Schemas and psychological distress in skin disease: A preliminary investigation into the role of schemas in UK patients with psoriasis and eczema.

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Dedicated to the memory of my father

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ABBREVIATIONS

ACC	Acceptance
ANOVA	Analysis of Variance
AR	Seeking alternative rewards
B	Unstandardised coefficient
Beta	Standardised coefficient
CA	Cognitive Avoidance
CBT	Cognitive-Behaviour Therapy
CRI	Coping Responses Inventory
DLQI	Dermatology Life Quality Index
ED	Emotional Discharge
EMS	Early Maladaptive Schemas
F	F ratio
H	Research Hypothesis
HADS	Hospital Anxiety and Depression Scale
LESS	Leahy Emotional Schemas Scale
M	mean
n	sample size
NHS	National Health System
p	significance value
SD	Standard Deviation
SRM	Self-Regulatory Model of Illness
UVA/B	Ultraviolet A/B
YSQ-S	Young Schema Questionnaire-Short Form

ABSTRACT

Psoriasis and atopic eczema are chronic skin disorders with a disfiguring component that present the patient with many challenges. Studies have already addressed some fundamental questions with regards to variability in the psychological impact of skin disease. Present studies have sought to provide some preliminary understanding of the core cognitive content of skin disorders and the role of schemas in psychological distress in patients with psoriasis and atopic eczema. A cross-sectional design with four groups was employed. Eighty-eight dermatology outpatients (psoriasis n= 55 and atopic eczema n=33) and seventy-six comparison participants (normal n=53 and chronic disease n=23) completed a package of questionnaires. Results suggest that the combined group of dermatology outpatients can be differentiated in terms of schemas and those beliefs are predictive of their symptoms of anxiety and depression. These findings have a clear relevance to the theoretical underpinning of psychological impact in skin disorders and to counselling practice. Implications for the psychological management of skin disorders are discussed. Further studies are needed to investigate the implicating role of schemas in dermatological conditions.

CHAPTER ONE: INTRODUCTION

1.1 Overview

Dermatology holds a distinct relationship to psychosomatics. The existence of a close relationship between psychological factors and dermatology has long been postulated in the literature. The term *psychodermatology* has recently evolved and it refers to the discipline that covers all aspects of how the mind and body interact in relation to the onset and progression of various skin disorders. Research in psychodermatology has mainly tried to provide a framework for the holistic consideration of the patient with skin disease and to address issues pertaining to the quality of life of the sufferer and their families (Walker, 2005b). This chapter provides an overview of the relevant literature in psychodermatology and it builds the theoretical framework upon which current research was based.

1.2 Psychodermatology: Links between the psyche and the skin

Attractiveness and good appearance are highly desired and valued in contemporary Western societies. This is evidenced by the recent enormous growth in cosmetic surgery, dieting and the fashion industry. The social stereotype for both males and females is that attractiveness is positively correlated with success, happiness, love and achievement (Papadopoulos & Walker, 2003). Beautiful people are portrayed as happy, successful and carefree with opportunities of success ahead of them. A society that places so much emphasis on appearance and physical attractiveness brings with it a variety of challenges for individuals with disfiguring dermatological conditions. Unlike other medical conditions, they are unique in that they involve an organ that can be readily seen and touched. Not surprisingly, stigma and shame surround many skin disorders

and that can profoundly affect the psychological functioning and quality of life of the sufferer.

Skin disease is common, affecting approximately one-quarter to one-third of the UK population and consumes a significant amount of NHS resources (Williams, 1997). Despite their prevalence, the majority of dermatological conditions are neither well known nor understood by the general public. Traditional views do not account for the profound psychosocial impact that skin disease may exert on those affected. Skin disorders are often considered 'cosmetic' or 'non life-threatening' (Papadopoulos, 2005). Thus, when considering the impact that dermatological conditions may have on the patient, many fail to acknowledge just how important psychological aspects can be and sufferers are often left feeling minimized as individuals, especially by healthcare professionals.

The idea that the skin is closely linked with the psyche is not new (Papadopoulos & Bor, 1999). Several links between the psyche and the skin have been proposed. The skin and the central nervous system are embryologically related as both the epidermis and the neural plate are derived from the embryonic ectoderm. Also, the skin and the nervous system share several hormones, neurotransmitters and receptors (Gupta & Voorhees, 1990; Picardi & Abeni, 2001). Endocrine and immunological factors are pathohysiological mechanisms involved in many dermatological conditions. A mechanistic link between the immune system and nervous system has been suggested. A role for neuropeptides in the pathophysiology of skin diseases such as psoriasis and eczema has been proposed (Luger & Lotti, 1998; Saceno, Kleyn, Terenghi & Griffiths, 2006). A number of

clinical and histological observations such as the therapeutic efficacy of neuropeptide-modulating agents such as capsaicin, somatostatin and peptide T supports this hypothesis (Girolomoni & Tigelaar, 1990). Finally, the skin plays a cardinal role as a sensory organ in the socialization process from early infancy throughout the entire life cycle, being an important organ of communication and being responsive to a variety of emotional stimuli (Picardi & Abeni, 2001). The earliest social interactions between the infant and its caregivers occur via the body through touch. While, later on, in adolescence, the development of a disfiguring skin condition can have a significant impact on the psychosocial development of the afflicted (Gupta, 2005).

In a seminal paper, Koblenzer (1983) proposed a classification for dermatological conditions according to which three main categories of conditions are depicted:

a) Conditions that are strictly psychological in origin.
b) Conditions in which strong psychogenic factors are imputed, for example urticaria and hyperhidrosis.
c) Conditions that are dependent on genetic and environmental factors but in which the course of disease is substantially affected by stress, for example psoriasis, atopic dermatitis, and vitiligo.

Patients with skin disease have a higher prevalence of psychiatric disorders than the general population (Picardi, Abeni, Melchi, Puddu & Pasquini, 2000, Hughes, Barraclough, Hamblin, & White, 1983). Picardi and colleagues (2000) observed that approximately one in four of the 2,579 outpatients affected by a wide variety of skin diseases had significant psychiatric morbidity. Gupta and colleagues

(1993) demonstrated that depression and suicidal ideation occurred in more than 5% of a population of patients with psoriasis. Also, skin lesions and psychiatric symptoms may both be present in some systemic diseases such as systemic lupus erythematosus (Picardi et al., 2000).

There is increasing awareness of the psychosocial effects of skin disorders. These include a negative body image, low self-esteem, sexual and relationship difficulties and a general reduction in the quality of life (Papadopoulos, Bor & Legg, 1999; Thompson & Kent, 2001). Dermatology patients often report an acute awareness of their bodies and the associated pressure to conform to social standards (Walker, 2005). Hence, psychiatric symptoms may be a reaction to disfigurement and the perceived stigma of a primary skin disorder (Hughes et al., 1983; Picardi et al., 2000).

As well as affecting psychosocial functioning, psychological factors are implicated in the aetiology, maintenance and exacerbation of skin disorders. Clinical observations have suggested that stress often precedes the onset or exacerbation of many dermatological conditions that share both psychosomatic and immunological components (Al-Abadie, Kent, & Gawkrodger, 1994; Koblenzer, 1983; Saraceno et al, 2006). There is good evidence to suggest that stressful life events can trigger or aggravate psoriasis (Ginsburg, 1996), while, atopic dermatitis is one of the most frequently cited skin disorders with a suspected psychosomatic factor (Ehlers, Gieler, & Stangier, 1995).

1.3 The psychosocial impact of skin disease

All illnesses bring with them life changes and challenges that need to be addressed for an individual to cope with their condition. In the case of dermatological conditions, these challenges are further complicated by the conspicuousness and visibility of the skin. There are marked psychological implications for the sufferer of chronic skin disorders (Thompson & Kent, 2001; Thompson, 2005).

The skin is an important component of an individual's physical appearance. Cross-culturally, individuals learn that attributes such as clear skin, strong nails and rich hair are needed if one is to achieve the elusive quality of beauty and health. If one lacks such features, then the person is no longer perceived as 'attractive' or 'beautiful'. Imperfect or scarred skin attracts attention and often carries the stigma of 'contagion' or a 'lack of hygiene' (Van Moffaert, 1992; Kent, 2005). Consequently, the sufferer may often experience distress and may feel stigmatized. For example, Ginsburg and Link's (1989) sample of psoriasis patients reported shame and embarrassment about their condition. Their beliefs regarding stigmatisation were grouped as follows: anticipation of rejection, feelings of being flawed, sensitivity to the opinion of others and secretiveness. One of the most important predictors of such beliefs was previous experience of rejection. In another study, 26% of psoriasis patients reported that they had experienced an episode of rejection when someone made an effort not to touch them because of their psoriasis (Gupta, Gupta, & Watteel, 1998). Many patients reported feeling 'untouchable' or 'like a leper' and they regarded their bodies as

'unclean' because of their psoriasis. Understandably, most patients report that the worse thing about their psoriasis is the appearance of their skin.

Skin disorders can often have a progressive and episodic course making it necessary for the sufferer to adapt to changes in physical appearance and deal with issues of unpredictability and control (Papadopoulos & Bor, 1999). Body image refers to the mental construction that a person has for his or her body appearance. Dissatisfaction results from a discrepancy between a person's perceived body and ideal body. This often leads to self-criticism, guilt, shame and low self-esteem (Walker, 2005a). Thus, dermatology patients must develop and maintain a sense of self-esteem without relying upon physical appearance (Papadopoulos, 2005).

A negative body image can be damaging to one's sexuality and can disrupt intimacy in relationships. Sufferers often report having problems with their interpersonal relationships. Difficulties are encountered in forming intimate relationships or beginning new sexual relationships. For example, Gupta and Gupta (1997) investigated the effects of psoriasis on sexual activities of sufferers. Patients reported that their sexual activity had declined as a result of their psoriasis. Embarrassment over unsightly or painful lesions was most apparent during intercourse. Many psoriasis patients also claim that their disease is a major obstacle in forming and sustaining intimate relationships (Koo, 1996).

Not only intimate relationships but also social situations are frequently perceived and cited as problematic by dermatology patients. Porter and colleagues (1990) reported that vitiligo patients experienced anxiety and embarrassment when

meeting with strangers. While, acne patients have been shown to limit social exposure through avoidance (Kellet & Gilbert, 2001). Many dermatology patients also describe a lack of privacy resulting from others' staring, pointing, making hurtful comments and asking intrusive questions about their disease (Robinson, Rumsey & Patridge, 1996). There is both anecdotal and empirical evidence to suggest that individuals with skin disorders think that they are avoided or even rejected by others (i.e. Gupta et al, 1998; Ginsburg & Link, 1989; Kellett, 2002). This is particularly relevant when the condition (e.g. psoriasis) appears to be contagious. Patients become particularly sensitized to the fact that others may not wish to touch them or stand further away from them (Gupta, et al., 1998).

Finally, dermatological conditions adversely affect quality of life. Avoidance of activities where skin is revealed such as using the gym, holidaying in climates where minimal clothing is required or other leisure activities have also been identified as key concerns for dermatology patients (Jowett & Ryan, 1985). In a study of 3,125 dermatology outpatients, health–related quality of life was found to be a much stronger predictor of psychiatric morbidity than physician-rated disease severity (Zachariae, Zachariae, Ibsen, Mortensen & Wulf, 2004). As part of an improved, evidence-based practice, eligibility criteria for receiving biological treatments for psoriasis require amongst others a score of more than 10 (range 0-30) on Dermatology Life Quality Index (DLQI) that measures the effect of disease on quality of life (Smith et al., 2005). Overall, it is recognized that perceived difficulties in everyday activities, absences from work, types of treatment and regular hospital appointments appear to be more of a burden for dermatology patients than objective clinical severity (Picardi et al., 2000).

Despite the great psychiatric morbidity associated with skin disease and the various psychosocial difficulties experienced by patients, research for dermatological conditions has been minimal. Historically, there had been a tendency to trivialize skin disease within the medical profession and accord it low priority in research programmes (Williams, 1997). However, in recent years, there has been the increasing recognition that the psychological effects of even relatively minor skin complaints can cause significant distress more so than or equal to other medical conditions such as diabetes, heart disease and some cancers (Choi & Koo, 2003). The psychological implications as well as the role of psychological distress in skin disease have increasingly become worthy of medical attention and research in the field of psychodermatology has evolved over the years.

1.4 Research trends in psychodermatology

Research in psychodermatolody has taken various directions; investigating psychiatric morbidity in dermatology patients (Picardi et al., 2000), delineating personality traits of different dermatological conditions (Fortune, et al., 2002; White et al, 1990) examining the effect of various dermatological conditions on the quality of life and the psychological well-being of patients (Evers et al., 2005), the role of stress (Picardi et al, 2005; Richards et al, 2005) and coping (Fortune et al, 2002) as well as the efficacy of psychological therapies in specific dermatological conditions (for a review see Papadopoulos, 2005). Most investigations have focused their attention on dermatological conditions such as psoriasis, acne, vitiligo, herpes, alopecia areata, hirsutism and port-wine stains.

