemented to investigate the effectiveness of the intervention. Significant differences were found between the intervention group and the control group between the initial assessment and 12-week assessment for the self-report measures of dermatology Quality of Life, depression and levels of distress associated with AA. The physical measure of the scalp assessment also showed significantly less hair loss for the intervention group in comparison to the control group from the initial assessment and 12-week assessment.

Conclusions

These findings have important clinical implications for treatment for people with AA. Larger scale studies are needed to further investigate the impact of psychological interventions for people with AA.

ClinicalTrial identifier: NCT04205214