The methodological rigour of research in psychodermatology has improved over time. Early research must be viewed tentatively in view of certain methodological shortcomings, such as the use of small samples with no control groups, unsophisticated and crude outcome measures and use of single observers (Papadopoulos & Bor, 1999). Also, outcome was assessed by changes to either psychological or dermatological measures but rarely to both. The use of standardized criteria and procedures for measurement in research is of the utmost importance as vague and imprecise definitions of constructs carry the risk of bias and inaccurate measurement. Earlier studies that used non-standardized measures only provided weak evidence about the role of the investigated factors in skin disease.

Since the early 1980's, psychocutaneous research has employed controlled trials with large samples, quantitative and qualitative, cross-sectional designs and examined outcomes from both psychological and dermatological perspective (Papadopoulos & Bor, 1999). Research has been also directed towards areas such as psychological distress and quality of life, prevalence of psychiatric morbidity, factors affecting adjustment and the efficacy of psychological treatment protocols. In terms of outcome, more reliable and valid measures have been used, with studies employing standardized questionnaires and interview schedules and standardized measurement of skin disease severity. Finally, randomised controlled trials have been employed using appropriate control groups.

The implication of psychological factors in skin disease is now better understood and recognised not only by psychologists but dermatologists as well. The experience of adult dermatology patients can be extremely varied. Some individuals may be relatively unaffected by wide spread disease, while others can be devastated by a relatively small lesion (Walker, 2005). Despite efforts to explain why this happens, there are still methodological problems that have not been adequately addressed. For example, in studies investigating the role of stress in dermatological diseases, a well-known methodological problem is focusing on discrete life events with only a few studies investigating daily hassles or chronic stress situations such as enduring economic, work, health or relationship problems. While, some studies have failed to distinguish between distress, disease-specific factors and developmental factors (Picardi & Abeni, 2001).

Psychophysiological mechanisms are fascinating. There are many exciting ways by which psychology can affect the skin and vice versa (Walker, 2005). One way to understand the interplay between skin disease and the psyche is to understand the person behind the condition. Clinical researchers have begun to investigate key factors that might be implicated and mediate adjustment and overall coping with chronic dermatological conditions. The identification of such factors is particularly important, especially for skin disorders, given the role they may play in exacerbation of the physical condition itself (Millard, 2005). A review of some of the variables investigated in relation to coping with chronic skin conditions is presented.

1.5 The concept of coping in chronic skin disease

For some people minor blemishes can cause extreme distress while others report low distress despite high levels of clinical severity (Robinson, 1997). Demographic characteristics add little to understanding the adjustment process to chronic skin disorders. Fortune and colleagues (2002) found that demographic variables, clinical history and extent of disease in patients with psoriasis were consistently the least useful variables in terms of explaining variance in adjustment.

The coping process

Observed differences in psychological adjustment to any chronic disease may be due to the coping strategies used. The conceptualisation of coping processes represents a central aspect of adjustment. Many investigators have employed this concept to explain why some individuals fare better than others when they experience stress(ors) in their lives (Folkman & Moskowitz, 2004). According to Lazarus & Folkman (1984), *coping* is defined as 'constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person' (p.141). Coping is viewed as a stabilizing factor that may help individuals maintain psychosocial adaptation during stressful periods; it encompasses cognitive and behavioural efforts to reduce or eliminate stressful situations and associated emotional distress.

According to Lazarus & Folkman (1984), the coping process is initiated in response to the individual's appraisal that there is some harm, loss or threat.

These appraisals are accompanied by arising negative emotions that are often intense. Coping responses are therefore initiated to regulate emotions, which may often be interfering with more instrumental forms of coping (Folkman & Moskowitz, 2004). There are many ways to classify coping responses. According to Lazarus & Folkman (1984), coping can serve two major functions: a) it can alter the problem causing the stress (problem-focused) or b) it can regulate the emotional response to the problem (emotion-focused). Other researchers have distinguished coping behaviour between approach and avoidance (Moos & Schaefer, 1993; Krohne, 1993). The approach dimension refers to a tendency to approach and confront the problem, whereas the avoidance dimension refers to a tendency to avoid, ignore or deny the significance of the event.

Approach coping

In general, more approach coping or greater proportions of approach coping such as positive reappraisal or seeking guidance and support are associated with better psychological outcomes and greater proportions of avoidance coping with psychological distress (Holahan & Moos, 1990). Emotion-focused coping is an attempt to regulate emotional distress and has been shown to have some protective properties although may be less adaptive in the long term than task-orientated and approach strategies (De Ridder & Schreurs, 2001). Seeking social or intimate support from friends or family is believed to be a moderator of the impact of adverse life events as the security of attachment seems to modulate susceptibility to stress (Picardi & Abeni, 2001).

Avoidance coping

Avoidance coping is consistently associated with poor mental health outcomes (Folkman & Moskowitz, 2004). Both in clinical and non-clinical samples, avoidance has strongly been correlated with measures of anxiety and depression. Recently, avoidance has been given a prominent role in theoretical accounts of maintenance of emotional disorder (Wells, 1995; Hayes et al., 1999). Dermatology patients tend to use significantly less active coping strategies and more avoidance coping (Fortune, Richards, Main & Griffiths, 2002; Fortune et al., 2002). Root and colleagues (1994) found a significant relationship between self-reported severity of disease and distress in psoriasis sufferers. The sufferers who perceived their disease as severe were less likely to engage in activities such as swimming, socializing and other sporting activities. Further analyses revealed that it was avoidance and not psoriasis itself that was the main determinant of distress. Finally, avoidance and concealment through the choice of clothing seems to have short-term positive consequences for sufferers as it does not address underlying issues and only adds to the distress experienced in the long term (Thompson & Kent, 2001).

Self-Regulatory Model of Illness.

New directions within the coping literature (i.e. Leventhal, Meyer, Nerenz, 1980; Leventhal, Nerenz, Steele, 1984; Meyer, Leventhal, and Guttman, 1985) focused on exploring the way an illness is represented cognitively. Research has demonstrated that people with chronic medical conditions actively construct individual models of illness in an attempt to deal with their condition. When

confronted with an illness or a threat to their health, individuals instigate a complex set of cognitions to conceptualize and manage the situation. Leventhal, Meyer, and Nerenz (1980), Leventhal, Nerenz, and Steele (1984) and Meyer, Leventhal, and Guttman (1985) proposed a model termed as the *self-regulatory model of illness (SRM).* According to this theoretical framework, *beliefs or illness representations* guide coping behaviour and via coping they influence psychological adjustment to illnesses (Leventhal, Diefenbach, & Leventhal, 1992).

According to the theoretical framework of *SRM* (Leventhal et al, 1992), the cognitive representations contain the following five dimensions:

(i) *Identity*- beliefs about the bodily symptoms and labels associated with the illness.

(ii) *Causality* - beliefs about factors contributing to the onset of an illness.

(iii) *Consequences* - the expected outcomes and sequel of the disease.

(iv) *Time line* - beliefs concerning the moment of onset and expectations about the duration and periodicity of an illness.

(v) *Cure/control* – beliefs about how one may manage or recover from a disease and the extent to which this is possible.

These components provide a framework through which illness can be interpreted. People are viewed as active processors of information about illness and illness-related events. They actually develop a representation of their illness in conjunction with previous knowledge and beliefs concerning their self-esteem, perception of others and knowledge of disease in order to create a unique disease concept (Walker, 2005). In cases where information is incongruent with what the

person already believes, then the information is often tailored to that. Leventhal and colleagues, (1992) believe that the exact meanings attached to being ill affect mood and self-worth and determine the patient's coping style. The outcomes of these coping efforts are appraised and fed back into the representational and coping systems so the self-regulatory process is a constantly developing and active system (Leventhal & Leventhal, 1993).

SRM predicts that illness representations are directly related to coping and via coping to outcomes; thus coping mediates between representations and outcomes (Heijmans, 1998). Subsequent work has demonstrated direct links between representations and outcomes (Hagger & Orbell, 2003). Thus, the meanings an individual attaches to his/her illness or condition determines the nature and the extent of the psychological impact the condition has on him/her (Papadopoulos, Bor, Walker & Legg, 2001). Within dermatology, illness perceptions are the most consistent predictors of distress and disability in psoriasis (Fortune et al., 2002) and vitiligo patients (Papadopoulos, Bor, Walker, Flaxman, & Legg, 2002).

New directions in coping

Adjustment to chronic disease is a complex and ongoing biopsychosocial process. Variability is linked to the environment and to personality dispositions influencing the appraisal of stress and coping resources (Folkman & Moskowitz, 2004). Underlying, core cognitive factors (the way people perceive both internal and external threats and their behaviours) seem to be largely responsible for mediating the nature of coping and the distress and disability experienced in skin disease (Thompson, 2005). The role of schema-level cognitions has been

recognized in the development, maintenance and modification of emotional disorders and psychological well-being in current cognitive theories (i.e. Beck et al., 1990; Young, 1990). Hence, central cognitive structures such as schemas might also account for the coping process in skin disease. Exploring the role of schemas has an important scope in understanding how individuals may operate with regards to adjustment to chronic skin diseases.

1.6 Personality and schemas

1.6.1 Personality and psychosomatics

Exploration of various psychosocial factors that may handicap a person making them more psychologically vulnerable and less resourceful in coping with events has led to increasing literature in psychosomatic health. Factors investigated included recent and early life events, chronic stress, personality, psychological well-being, health attitudes and behaviour (Fava & Sonino, 2000). Each of these factors has been implied to modulate individual vulnerability to disease.

It has been suggested that personality can affect vulnerability to specific disease. Between 1930-1960's personality research focused on determining the consistent patterns of cognition, emotion and behaviour that make individuals differ from and resemble one another (Carson, Butcher, & Mineka, 1998). The term *personality* mainly refers to the unique pattern of enduring psychological and behavioural components by which each person can be compared and contrasted with other people (Bernstein, Clarke-Stewart, Roy & Wickens, 1997). This trend was particularly influenced by psychoanalytic investigators who maintained that specific personality profiles underlay specific psychosomatic diseases. (Carson et

al., 1998). The work of these early investigators raised the hope of identifying specific personality factors associated with certain psychophysiologic disorders. The ability to delineate characters and diseases would have been of great value in both assessing and treating illness. However, this hypothesis was not supported by subsequent research (Lipowski, 1986; Fava & Sonino, 2000).

Type-A behaviour pattern

Three personality constructs that can potentially affect vulnerability to disease have attracted considerable attention later on. Type-A behaviour pattern has been associated to coronary heart disease (Hemingway & Marmot, 1999). Type-A behaviour pattern characteristically involves: excessive involvement in work and other activities subject to deadlines, sense of time urgency, hostility and cynicism, irritable mood, tendency to speed up physical and mental activities, high desire for achievement and recognition, high competitiveness (Fava, Freyberger, Bech, Christodoulou, Sensky, Theorell & Wise, 1995). Evidence for the pathogenetic role of Type-A behaviour pattern in coronary heart disease has been controversial. The main problem is that the definition of Type-A behaviour pattern comprises of a combination of state and trait features, which cannot be ascribed to stable personality characteristics (Fava & Sonino, 2000).

Neuroticism

Neuroticism refers to another personality trait that includes anxiety, hostility, depression, self-consciousness, impulsiveness and vulnerability (Costa & Widiger, 1994). This construct encompasses proneness to negative emotions, poor coping and difficulty controlling impulses. This combination of

characteristics is often associated with medical complaints that prove on careful examination to be spurious demonstrating that neurotic people are indeed more vulnerable to emotional distress (Kling, Ryff, Love & Essex, 2003).

Alexithymia

Alexithymia, another personality construct, was introduced as concept by Sifneos (1973) and describes individuals who cannot identify and report subjective emotional states. According to Sifneos (1973) the main characteristics of this trait are: inability to use appropriate words to describe emotions, tendency to describe details instead of feelings, lack of rich fantasy life, unawareness of common somatic reactions that accompany the experience of a variety of feelings, occasional but violent and often inappropriate outbursts of affective behaviour. Alexythimics frequently demonstrate somatoform patterns, as they seem unwilling or unable to communicate their personal distress in other than somatic language (Carson et al., 1998). They tend to focus on and amplify body sensations almost to exclusion of attending to their own subjective attitudes and feelings which if negative are perceived as some supposedly 'malfunctioning' body part. The inhibition of emotion and suppression of anger have been linked to involve an increased risk for a variety of health problems (Fava & Sonino, 2000).

Personality and dermatolology

Within dermatology, the suggestion that patients with psoriasis and eczema have an underlying personality style that may predispose them to the condition has been proposed for a number of years. Sheldon (1942) described the personality of the atopic dermatitis patient as tense, nervous, depressed, introverted and

apprehensive. A pilot study also showed that patients with atopic dermatitis are characterized by high manifest anxiety, depression, neurosis and hypochondriasis (Al-Ahmar & Kurban, 1976). It has been suggested that most early research is unreliable as it was based on small samples (Fortune et al., 2002). However, recent studies with improved designs have shown patients with psoriasis to score higher than controls on measures of alexithymia (Allegranti, Gon, Magaton-Rizzi, & Aguglia, 1994). Fortune and colleagues (2002) found that alexithymia in patients with psoriasis accounted for significant additional variance chiefly for anxiety. Additionally, Picardi and colleagues (2005) suggested that alexithymia among others might increase susceptibility to exacerbations of diffuse plaque psoriasis, possibly through impaired emotional regulation. Finally, White and colleagues (1990) in a study investigating the presence of certain personality traits with patients with atopic eczema, they found that these patients have significantly high levels of anxiety and neuroticism and have significant problems in dealing with anger and hostility.

1.6.2 The schema construct

Although the relationship between particular personality variables and disease processes seems to be important, it tends to be complex and difficult to describe succinctly. The last decade has witnessed an increased interest in another concept closely related to personality. Developments in cognitive therapy have emphasised work at the level of schematic processing for long-term, psychiatric and characteorological problems (Padesky, 1994; Young, Klosko, & Weishaar, 2003). The central target for change for chronic problems has been the *schema* or *core belief.*

Aaron T. Beck (1967) first introduced the concept of schema in cognitive therapy. He borrowed the term from the information-processing model. *Schema or core belief* is defined as a deeper, enduring cognitive structure (e.g. with themes such as mistrust, inferiority, vulnerability), which characteristically biases the kind of information individuals attend to, store and retrieve from memory (Pervin & John, 2001). According to Beck, schemas (or core beliefs) originate both from early and later learning experiences within the family, school and culture. They reflect earlier learning and make sense in that context as they help the individual cope with his/her experiences at the time. Through the processes of scanning for proof and discounting conflicting information, schemas perpetuate over time into one's adult life and relationships.

Cognitive theory of personality

According to the cognitive theory, the self is a concept or category that is comprised of self-schemas. Such dimensions define an individual's self-identity meaning one's views on what they are, what they might become and what is important to them. Consequently, schemas (or core beliefs) are deeply embedded in the individual's personality. Cognitive theorists conceptualise them as central to the concept of personality. Personality traits (or dispositions) such as 'dependent', 'withdrawn', and 'extraverted' may be conceptualised as the overt expression of these underlying structures (Beck, Freeman & associates, 1990). How a situation or event is evaluated depends on these structures. They start a chain reaction culminating in the kinds of behavioural (coping) strategies that are usually attributed to personality traits. For example, individuals with schemas for

independence function differently to those with a schema of dependence (Pervin & John, 2001).

Theoretically, there is an association between certain schemas and psychiatric symptomatology, as psychopathology is viewed as arising from distorted, maladaptive schemata about the self, others and the world. (Beck et al, 1990; Young, 1994; Padesky, 1994). Clinical literature has mostly focused on the role of schemas in the development of personality disorders. People with chronic or lifelong problems often lack alternative, more adaptive schemas. Thus, dysfunctional beliefs and maladaptive strategies employed in order to function in one's environment render individuals susceptible to life experiences as they impinge on their cognitive vulnerability (Beck et al., 1990).

Beck, Freeman and colleagues (1990) developed a model of specific schemas for various personality disorders relating different disorders with different cognitions. For example, the schema for vulnerability to harm is more likely to relate to feelings of anxiety rather than depression, as the mode in depression is organized around self-negation and loss. Consequently, avoidant personality is comprised of schemas of inadequacy and rejection, narcissistic personality of schemas of entitlement and so forth. They conceptualised personality as a relatively stable organization that consists of systems of interlocking structures (schemas) and modes. Separate but related systems are involved in memory, cognition, affect, motivation, action and control. Theorists speculated that dysfunctional beliefs originate as result of the interaction between an individual's genetic predisposition and exposure to undesirable experiences. Schemas contribute to

the maintenance of pathology as they bias information processing; that is they selectively scan for corroborating information and discount conflicting information serving to perpetuate the existing schemas over time into one's adult life and relationships. This self-perpetuating nature of schemas leaves the individual emotionally vulnerable to experiences of depression and anxiety in situations that activate the dormant schemas (Wellburn et al., 2002).

1.6.3 Schema Therapy: A schema-focused approach

Following Beck and colleagues (1990), Young (1990) developed a model termed *schema therapy* which focuses on the specific content of personality vulnerability. In his theoretical model, he integrates concepts from other conceptual models and extended the cognitive model. As opposed to Beck and colleagues' model (1990) he offered the term Early Maladaptive Schemas (EMS) and he theorizes that self-defeating, emotional and cognitive structures begin early in our development and repeat throughout life. He proposes that individuals develop certain coping styles and responses in order to adapt to schemas so that they do not have to experience the intense and overwhelming emotions that schemas usually engender. He also argues that certain schemas might be at the core of personality disorders, milder characterеological problems and many chronic Axis I disorders (i.e. anxiety, depression etc). Early Maladaptive Schemas begin early in life and represent reality-based representations of the child's environment (Young, Klosko, & Weishaar, 2003). There are positive and negative schemas. The dysfunctional nature of schemas becomes apparent later in life when individuals continue to perpetuate these maladaptive schemas in their interactions even though these beliefs are no longer accurate. The maladaptive ways, in which people cope with

these dysfunctional schemas often underlie chronic Axis I symptoms such as anxiety, depression, substance abuse and psychosomatic disorders.

The origins of EMS

According to schema therapy (Young et al, 2003), Early Maladaptive Schemas (EMS) are thought to reflect toxic childhood experiences, related to insecure attachment, disapproval and/or abuse. When the core emotional needs of a child are not met within his/her early environments, then EMS develop. Theorists have postulated that for individuals five core needs exist (Young et al., 2003):

1. Secure attachments to others.
2. Autonomy, competence and sense of identity.
3. Freedom to express valid needs and emotions.
4. Spontaneity and play.
5. Realistic limits and control.

A psychologically healthy individual is one who can adaptively meet all core emotional needs. However, individuals who find themselves in environments such as families that cannot meet their emotional needs or who face life circumstances such as illness, death or abuse then maladaptive schemas may develop. Other important influences also come from peers, school, community and the surrounding culture. Some maladaptive schemas may develop in later childhood or adolescence (for example, social isolation) and they are generally not as pervasive and or as powerful (Young et al, 2003).

Emotional temperament

This conceptual model does not assume that individuals identify with and internalise everything their parents do. Rather it proposes that people selectively identify and internalise certain aspects as an individual's temperament partly determines what this person will internalise (Young et al., 2003). In accordance with Beck and colleagues'(1990) own model, other factors than the early childhood environment play a role in the development of schemas. Young and colleagues (2003) believe that the emotional temperament interacts with painful childhood experiences. Consequently, different temperaments render children differentially susceptible to similar life circumstances. There is vast research supporting the importance of biological underpinning of personality. Different types of temperament expose a child to different life circumstances. There is strong evidence that certain types of relatively stable temperaments and behavioural patterns are present at birth (Kagan, 1989). For example, sociability has been shown to be a prominent trait of resilient children.

EMS & Schema Domains

Young and colleagues (2003) have proposed the existence of 16 primary Early Maladaptive Schemas (EMS) that cluster in five domains representing the five broad categories of unmet emotional needs (Table 1.1).

Table1.1 Early Maladaptive Schemas with associated schema domains (Young et al., 2003).

Schema Domains	Early Maladaptive Schemas
I. Disconnection & Rejection	Emotional Deprivation Abandonment Mistrust/Abuse Defectiveness Social Isolation
II. Impaired Autonomy & Performance	Dependence Vulnerability to harm Enmeshment Failure
III. Impaired Limits	Entitlement Insufficient Self-control/Self discipline
IV. Other-Directedness	Subjugation Self-sacrifice Approval Seeking
V. Overvigilance & Inhibition	Emotional Inhibition Unrelenting Standards Pessimism/negativity Punitiveness

Domain I: Disconnection & Rejection

Individuals in this schema domain are unable to form secure, satisfying attachments to others. They hold beliefs that their needs for safety, stability, nurturance and love will not be met. Specifically, a*bandonment* refers to the belief that those who provide support and connection cannot be relied upon, while *mistrust/abuse* refers to the expectation that others will hurt, abuse, humiliate, cheat, lie or manipulate, *emotional deprivation* refers to the expectation that one's desire for a normal degree of emotional support will not be adequately met, *defectiveness* refers to the belief that one is defective, bad, unwanted, inferior, or invalid or that someone will be unlovable to others if exposed. Finally, *social*

isolation/alienation refers to the belief that one is isolated from the world, different from other people and not part of a community.

Domain II: Impaired Autonomy

Individuals with these schemas have expectations about themselves that the world interferes with their ability to differentiate themselves from parental figures and to function independently. Specifically, *dependence* refers to the belief that one is unable to handle one's everyday responsibilities in competent manner without considerable help from others, *vulnerability to harm* refers to the unrealistic or disproportionate fearful belief that a catastrophe could strike at any time, *enmeshment* refers to excessive emotional involvement and closeness. The *failure* schema is the belief that one will inevitably fail in areas of achievement (such as school, sport, career).

Domain III: Impaired Limits

Individuals have not developed adequate internal limits with regard to reciprocity or self-discipline. These people often present as selfish, spoiled, irresponsible or narcissistic. Specifically, the *entitlement* schema is the assumption that one is superior to other people. The *insufficient self-control* schema refers to the belief that one cannot or will not exercise sufficient self-control and frustration tolerance to achieve personal goals.

Domain IV: Other-Directedness

Individuals place excessive emphasis on meeting the needs of others rather their own needs. They do this in order to gain approval, maintain emotional

connection or avoid retaliation. Specifically, the *subjugation* schema is an excessive surrendering of control to others because one feels coerced. However, individuals with the *self-sacrifice* schema voluntarily meet the needs of others at the expense of their own needs. The *approval-seeking/recognition* schema refers to the need of gaining approval or recognition from other people for developing a secure sense of self.

Domain V: Overvigilance & Inhibition.

Individuals in this domain suppress their spontaneous feelings and impulses. They often strive to meet rigid, internalised rules at the expense of their happiness, relaxation, close relationships or good health. The *negativity/pessimism* schema is a pervasive lifelong focus on the negative aspects of life. The e*motional inhibition* schema refers to inhibition of emotional responses, impulses or communication, difficulty expressing vulnerability and emphasis on rationality. The *unrelenting standards* schema refers to the belief that a person is not good enough and must perform at extremely high standards in order to avoid disapproval or shame. While the *punitiveness* schema is the conviction that people should harshly punished for making mistakes.

EMS & schema processes

Once activated the schemata have the potential of generating high levels of affect and individuals often develop self-defeating cycles that perpetuate them. According to schema therapy (Young et al., 2003) there are three major schema processes: schema maintenance, schema avoidance and schema compensation. Hence, schemas are held firmly in place or are perpetuated through these

processes that may be behavioural, cognitive and/or affective. They might lead to negative outcomes, which may include: work performance problems, interpersonal difficulties, addictions, psychosomatic disorders, depression, anxiety and suicidality (Young & Behary, 1998).

1.7 Emotional schemas

1.7.1 Importance of emotion processing in CBT

What has also become evident over the past years is that emotions represent an integral part of a person's experience. Various theoretical approaches (Greenberg & Paivio, 2003; Greenberg & Safran, 1987) have stressed the importance of emotional experience and the process of emotion in literature. Latest research has provided demonstrated the importance of emotions and their role in the maintenance of emotional disorder. It has shown that emotional response can occur without the participation of higher processes of the brain (Young et al., 2003).

Such findings contradict a core premise of cognitive-behaviour therapy that states that the way you think profoundly influences the way you feel. The limited role of emotion in traditional cognitive models is mainly rooted in the history of the behavioural component. Early cognitive theories maintained that emotion was a product of cognitive evaluations (appraisals) of either internal or external stimuli (Samoilov & Goldfried 2000). Negative emotions were typically conceptualised as clinical symptoms that needed to be reduced or contained and that modifying specific beliefs or attitudes would be sufficient to produce the desired change.

However, symptoms often persist despite challenges or modifications at the logical/rational level (Greenberg & Paivio, 2003; Wells, 1995).

Non-Cognitive Behaviour Therapy schools of thought have highlighted the importance of emotion beyond the concept of symptoms and encouraged emotional experiencing. The distinction between two levels of knowing: emotional and cognitive (intellectual) has been highlighted in experiential theories. Such theories have suggested the existence of emotional schemes and cognitive schemata (Greenberg & Safran, 1987). According to the experiential perspective, emotional schemes are meaning producing networks that result from the interaction of the innate response repertoire, past experiences and the present situation (Samoilov & Goldfried 2000). These schemes lie at the core of an individual's personal meanings and they are closely connected with memories.

Recent developments in cognitive neuroscience provided evidence for a distinction between cortically based and subcortical information processing. Findings suggest that emotion networks have direct anatomical connections to both the neurocortex (thinking brain) and to the amygdala (emotional brain) (Samoilov & Goldfried, 2000). A neural pathway has been uncovered that allows the amygdala to receive input from sensory organs and to produce a response before the information is registered by the neurocortex (LeDoux, 1993). According to LeDoux, arousal of the amygdala increases parallel to the emotional significance of the stimulus. This means that events that are highly emotional are likely to be registered at both subcortical (emotional) and cortical (cognitive) levels. The implication of these findings on clinical practice are explicit, as

interventions should target both cortical and subcortical levels in order to achieve change in symptomatology.

The view of emotion within cognitive-behaviour therapy models has shifted and theorists have significantly changed their views on emotion. CBT has begun to expand its focus and utilize growing evidence regarding the role of emotion in the process of change. It has recognized that the emotional system can be affected by change in the cognitive system and vice versa, the emotional system has also a set of unique pathways that can be used to change a person's cognitive structures (Samoilov & Goldfried 2000). For example, exposure work with post-traumatic stress disorder has indicated that the emotion of fear (and its underlying structure) must be fully activated in order for exposure to be effective (Ehlers & Clark, 2000; Foa & Kozak, 1998).

1.7.2 Model of Emotional Schemas

Recent clinical applications such as schema therapy (Young, et al., 2003) have begun to focus on the emotional aspects of cognitive schemas. In their model, they have conceptualised Early Maladaptive Schemas as patterns containing memories, emotions, bodily sensations and cognitions. Well's (1995) meta-cognitive model proposes that emotions are experiential events. He conceptualises worry as an anxious emotional experience that may activate beliefs about the implication of this state. These interpretations or meta-beliefs lead to ways of addressing anxious or other emotional states. According to the meta-cognitive model, worry and rumination also represent problematic coping styles that are maintained by emotional avoidance. Similarly, the Acceptance and

Commitment Therapy model (Hayes, Strosahl, Wilson, 1999) suggests that emotional acceptance is an essential component in treatment.

Leahy (2002) has advanced a model of emotional schemas that attempts to describe the role of conceptions of emotions and strategies of emotional processing. In his model, he defines emotional schemas as plans, concepts and strategies employed in response to an emotion. This definition complements Greenberg and colleagues' (Greenberg & Safran, 1987) definition of emotional schemas as emotions that contain or give access to the cognitions. It also draws on the work of Wells but attempts to stress various coping strategies that individuals use once an emotion is activated.

In particular, according to this cognitive model of emotional processing (Leahy, 2002), once an emotion is activated, two distinct pathways are available:

a) Normalising the emotion,

b) Pathologising the emotion (emotional and cognitive avoidance).

If the individual normalizes the emotion, then they can either accept, express, validate or learn from their experience. However, if the individual pathologises their emotion, then a set of negative interpretations of emotion are elicited. These reflect beliefs regarding the duration, controllability, extremity, complexity, pathology and moral quality of their emotions. These may result in rumination and worry, avoidance of situations, blaming others, cognitive avoidance (bingeing, emotional numbness, dissociation). All these strategies further exacerbate the intensity and duration of negative emotions. Figure 1.1 depicts a

diagrammatic presentation of the cognitive model of emotional processing as proposed by Leahy (2002).

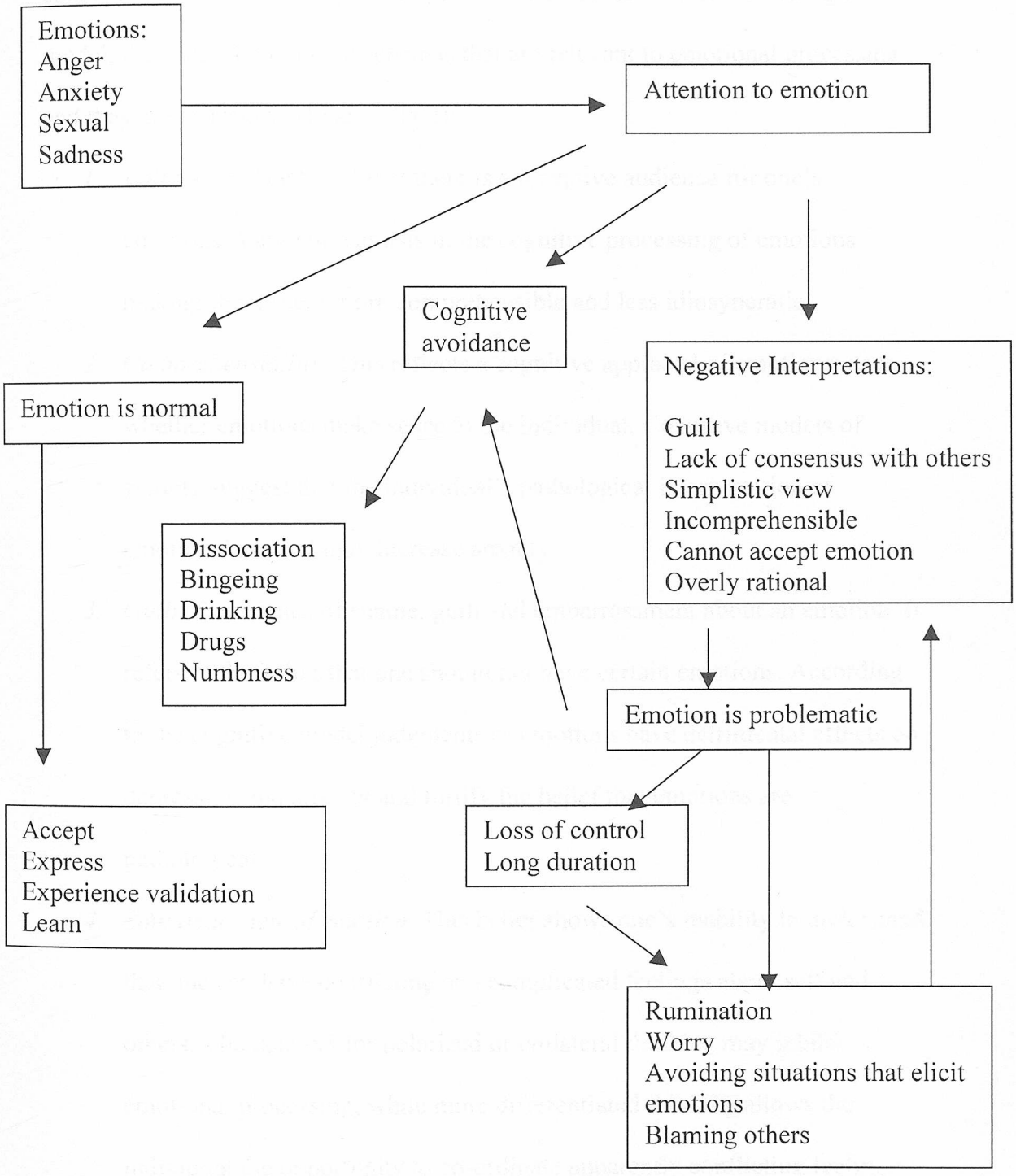


Figure 1.1 Metacognitive schematic of emotions (Leahy, 2002)

Emotional Schema Dimensions

Leahy's (2002) theoretical model proposes that the way that individuals conceptualize (schemas they hold about) their emotions differ. According to the model, they are 14 emotional schemas that are relevant to emotional processing and they are as follows (Leahy, 2002):

1. *Validation.* The belief that there is a receptive audience for one's emotions. Validation assists in the cognitive processing of emotions making them seem more comprehensible and less idiosyncratic.
2. *Comprehensibility.* This reflects a cognitive appraisal of emotions; as to whether emotions make sense to the individual. Cognitive models of anxiety suggest that the individual's pathological interpretation of emotional arousal may increase anxiety.
3. *Guilt.* Experience of shame, guilt and embarrassment about an emotion. It refers to the belief that one should not have certain emotions. According to the cognitive model judgments of emotions have detrimental effects on depression and anxiety and fortify the belief that emotions are pathological.
4. *Simplistic view of emotion.* This belief shows one's inability to understand that one can have conflicting and complicated feelings about self and others. The demand for polarized or unilateral thinking may inhibit emotional processing, while more differentiated thinking allows the individual the opportunity to co-ordinate apparently conflicting feelings.
5. *Higher values.* Recognizing the importance of higher values. Doing this affirms the legitimacy of an individual's values and should assist in reducing anxiety or depression as it facilitates less guilt and rumination.

6. *Control.* The belief that one has control over emotions (emotions would not go out of control). Cognitive models of anxiety and depression suggest that this is related to decreased levels of anxiety and depression.
7. *Numbness.* The sense that intensity of emotions only carries a sense of loss of control, chaos and a sense of being overwhelmed. It represents a repressive style of emotional processing and it can be viewed as a cognitive defence against affect that prevents emotional processing.
8. *Rationality:* Overemphasis on rationality and logic. Attempting to treat one's emotions only as rational may not be immediately related to anxiety or depression but still has negative implications.
9. *Duration.* The belief that emotions have longer duration. This belief reflects difficulty in accepting emotions and is related to depression.
10. *Consensus*: Recognizing that others have similar feelings. This is a form of validation and is related to reductions in anxiety and depression.
11. *Acceptance.* Allowing self to have feelings and to spend little energy trying to inhibit them. Experiential models emphasise acceptance of emotions and suggest that inability to accept emotions results in greater anxiety.
12. *Rumination.* The tendency to ruminate and ask unanswerable questions. Given to existing empirical evidence, this tendency to engage in ruminative coping in response to negative mood seems to be a traitlike vulnerability factor for depression and anxiety.
13. *Expression.* The willingness to experience and to express feelings. It reflects an acceptance that emotions are important. Such an attitude can possibly enhance change or understanding.

14. *Blame.* Blaming others for one's emotions. The cognitive model argues that blaming others is a kind of judgement focus and is employed a style of judging others and the self.

The emotional schema model allows examining of a person's idiosyncratic 'theory' of emotions much as schemas help examine one's interpretations, perceptions, attitudes and significance of events or symptoms. Problematic negative schemas for emotions make emotional processing or emotional regulation difficult further prolonging emotional distress (Leahy, 2002). Consequently, individual theories of emotion may contribute to the exacerbation of negative emotion and other psychosomatic symptoms.

1.8 Theoretical frameworks

1.8.1 Psychosomatic medicine

Modern psychosomatic medicine puts emphasis not on linear biogenetic or psychosomatic causal relationships but on multifactorial models that focus on dynamic interactional processes among predisposing, triggering and vulnerability factors (Picardi & Abeni, 2001; Fava & Sonino, 2000). Within the field of psychosomatics alternative viewpoints have emerged focusing on intricate relationships between biological, psychosocial and environmental variables. Each model has focused on important facets of psychosomatic disease and psychogenesis. These viewpoints continue to evolve as they try to embrace new discoveries.

a. Biopsychosocial model

Among the first theories of psychosomatic medicine was the *biopsychosocial* model of illness, which maintains that health and illness are caused by multiple factors. It allows illness to be viewed as a result of interacting systems at cellular, tissue, organic, interpersonal and environmental levels (Engel, 1967). This suggests the study of every disease should incorporate the individual, his/her body and the surrounding environment as essential components of the total system. According to this model psychosocial factors may facilitate, sustain or modify the course of disease even though their relevant role may vary (Fava & Sonino, 2000). Psychosocial components may influence susceptibility to disease by activating a variety of central nervous system pathways. This model has advocated for biological, psychological and social determinants of health and disease and it embodies a holistic approach to the practice of medicine (Papadopoulos & Bor, 1999).

b. The diathesis-stress model

The *diathesis-stress* model (Meehl, 1962) can sit adjacent to the biopsychosocial model as it focuses on the relationship between a predisposition to a disease and the environment. A predisposition toward developing a disease is termed a diathesis. The diathesis is perceived as a relatively distal, necessary or contributory cause but it is not sufficient to cause the disorder. Rather a more proximal cause, what is termed a stressor, must exist. As defined earlier, stress is the response of an individual to demands that he or she perceives as taxing or exceeding his or her personal responses (Lazarus & Folkman, 1984). Indeed, the presence of a diathesis is often only inferred after stressful circumstances have led

to maladaptive behaviour (Carson et al., 1998). With respect to dermatological conditions, it has been proposed that sufferers inherit or gain a basic organ inferiority (the skin) that will determine the effects of psychological/biological upsets so that autonomic activity may be directed towards the weak organ (Walker, 2005a).

Both biogenetic and psychosocial factors are present in every individual and environmental factors interact with predisposing factors. Clinical experience suggests that psychological factors play a role in triggering and exacerbating many dermatological diseases (Picardi & Abeni, 2001). Vulnerability and protective factors are conceivably relevant. Picardi and colleagues (2005) investigated the role of stressful events, perceived social support, attachment security and alexithymia. Their results suggested that these variables might increase susceptibility to exacerbations of psoriasis. The observed importance of cognitive psychological factors suggests an important role in the psychological difficulties experienced by patients with skin disease. It also supports a multidisciplinary model of patient care and conceptualization of illness. A multivariate model of illness is well suited to understand the complexity of dermatological disease. Like other medical conditions, the aetiology of dermatological conditions such as psoriasis and atopic eczema is likely to be multifactorial and sufferers only inherit a predisposition to the disease (Picardi et al., 2005).

1.8.2 Counselling Psychology

The discipline of counselling psychology is defined as the application of psychological knowledge to the practice of counselling (Woolfe, 1996) The main theoretical forces that have influenced the discipline have basically been underpinned by a set of humanistic values, a phenomenological view of the nature of science and the scientist-practitioner model (Lane & Corrie, 2006). Counselling psychology draws upon and seeks to develop a more alternative phenomenological model of practice and enquiry in addition to that of traditional psychology (BPS, 2005). It arose from a wish to move away from mechanistic views of human beings inherent in the conventional medical model. Much of its emphasis has been on enhancing psychological functioning, effectiveness and well-being rather than on pathologising or curing of sickness.

This emphasis on psychological well-being and the person becomes evident when the basic tenets of counselling psychology are considered. They are as follows (Woolfe, 1996):

a) *An increasing awareness of the helping relationship as a significant variable in working with people and a humanistic value base.*

Under the framework of counselling psychology, *helping* is conceptualised as a transactional encounter between two people and the quality of that encounter is significant. On the part of the clinician, the manifestation of the core person-centred qualities of empathy, acceptance and congruence (Rogers, 1951) has been central. Counselling psychology emphasizes that each individual is separate and unique and tries to bring these beliefs to the heart of its clinical practice. The

subjective experience and the world of the client are at the core of practice. The clinician works as a collaborator in seeking to understand the client's inner experience and seeks to build a relationship with him/her (Woolfe, 1996).

b) *A science-practitioner model.*

The link between science and practice has always been an important. A research-based approach has been central to the activity of the counselling psychology's practice (Lane & Corrie, 2006). According to this model, there is a commitment to a rigorous process of conducting research aimed at ensuring treatments are both reliable and relevant to clinical practice. Within counselling psychology, there has been the expectation that research will provide a more structured and critical examination of the therapeutic practice and generate knowledge (Woolfe, 2006). Research is viewed as way to provide an evidence base for practice and also a method of scrutinising and evaluating practice.

c) *A focus on well-being rather than sickness and pathology.*

Psychological functioning, effectiveness, well-being and development of coping strategies provide the focus of counselling psychologists. The emphasis on the fulfilment of potential reflects the humanistic values and basis of counselling psychology. Instead of emphasizing pathology and sickness, the emotional and mental health of the person is examined in the context of the individual's location in the life cycle and relationships and emphasis is placed on development of potential (Woolfe, 1996).

d) A focus on reflective practice.

Together with the model of scientist-practitioner there is an awareness of the reflective practitioner model in counselling psychology. The need to reflect on practice is linked to the importance of cultural and social diversity and to the need for continuing professional development (Lane & Corrie, 2006). It enables clinicians to develop self-awareness and competence and to critique their work.

The need for an alternative view of health is important given that conventional approaches have been unsuccessful in answering critical questions. Given the close association between psychology and dermatological conditions, it is not surprising that a more holistic view of the patient in the field of dermatology is being developed. Wellness is conceptualized as involving many aspects of life including physical, psychological, social, spiritual and environmental. Counselling psychology has been developed based on this holistic view of the person rather than a mechanistic, pathologising view of sickness. Much of the work of counselling psychologists is to help individuals to cope with their difficulties and to grow emotionally given the right therapeutic climate (Papadopoulos & Bor, 1999). The individual is helped to gain self-confidence and through the process of therapy is encouraged to move towards openness and self-exploration, to feel better about themselves.

The framework of counselling psychology is well placed and it can inform research in the area of psychodermatology where there is a great need for creating evidenced-based treatment protocols that combine efficacy with a facilitative climate. Investigating variables such as schemas that represent core psychological

themes of a person's chactereological patterns is a way of incorporating into conceptualizations of skin disease an interpersonal aspect with a more holistic view of the suffer. Such research has theoretical and therapeutic implications for professional practice. It is in line with the principle of building a rigorous scientific basis for the practice of counselling psychology that can form and inform the profession and that can discern effective interventional strategies. Finally, it is important to address the need for developing evidence-based models to treat specific populations such as people with skin disorders within counselling psychology.

1.8.3 Cognitive Theory

Case conceptualization of skin disease

In building a theoretical multifactorial model of skin disease, one needs to understand how various factors are implicated and the role they play in the aetiology and exacerbation of skin disorders. Such a model should generally incorporate a mixture of biological predispositions and psychological factors such illness perceptions, schemas (personality) and other important behavioural and emotional factors. Cognitive-behaviour models have received the most attention and empirical support in the literature and they are the most extensive in terms of considering cognitive, affective and behavioural components.

A cognitive conceptualization for disfigurement has been offered. Kent and Thompson (2002) have proposed a model explaining shame-proneness in individuals distressed by disfigurement. They have argued that experiences of stigmatization, particularly if this occurs in a repeated fashion in childhood when

there is an early onset of skin disease can lead to the development of body shame and social anxiety. The possibility that variations in distress associated with disfigurement may be related to early parent-child interactions is consistent with many theories regarding the development of psychopathology. It thus suggested that such experiences of stigmatization can result in the development of negative, maladaptive schemas (Kellet, 2002). Individuals that report relatively high levels of emotional neglect during childhood exhibit higher levels of psychiatric symptoms (Campbell-Sills et al., 2006). Also, the importance of adolescent years in the development of identity and social aspects of the self, in creation of relationships and increasing awareness of sexual attractiveness has been noted (Bernstein et al, 1997). The themes of the schemata possibly centre on shame and isolation from others (internal and external shame). In theoretical terms, such maladaptive schemata colour the thinking process of sufferer (worry, pessimism), which might in turn be linked with increased feelings of shame, anxiety about social encounters, sensitivity to rejecting experiences, depression, avoidance and concealment (Kent & Thompson, 2002; Kellet, 2002).

People who have acquired skin disorders in adulthood are also at risk of suffering psychological distress. Rejecting experiences or other situations can lead to confirmation of existing underlying maladaptive schemata or to disconfirmation of existing positive schemata. For example, dermatological conditions such as psoriasis and eczema that have a disfiguring component are often surrounded by myths involving hygiene and contagion. (Papadopoulos et al., 2001). Also, attitudes within the individual's family and culture that emphasize the importance of appearance and physical attractiveness make a less than 'perfect or ideal'

appearance be viewed negatively and they are linked to formation of schemata of undesirability or isolation. These schemas may again be linked with maladaptive responses and psychological difficulties in patients with skin disease, exacerbating its impact and hindering psychological adjustment

1.9 Clinical sample: Skin disorders

Psoriasis and atopic dermatitis (eczema) are common, non-curable, chronic skin disorders that present the patient with many challenges. They have long been considered to be psychosomatic. Each disease has a genetic component and their exacerbation can be related to the presence of psychosocial stressors and distress (Picardi et al., 2000). Additionally, as both diseases may be disfiguring, they can be a 'stressor' in themselves and consequently influence the psychological well-being and identity of the patient (Papadopoulos & Walker, 2003). Finally, both psoriasis and eczema represent debilitating conditions. Patients often find it difficult to cope with either the pain or itchiness caused by the conditions and the quality of life can be severely compromised and therefore increasing the psychological impact. A brief presentation of each disorder is delineated.

1.9.1 Psoriasis

Psoriasis is a genetically determined inflammatory skin condition affecting approximately 2% of the UK population. It is an autoimmune disease resulting in rapid turnover of keratinocytes (Ghoreschi, Mrowietz & Rocken 2003). The proliferative process is mediated by T cell malfunction which signal keratinocytes to grow rapidly resulting in the symptoms of red, inflamed areas of skin. Although there is no cure, many treatments offer relief of symptoms and

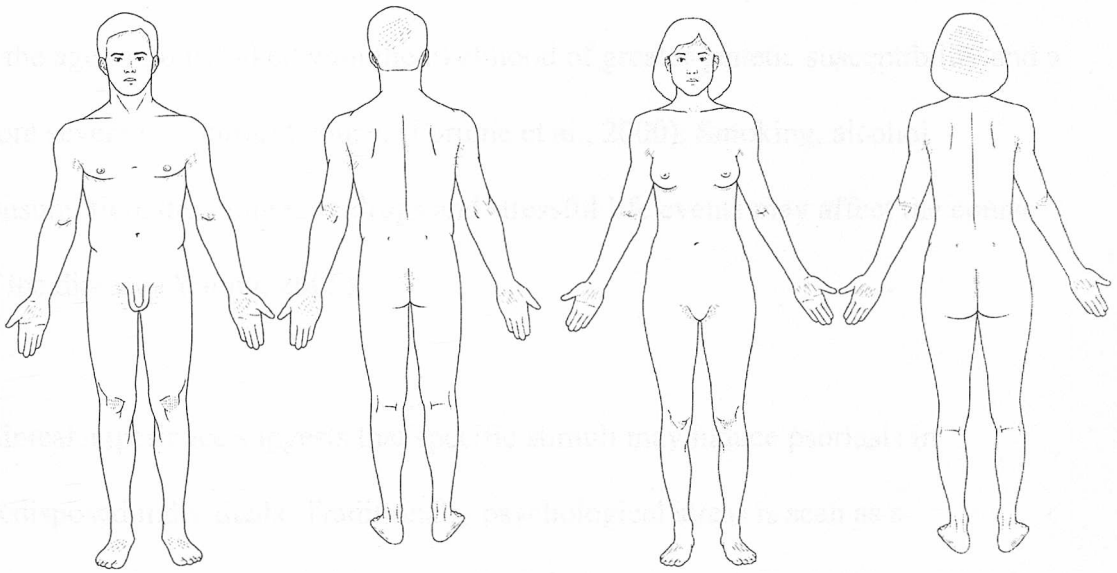
reduction in the frequency and duration of psoriasis flares (Young, 2005). Itching (pruritus) and scaling (desquamation) are the most commonly reported symptoms of psoriasis; with 75% and 80% of the patients respectively reporting experience of these symptoms frequently or all of the time (Fortune, Richards, Main & Griffiths, 1998).

i) Types of Psoriasis

Psoriasis is characterized by sharply defined erythematous, scaly plaques varying in size from pinpoint to covering the whole body. If the clinical picture is dominated by small lesions it is described as guttate psoriasis. Chronic plaque psoriasis is the most common form and is characterized by coin-sized or palm-sized, red scaly plaques, which are often painful, itchy and unsightly. The scalp, elbows, knees, and lower back are commonly affected sites although other areas of skin may be affected (Figure 1.2). Approximately one third of patients with this type of psoriasis are classified as having moderate-to-severe disease on the basis of the affected body surface or the impact of quality of life (Gottlieb, 2005). Another manifestation is called pustular psoriasis and it is characterized by pustules rather than plaques. It is a rare form of psoriasis and can come on suddenly. Painful red patches covered in pustules can appear anywhere on the surface of the skin. While, erythrodermic psoriasis occurs when the whole of the skin surface is affected and it is a potentially life-threatening form of the disease.

Psoriasis is also not exclusively a skin condition as extracutaneous manifestations are nails, mucosal membranes, and joints being affected (van de Kerkhof, 1986). Psoriatic arthropathy is a frequent complication in severe psoriasis and may occur

in the absence of cutaneous lesions. Between 10% to 20% of sufferers with psoriasis develop psoriatic arthritis, which causes tenderness, pain and swelling in the joints and connective tissue with associated stiffness. It commonly affects the ends of the fingers and toes.



Source: Jenny Karetsi. Specifically designed for the purposes of the thesis.

Figure 1.2 Commonly affected sites of the skin in psoriasis

ii) Aetiology & course

A genetic component has long been recognized and studies of familial predisposition have indicated the role of genetic factor (Duffy, Spelman, & Martin, 1993). However, in some sufferers heredity seems to be of little significance and environmental factors are more influential (Zachariae, 1986). Genetic studies suggest that genetic differences might explain the many different ways that psoriasis can appear (Elder, Nair, Henseler, Jenisch, Stuart, Chia, Christophers, Voorhes, 2001). The aetiology of the disease is likely to be

multifactorial and patients inherit only a predisposition to the disease (Picardi, Mazzoti, Gaetano, Catttaruzza, Baliva, Melchi, Biondi & Pasquini, 2005).

The disease in itself has often an unpredictable course. The age of onset of psoriasis varies from the first to the final years of life (Zachariae, 1986). The most common age of onset is 20 to 30 years and studies have reported that onset prior to the age of 30 is linked with the likelihood of greater genetic susceptibility and a more severe or recurrent course (Fortune et al., 2000). Smoking, alcohol consumption, diet, infection drugs and stressful life events may affect the course of the disease (Young, 2005).

Clinical experience suggests that specific stimuli may induce psoriasis in predisposed individuals. Traditionally psychological stress is seen as a precipitating factor for psoriasis both by dermatologists and by patients (Picardi & Abeni, 2001; Nevitt & Hutchinson, 1996)). Interestingly, holding this belief is independent from the presence and/or the absence of a family history of psoriasis (Fortune, Richards, Main, & Griffiths, 1998). In their review of the role of stressful events in the onset and exacerbation of psoriasis, Picardi and Abeni (2001) suggest that there is only preliminary evidence that an association exists. However, stressful life events might be more frequent in patients with psoriasis as a consequence for having the disease. This receives support from a study that suggests that psoriasis-related stress in the form of anticipation of negative reactions from others results in difficulties in interpersonal relationships and may thus increase the number and severity stressful events (Fortune, Main, O'Sullivan & Griffiths, 1997).

iii) Management & treatment

Treatments include topical therapy, phototherapy and systemic therapy. However, they often have several shortcomings including inconvenience, as the cases of topical therapy or phototherapy, and toxicity such as the cases of acitretin, methotrexate and cyclosporine (Gottlieb, 2005). Consequently, they are often used intermittently so patients experience phases of clearance with 'normal' quality of life followed with phases with active disease with 'poor' quality of life. For patients this presents a major concern and there is a need to control the different phases and keep their skin clear.

iv) Psychological adjustment

It is well established that psoriasis is associated with significant psychological distress and psychiatric morbidity (Picardi, et al., 2000). The disability experienced by these patients has been reported to be comparable to that of patients with heart disease, diabetes, cancer or depression (Choi & Koo, 2003). Depressive symptomatology is a clinically important feature of psoriasis (Russo, Ilchef & Cooper, 2004). Onset of psoriasis before the age of 40 has been associated with greater difficulties in expressing anger (Gupta & Gupta, 1996). Fortune and colleagues (1997) found that patients that feel stigmatised in social situations have higher depression scores than patients who do not feel stigmatised. Gupta and colleagues (1993) have shown that depression and suicidal ideation occur in more than 5% of the population of psoriasis patients and the severity of the skin disorder correlates directly with the severity of

depression and the frequency of suicidal ideation. Severity of pruritus also correlates with severity of depressive symptoms (Gupta & Gupta, 1998).

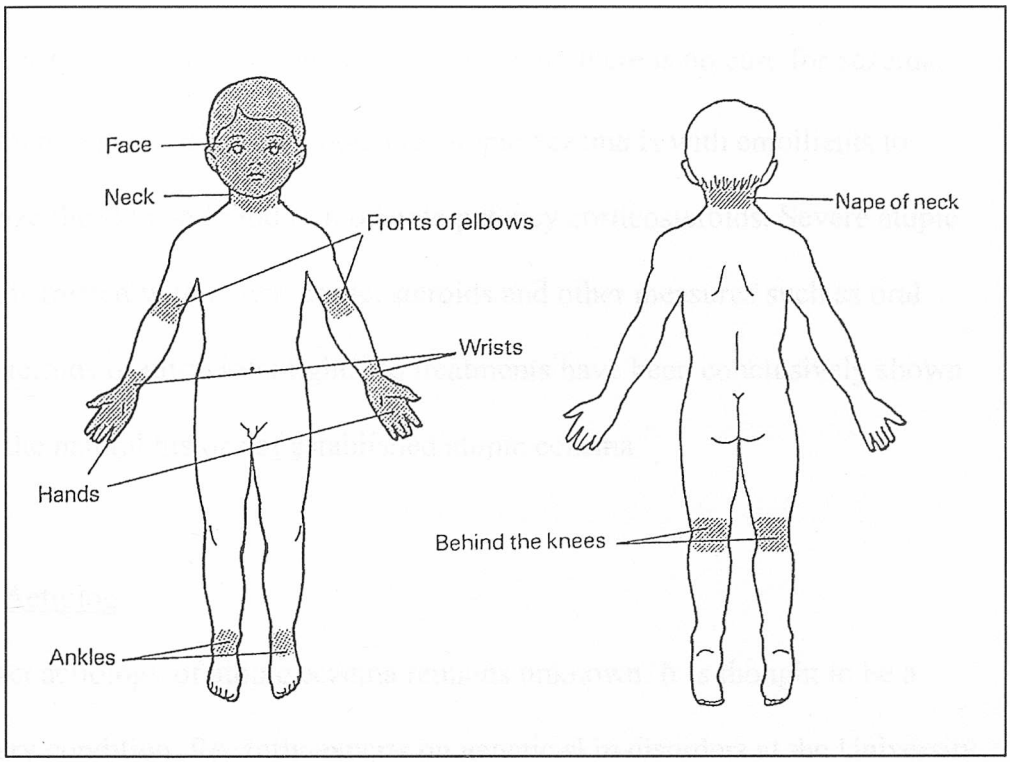
1.9.2 Atopic Eczema

Eczema is a general term encompassing various inflamed skin conditions.

i) Types of eczema

There are many types and varieties of eczema such as contact dermatitis, varicose eczema, seborrhoeic dermatitis, neurodermatitis, nummular and atopic dermatitis. The most common forms of eczema is atopic dermatitis. *Atopic dermatitis (AD)* (also called atopic eczema) is a pruritic, chronic inflammatory skin disorder with variable clinical features. It affects 2-10% of the adult population tends to run in families and can be inherited. It can also occur in an individual with no family history (Mackie, 1983). Atopic eczema is more prevalent in wealthier families and in Afro-Caribbean families for reasons that are not clear at present. There is considerable regional variation in eczema prevalence throughout the UK (Williams, 1997).

The areas most commonly affected are the elbow and the knee flexures and the wrists and neck. It can also affect the face (Figure 1.3). The hallmark of atopic eczema is itch, which leads to scratching and rubbing. Few other skin diseases provoke such intense itch (Atherton, 1995). Scratching and rubbing causes thickening of the skin which manifests as raised scaly patch with an exaggerated pattern of the normal skin lines. When atopic eczema worsens rapidly, there is intensified redness (erythema).



Source: Jenny Karetsi. Specifically designed for the purposes of the thesis.

Figure 1.3 Commonly affected sites of the skin in atopic eczema.

ii) Course

Onset tends to occur in early childhood but may be at any age. Atopic eczema affects between 5 to 20 percent of children by the age of seven in the UK (Williams, 1997). Although the great majority of cases occur in infancy and childhood, atopic eczema can develop at any time throughout life. It affects roughly equal numbers of girls and boys (Mackie, 1983). Atopic dermatitis occurs more frequently in people who have asthma and hay fever or in individuals whose families have asthma and hay fever. The affected individual may have attacks of dermatitis that alternate with attacks of asthma with the skin being active when the asthma is not.

iii) Management & treatment

The severity of the disease can vary and currently there is no cure for eczema. The main treatment of mild to moderate atopic eczema is with emollients to moisturize the skin and mild to moderate potency corticosteroids. Severe atopic eczema is treated with potent corticosteroids and other measures such as oral corticosteroids or ultraviolet light. No treatments have been conclusively shown to alter the natural history of established atopic eczema.

iii) Aetiology

The exact aetiology of atopic eczema remains unknown. It is thought to be a hereditary condition. Recently experts on genetic skin disorders at the University of Dundee have discovered a gene that has a causative role in eczema and that is linked to asthma. The gene in question produces a protein called filagrin, which is normally found in large quantities in the outermost layers of the skin. This protein is essential for skin barrier function, helping to form a protective layer at the surface of the skin that keeps water in and keeps foreign organisms out. Reduction or complete absence of this important protein leads to impaired formation of the skin barrier. As a result, the skin dries out too easily and in addition, the outer layers of the skin are poorly formed and constantly flake off. Some of these individuals also develop a form of asthma that occurs in association with eczema. People with atopic eczema are sensitive to allergens in the environment, which are harmless to others. In atopy there is an excessive reaction by the immune system producing inflamed, irritated and sore skin. Associated atopic conditions include asthma and hayfever.

iv) Psychological adjustment

Environmental and psychosocial factors are implicated in exacerbations of eczema (Schulz, Diepgen & Svensson, 1996; Holden & Parish, 1998). There is general agreement that exacerbation of eczema is related to the presence of stressors (Ehlers, Stangier & Gieler, 1995). Various studies have highlighted the impact of atopic dermatitis on patient's quality of life in terms of their personal and social life and daily functioning (Jowett & Ryan, 1985; Wittkowski, Richards, Griffiths, & Main, 2003). For children in particular, the itching associated with eczema can be very distressing. Higher anxiety and depressive symptoms have been reported for patients with atopic dermatitis (Kiebert, Sorensen, Revicki, Fagan, Doyle, Cohen, & Fivenson, 2002; Zacharie, Zacharie, Ibsen, Mortensen & Wulf, 2004). As with patients with psoriasis, severity of pruritus has been correlated directly with severity of depressive symptoms in the patient (Gupta, 2005). Psychological morbidity in this group of patients indicates enduring emotional problems (Wittkowski et al, 2003).

Conclusion

In both psoriasis and atopic eczema, biogenetic and psychosocial factors are important. Individual and environmental factors interact with predisposing factors. Consequently, patients with psoriasis and eczema are suitable patient groups to utilize in the investigation of the role of core psychological variables such as EMS and emotional schemas.

CHAPTER TWO: RATIONALE

2.1 Thesis: A new direction to conceptualizing skin disorders

Chronic illness provides a patient with numerous threats and challenges, which may include the need for reasonable emotional balance and a satisfactory self-image (de Ridder & Schreurs, 2001). Research has indicated that psychological well-being plays a buffering role in coping with stress, has a favourable impact on disease course and important immunological and endocrine connotations (Fava & Sonino, 2000). For patients with skin disease, psychological well-being and quality of life can be poor. Remarkably there is no demonstrable relationship between the extent or severity of disease and psychological distress. The psychological impact of dermatological conditions tends to vary considerably among patients (Rumsey et al., 2004). Variability in adjustment and distress experienced by patients with chronic skin disorders (Root, Kent, & Al-Abadie, 1994; Porter & Beuf, 1991) certainly presents a challenge in designing appropriate screening and treatment protocols.

To understand the relationship between skin disease and the psyche, one needs to focus on understanding the person behind the skin condition. A way to achieve this is by looking at the personality and characterological patterns of the individual. Recent studies in the field of psychodermatology have addressed some fundamental questions about the links between the psyche and the skin (Walker, 2005a). Variables such as coping, social support and cognitive representations of illness have already been investigated. However, much more research is needed here in order to explain adjustment in skin disorders. It is likely that underlying, central cognitive factors such as schemas might also mediate the nature of coping and prove useful in our understanding of the observed variability between individuals with skin disorders.

The prominent role of core beliefs in the development and maintenance of psychological difficulties in adult life has been recognized (Young et al, 2003). It has been proposed that they are likely to be fundamental to several different theoretical models such as cognitive, interpersonal, and dynamic models (Wellburn et al., 2002). They may also affect subjective perception of skin symptoms and self, leading to maladaptive emotions and dysfunctional coping responses such as avoidance or self-defeating behaviours, all of which further exacerbate one's suffering. Not surprisingly, schemas might be linked with specific health-compromising behaviours such as not complying with dermatological treatment, paying less attention to a healthy diet, smoking or alcohol use. Finally, as schemas influence and shape one's behaviour and interpersonal interactions, they might colour patient-doctor's consultations.

2.1.1 Clinical significance for Counselling Psychology

There is growing interest amongst counselling psychologists not only to document psychological distress but to consider appropriate treatment approaches. The role of research in the field is to provide a basis for counselling practice (Woolfe, 1996). There is extensive awareness of the close links between the skin and the psyche, it is surprising how little has been translated into therapeutic approaches for people with dermatological conditions. Investigations into the role of schemas in skin disease have the potential to understand how they might operate in skin disease so as to design disease-tailored, therapeutic interventions that could effectively target psychological distress experienced by dermatology patients.

Each patient has a unique personality profile consisting of varying degrees of probability of responding in a particular way to a particular degree to a particular situation (Beck et al., 1990). Formulation based on a schematic level opens numerous possibilities of interventions. Clinically, addressing schemas within dermatology can help patients develop a more compassionate view of themselves and produce structural change in a patient's personality. Improvement in psychological well-being might affect disease severity for individuals with chronic skin disorders and improve health behaviour. It might also assist the consultations of dermatologists and other health professionals involved in their care by providing a pathway for successful interaction with dermatology patients.

Rapid advances over the last decade in counselling psychology pose significant challenges and a need for greater sophistication and continued research. The relevance of this work in the area of psychodermatology to counselling psychology is that it focuses on understanding how schemas may be implicated in skin disorders in order to provide practitioners with a basis to establish effective counselling techniques for dermatology patients. It will also provide evidence of the multifaceted and complex nature of distress in this population and need for the counselling approach to treatment.

Developing evidence-based practice is important not only to prevent wastage of health care resources (Williams, 1997) but also in the development of counselling psychology. There is a clear need for a deeper understanding of the sufferer in dermatology as well as for evidence for the provision of counselling for this

population. These studies aimed to: a) to investigate schema-level cognitions in patients with psoriasis and atopic eczema, by focusing on Early Maladaptive Schemas as conceptualized by Young (1994) and on emotional schemas as conceptualized by Leahy (2002); b) to provide an initial understanding of the relative contribution of schema-level cognitions to psychological distress in individuals with psoriasis and eczema; c) provide evidence for building a framework of appropriate psychological interventions for counselling psychologists. A synopsis of the rationale as well as the specific aims and hypotheses of each study is presented.

2.2 Study 1: Early Maladaptive Schemas and psychological distress in skin disorders

2.2.1 Rationale

Clearly a better understanding of the role of central cognitive patterns (schemas) in skin disease is needed. Previous research has focused on cognitions such as illness cognitions. The role of schemas has only recently been addressed in skin disease. There is only one unpublished study that investigated Early Maladaptive Schemas in a sample of Greek patients with psoriasis and eczema (Anthis, 2007). Research on Young's YSQ-S (Young, 1994) has shown to have acceptable psychometric properties and clinical utility in assessing the presence and severity of early maladaptive schemas with different client populations (i.e. Waller et el., 2001; Brotchie et al, 2004). To date no published research has examined its utility in a UK dermatology population. Dermatology patients often present with depression and anxiety and interpersonal difficulties (White, 2001) suggesting the

presence of pathological core beliefs. The potential benefit of its use in routine counselling practice with dermatology patients is evident.

There are two main themes describing the psychological impact of psoriasis and eczema. The first theme is that of a low self-esteem and the tendency to form unfavourable comparisons to the self due to the appearance of the skin (Walker, 2005a). The second theme involves the impact of the disease on their social and interpersonal relationships (Gupta & Gupta 1997). It is acknowledged that dependent on the skin condition being investigated and the sequel of it, the relative importance of each schema may vary and clusters may become redundant, merged, or emerge as divergent from the original formulation. One central question that arises is: Do differences exist in the central cognitive contents of patients with psoriasis and eczema relative to each other and to comparison groups?

In patients with psoriasis and atopic eczema there are significant disease–related psychological problems (Zachariae, Zachariae, Ibsen, Mortensen, & Wulf, 2004) and a higher prevalence of psychiatric symptoms such as depression and anxiety (Gupta, 2005). Interestingly, impairment of quality of life has been found to be the main predictor of psychological morbidity rather than severity of the disease (Zachariae et al, 2004). It is worthwhile to investigate the links between schemas and psychological distress reported by dermatology patients. Theoretically, there are a number of core cognitive themes which are related to certain clinical problems (Young et al., 2003). It is therefore of interest to establish whether

pathological core beliefs mediate between disease and psychological distress in skin disorders irrespective of the years of coping with disease.

2.2.2 Aims

The present study set out to investigate the clinical utility of the Young's Schema Questionnaire-Short Form (YSQ-S) (Young, 1994) in a group of UK outpatients with psoriasis and atopic eczema. A second aim was to determine the central cognitive contents of patients with psoriasis and eczema by focusing on maladaptive/pathological core beliefs (schemas) in order to examine if they show different patterns of core beliefs relative to each other and to comparison groups. Moreover, differences in psychological distress between groups were investigated. A final aim was to examine the links and the nature of the relationship between core beliefs and psychological distress for dermatology patients in order to determine whether core beliefs are able to predict psychological distress independently of the length of coping with the disease.

2.2.3 Hypotheses

The specific hypotheses tested were as follows:

H1: Differences in patterns of individual EMS will exist between all groups. Since maladaptive schemata are theorized to be associated with affective distress and psychological morbidity (Young et al., 2003) it is hypothesized that differences in EMS will exist between all clinical and comparison groups.

H2: Psoriasis patients will score higher in individual EMS such as social isolation, defectiveness, failure, and emotional inhibition as compared to all groups. According to schema theory (Young et al., 2003) such schemas might arise from processes that have been demonstrated to be important in psoriasis: a) stigma and shame attached to the appearance of psoriasis (Ginsburg & Link, 1989; Gupta et al, 1998), b) alexithymia (Picardi et al, 2005; Fortune et al, 2002) and c) treatment effects of psoriasis (Zachariae et 2004; Picardi et al, 2000).

H3: Eczema patients will score higher than psoriasis patients in individual EMS such as abandonment, mistrust and dependence as compared to all groups. Most patients with eczema have onset of the condition early in their lives when attachment is a core developmental stage (Papadopoulos & Bor, 1999; Wittkowski et al, 2003), EMS might originate as result of problematic attachments (Young et al., 2003).

H4: Dermatology patients will score higher in psychological distress as measured by HADS compared to the normal comparison group. Previous studies have shown that there is marked psychological distress among dermatology patients and therefore it is predicted that dermatology patients will report a greater severity of psychological distress (Picardi et al, 2000)

H5: EMS will be positively correlated with anxiety and depression among dermatology patients since maladaptive schemata are theorised to be

associated with the themes of apprehension and threat (anxiety) and themes of shame and loss (depression) (Young et al, 2003; Wellburn et al., 2002).

2.3 Study 2: Emotional schemas and psychological distress in skin disorders.

2.3.1 Rationale

Emotional schemas attempt to describe the role of conceptions of emotions and strategies of emotional processing (Leahy, 2002). Emotions are universal experiences but individuals differ in their conceptualisation of emotions. Strategies of response to their emotions will be determined by how problematic emotional experiences become. Many patients with psoriasis and eczema on a daily basis experience shame, guilt, anger, and fear of being perceived as dirty and infectious by others (Ginsburg, 1995). Given the importance of emotional processing it is worthwhile to gain insight into the manner in which patients with psoriasis and eczema make sense of their emotions and how such cognitions create the foundations for any resultant observable emotional distress they experience in coping with their disease.

The role of emotional schemas within dermatology has not previously been investigated. Dermatology patients often present with increased psychological distress suggesting that they hold problematic schemas regarding their emotions. In many cases, emotional factors (stress) per se can exacerbate the severity of or be a trigger for the skin condition (Ginsburg, 1995). There are potential benefits of the use of such scale in assessing problematic beliefs surrounding emotions in

routine counselling practice with dermatology patients. A central question also arises: Do differences exist in the patterns of emotional schemas in psoriasis and eczema patients relative to each other and to comparison groups?

The meta-emotional or meta-cognitive model of emotional processing proposes that individuals who view their emotions in a negative way such as believing that their emotions are shameful, incomprehensible, escalating dangerous or unique are more inclined to use emotional avoidance responses (Leahy, 2000). Literature also suggests that obsessive and compulsive behaviours mainly serve the function of avoidance of affect (that is reducing the likelihood that negative emotions will be triggered). Dermatology patients often present with such type of behaviours (Gupta & Gupta, 1996), while, avoidance and hiding is the main way of coping demonstrated among all skin patients (Miles, 2002). Finally, it is important to establish whether conceptualizations of one's emotions mediate between skin disease and psychological distress irrespective of length of coping with the disease.

2.3.2 Aims

The present study attempted firstly to examine the clinical utility of the Leahy's Emotional Schema Scale (LESS) (Leahy, 2002) in a group of UK outpatients with psoriasis and atopic eczema. A second aim was to determine the central cognitive conceptualisations of emotions of patients with psoriasis and atopic eczema in order to examine if they show different patterns of problematic beliefs about emotion relative to each other and to comparison groups. A third aim was to examine the association of core conceptualisations of emotions with avoidance

coping strategies employed as well as with psychological distress experienced by dermatology patients. Finally, a fourth aim was to explore the nature of the relationship between emotional schema dimensions and psychological distress for dermatology patients in order to determine if they are able to predict psychological distress independently of length of coping with the disease.

2.3.3 Hypotheses

The specific hypotheses tested were as follows:

H1: Differences in the patterns of their problematic beliefs about emotions will exist between all groups. Since problematic beliefs about emotions are theorized to be linked with greater psychological distress (Leahy, 2002), it is hypothesized that differences in the patterns of problematic beliefs about emotions will exist between groups.

H2: Psoriasis patients will score higher on emotional schemas such as incomprehensibility, simplistic view of emotion, control, rationalization and rumination compared to other groups. According to model of emotional schemas (Leahy, 2002) and given findings on alexithymia (Fortune et al, 2002) and their inability to express feelings such as anger (Gupta & Gupta, 1996), it is expected that patients with psoriasis will display greater severity of problematic beliefs about emotions.

H3: Eczema patients will score higher on individual emotional schemas such as blame, guilt and duration compared to other groups. Given earlier findings with patients with eczema presenting with high levels of neuroticism (White et al., 1990), it is hypothesized that patients with eczema will display greater severity of problematic beliefs about emotions that link with feelings of anxiety (Leahy, 2002).

H4: Problematic beliefs about emotions will be positively correlated with avoidance (behavioural) coping among dermatology patients. According to meta-cognitive models (Wells, 1995; Hayes et al., 1999), problematic beliefs about emotions are linked to avoidance coping since the individual pathologizes emotions. Therefore it is hypothesized that problematic beliefs about emotions will be positively associated with avoidance coping among dermatology patients.

H5: Problematic beliefs about emotions will be positively and negatively correlated with anxiety and depression among dermatology patients. According to the model of emotional schemas (Leahy, 2002), pathological beliefs about emotions are linked to both anxiety and depression. Given theory, it is hypothesized that among dermatology patients there will be positive and negative associations of pathological beliefs about emotions with psychological distress.

CHAPTER THREE: STUDY 1

EARLY MALADAPTIVE SCHEMAS AND PSYCHOLOGICAL DISTRESS IN SKIN DISORDERS

3.1 Introduction

Skin disorders such as psoriasis and atopic eczema are chronic diseases and they can be stressors in their own right. The physical symptoms associated with these conditions can cause irritation, pain and disability. Their treatment may involve the use of smelly and/or oily creams and ointments, frequent attendance to clinics for time-consuming therapies such as UVA/B light therapy and adherence to complicated treatment regimes (Thompson, 2005). Additionally, they are often characterized by exacerbations and periods of remission. For many sufferers much of the distress arises mainly from having a persistent, visible disfigurement. Patients with skin diseases often develop psychological problems that are secondary to the impact of visible disfigurement (White, 2001).

People with disfigurement or altered appearance may encounter rejection in a variety of situations (Kent & Keohane, 2001). Ginsburg and Link (1998) found that 20% of their sample of people with psoriasis had been asked to leave a restaurant, swimming pool or other public place because of their appearance. Jowett and Ryan (1985) found that sufferers of acne, psoriasis and eczema experienced problems in their personal and social lives and daily functioning. The general public tends to hold negative, implicit attitudes towards people with skin conditions (Grandfield, Thompson & Turpin, 2004). Patients themselves may also hold mistaken beliefs about the aetiology of their skin conditions that relate to themes of contagion and cleanliness (White, 2001; Papadopoulos & Bor, 1999).

Emotions such as shame and embarrassment as well as anticipation of rejection are often experienced. Skin patients often go to great lengths to conceal their condition from others and to present themselves as attractive. In a seminal paper,

Goffman (1963) theorized the role of stigma. According to Goffman (1963), the person with a highly visible stigma may be described as 'discredited'. Holding such belief about one's identity affects the view of him or her as 'falling short'. If one perceives his/her self as bad, flawed, worthless or unattractive, then such a response makes the experience of shame likely.

Suffering from dermatological conditions might have a lasting damage to self-esteem, as it is anchored with the day-to-day, unpredictable variation in the appearance of skin. In a recent review of the dermatological literature, Kellet and Gilbert (2001) state that acne can lead to feelings of shame because of its ability to invoke negative evaluations of attractiveness from others. While, the unpredictable nature of psoriasis or atopic eczema clearly impacts upon an individual's sense of identity. Patient's outlook and behaviour becomes a product of how visible or unappealing they experience their skin condition to be. Their self-identity and skin condition are in a constant state of flux. It appears that the skin condition is woven into their sense of identity, continually revising and moulding the expression of self. Consequently, damage to self-esteem can persist long-term (Papadopoulos & Walker, 2003).

Despite substantial advances in our understanding of coping with chronic, disfiguring dermatological conditions, it seems that research has scratched only the surface in understanding and treating psychological distress in dermatology patients. Developments in therapeutic approaches have seen an increasing interest in work at the level of schematic processing in treatment of complex cases (Padesky, 1994; Young, Klosko, & Weishaar, 2003). The role of core beliefs/schemas in our understanding of dermatology patients is relatively novel.

In this study, the presence of such cognitions and their links to psychological distress in an UK sample of psoriasis and eczema outpatients were examined. One aim of the study was to examine the clinical utility of the Young's Schema Questionnaire-Short Form (Young, 1994) with a group of patients with psoriasis and eczema. A further aim was to determine the central cognitive content of patients with psoriasis and eczema focusing on schema-level cognitions when compared to appropriate matched controls of healthy participants and participants with chronic medical conditions but without skin-related problems. It was hypothesized that:

- Differences in the patterns of their individual Early Maladaptive Schemas will exist between all groups.
- Psoriasis patients will score higher in individual EMS such as social isolation, defectiveness, self-sacrifice, and emotional inhibition as compared to all groups. Such schemas can arise from processes important to psoriasis: the stigma attached to the appearance of psoriasis, alexithymia and the treatment effects of psoriasis.
- Eczema patients will score higher in individual EMS such as abandonment mistrust and dependence as compared to all groups. As most of these patients have experienced onset of the condition quite early on in their lives and they may experience problems in their attachments.

It was also important to investigate the links between schema-level cognitions and psychological distress. It was of interest to establish whether core beliefs mediate between psychological distress and skin disease irrespective of the length of coping.

3.2 METHOD

3.2.1 Participants

The study involved both clinical (psoriasis and atopic eczema) and comparison (normal and chronic disease) groups.

i) Clinical group

Participants were patients with psoriasis or atopic eczema attending the Dermatology Department at the Royal Free Hospital, London, UK for management of their skin disease. The inclusion criteria for dermatology outpatients were:

- Age $\geq$ 18 years.
- A diagnosis of atopic eczema or psoriasis by a dermatologist.
- > 1 year history of disease.
- No psychological therapy or any psychotropic medication over the last year.

ii) Control group

The control groups comprised of: a) a normal control group, comprised of healthy participants without skin-related problems or other chronic diseases; b) a clinical control group, comprised of a group of participants who suffer from a non-disfiguring, chronic medical condition (diabetes) was also added. The recruitment strategy was the same for both control groups. Groups recruited from the community i.e. from individuals sitting in hospital waiting areas, libraries and refectories. Participants in the chronic disease group were eligible to participate if they met the following criteria:

- Age> 18 years.
- No dermatological or disfiguring condition.
- No psychological therapy or psychotropic medication during the last year.

The inclusion criteria for the healthy control group were:

- Age> 18 years.
- No dermatological or disfiguring condition.
- No chronic disease.
- No psychological therapy or psychotropic medication during the last year.

3.2.2 Design

A cross-sectional design was employed with four groups (psoriasis vs. eczema vs. clinical control vs. normal control). The dependent variables were Early Maladaptive Schemas as measured by YSQ-S and psychological distress as measured by the HADS. The independent variable was the health status of the participant.

Self-report, standardized questionnaires were employed to investigate the hypotheses as it appeared to be a more suitable design for a preliminary investigation. These questionnaires were deemed most suitable in terms of their efficiency, reliability and consistency. The selection of a quantitative design was based on: a) Previous research in the field has also employed similar designs (Waller et al., 2001; Papadopoulos et al, 2002; Fortune et al 2003; Picardi et al, 2005), b) A quantitative design is suitable for testing schema theory in a systematic way and for producing results that can be readily generalised among

dermatology patients (Aron & Aron, 2002), c) The selected psychological measures are standardized questionnaires with good psychometric properties and they are used as principal screening measures in counselling settings, d) A quantitative design allows the researcher to decide whether findings could be readily applicable to the population under investigation (Shaughnessy, Zechmeister, & Zechmeister, 2000). The results of this work may therefore be applied in counselling dermatology patients.

Power analysis

A power analysis was conducted with an alpha level of 0.05 and the power at 0.8 with effect size at 0.25, in order to determine the appropriate sample size that would enable significant effects to be detected. The sample size of the three groups was determined to be 159 participants (n=53 per group). A smaller clinical, control group was also added to reduce the likelihood of finding spurious differences in comparisons.

3.2.3 Instruments

The following standardized measures were chosen based on their good psychometric properties (Appendix One, p.200).

Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983)

The HADS (Zigmond & Snaith, 1983) is a self-report scale that consists of 14 items, 7 assessing anxiety and 7 assessing depression (Appendix One, p. 203). Each item is scored from 0 to 3. Total scores range from 0 to 21. Two thresholds have been identified for indicating possible pathology. The threshold of 8 is used

to suggest possible presence of a clinical disorder (mildly disturbed individuals). The score of 11 is the threshold for probable psychiatric caseness. Such scores indicate the presence of clinically significant levels of levels of anxiety ad depression. The scale is used in patients with chronic medical conditions and has good reliability and validity coefficients (Lewis & Wessely, 1990).

Young Schema Questionnaire-Short Form (YSQ-S) (Young, 1998)

The Young Schema Questionnaire-S (YSQ-S) (Young, 1998) is a self-report measure to assess 15 Early Maladaptive Schemas (EMS) (Appendix One, p. 205). This a short form of the Young Schema Questionnaire (YSQ) which was developed by Young (1994) and it contains 205 items and assesses 16 EMS. The YSQ-S was developed as a shorter but clinically relevant assessment tool to measure maladaptive schemas (Wellburn, Coristine, Dagg, Pontefract & Jordan, 2002). The YSQ-S is comprised of a subset of 75 items from the original pool of 205 items and is composed of the five highest loadings for each schema as determined by factor analysis (Schmidt et al, 1995) and they represent 15 EMS. It has acceptable psychometric properties (Wellburn et al, 2002; Waller, Meyer & Ohanian, 2001). This shortened version has clear potential in terms of clinical utility.

The 15 subscales address the following core beliefs/schemas:

- Emotional deprivation (belief that one's emotional needs will not be met)
- Abandonment (belief that others will not be protective or supportive)
- Mistrust/abuse (belief that others will be abusive)
- Social isolation (belief that one is different/isolated from others)

- Defectiveness/shame (perceived defects that make one unlovable)
- Failure to achieve (perceived inadequacy leading to failure to meet goals)
- Vulnerability to harm (belief that one is vulnerable to harm)
- Dependence (belief that one cannot cope without support from others)
- Enmeshment (emotional over involvement with others)
- Subjugation (others' desires are more important than one's own)
- Self-sacrifice (belief that on should focus on other's needs rather than one's own)
- Emotional inhibition (emotional expression is perceived as having adverse consequences)
- Unrelenting standards (belief that one should strive to achieve impossible levels of achievement)
- Entitlement (belief that one can act without considering others)
- Insufficient self-control (belief that one cannot or need not control impulses and feelings).

Each item of the YSQ-S is rated on a 6-point scale (1=completely untrue of me, 2=mostly untrue of me, 3=slightly more true than untrue, 4=moderately true of me, 5=mostly true of me, 6= describes me perfectly). The overall score for each subscale is calculated from the mean of the five items in that scale. A higher score (range 1-6) indicates a greater presence of a maladaptive, unhealthy schema for the respondent.

Demographic Information Questionnaire

This questionnaire was specifically designed for this study (Appendix One, p.207). It included questions regarding demographics, diagnosis of disease, years

of coping, treatment history as well as history of psychological therapy and psychiatric history.

3.2.4 Procedure

All dermatology participants in the clinical group were invited by their dermatologists or dermatology nurses to take part in the study. Participants in the clinical group were recruited from clinics within the Department of Dermatology at the Royal Free Hospital, London, UK. Both control groups were recruited from the community (i.e. in areas such as hospital waiting areas and refectories etc.) and they were approached by the researcher and/or dermatology nurses. All potential participants were asked if they were willing to participate in a research study conducted by the researcher as part of a doctoral thesis in Counselling Psychology. The purpose of the study was explained via a written information sheet (Appendix One, p. 201). A consent form (Appendix One, p. 202) was given to complete, which assured participants of issues of confidentiality and of their right to withdraw at any time from the study. All participants were asked to complete the questionnaire package in their own time. They were informed that there are no right or wrong answers. They were given pre-paid envelopes and they were asked to post the questionnaires back to the researcher. Participants were also informed that the information they gave might later be published. They were invited to contact the researcher should they want a copy of the report or should they have any other questions or concerns. Psychological support was also available to all participants should distress arise from participation. All staff involved in the study was made aware of all information and purposes of the study.

Data collection lasted over a 12-month period. A report was made available at the Department of Dermatology upon completion of the study.

3.2.5 Ethical Considerations

British Psychological Society's guidelines were adhered to and formed the basis upon which ethical issues were evaluated. Ethical approval for the study was granted by the Camden & Islington Community Local Research Ethics Committee [REC reference number 06/Q0511/12](Appendix Two, p.209) and by the Research and Development Department, Royal Free Hampstead NHS Trust (Appendix Two, p.210).

In order to protect the identities of participants and to ensure confidentiality all questionnaires were anonymous. Appropriate psychological support was available in case distress was caused to any of the participants.

3.2.6 Data analysis

Data were analysed using the statistical package SPSS 14.0 for Windows. The assumptions of normality and homogeneity of variance were explored prior to testing the main hypotheses. Parametric tests were used based on the following: a) Analysis of Variance (ANOVA) is a very robust statistical procedure even when there are violations of its assumptions (Aron & Aron, 2002; Levene, 1960); b) the power of the test is dependent on the sample size and power increases with a large sample size (Tabachnick & Fidell, 2001); c) previous studies on YSQ-S and HADS measures all used parametric tests (i.e. Waller et al., 2001; Brotchie et al., 2004).

The internal consistency of the 15 YSQ scales was calculated for the dermatology (psoriasis and eczema) patients using Cronbach's alpha. One-way analyses of variance (ANOVA) with post-hoc comparisons were used to compare groups on the YSQ-S scales and on the HADS scales. A set of correlations were used to determine dimensional associations of the YSQ-S scales with psychological distress as measured by the HADS for the dermatology patients. Multiple regression analyses were used to determine whether a set of YSQ-S scales when controlling for years of coping predict psychological distress. The assumptions of regression were also met.

3.3 RESULTS

3.3.1 Demographic characteristics of participants

The final sample consisted of 164 participants (psoriasis n=55, eczema n=33, healthy/control n=53, chronic disease/control n=23). The study involved both clinical (psoriasis n=55, eczema n=33) and comparison groups (control n=53, clinical control n=23). Table 3.1 displays the demographic characteristics of all participants.

i) Clinical sample

The clinical sample consisted of 55 psoriasis and 33 eczema patients attending the Dermatology Department at the Royal Free Hospital, London, UK for management of their skin disease. One hundred and five questionnaires were given out regularly. Of the returned questionnaires, ten were disregarded as the respondents did not meet the inclusion criteria, two were blank and five refused to complete them by returning them empty.

Table 3.1 Demographic characteristics of all participants (n=164).

	Psoriasis (n=55)	**Eczema** (n=33)	**Chronic Disease** (n=23)	**Normal** (n=53)
Age (years)				
Mean	42.25	35.30	34.39	31.39
(SD)	13.56	13.31	11.07	7.36
Range	23-75	18-74	25-72	21-49
Gender (%)				
Male	52.7	33.3	26.1	39.6
Female	47.3	66.7	73.9	60.4
Marital Status (%)				
Married	43.6	12.5	17.4	32.1
Single	43.6	81.3	73.9	62.3
Divorced	12.7	6.3	8.7	5.7
Onset of disease (years)				
Mean	23.96	10.93	26.17	
(SD)	13.85	17.45	11.15	
Range	4-65	1mo-60	11-67	
Years of coping (years)				
Mean	18	22.93	9	
(SD)	11.38	17.45	8.25	
Range	2-51	2-73	1-30	
Educational level (years)				
Mean	14.85	15.36	16.52	16.56
(SD)	3.78	2.48	1.95	2.79
Range	5-22	8-20	13-20	12-22
Ethnicity (%)				
White-British	58.2	51.5	43.5	41.5
White-Irish	7.3	3.0		
White-Other	20.0	24.2	47.8	54.7
Asian-Indian	9.1	9.1	4.3	
Asian-Pakistani	1.8	3.0	4.3	
Asian-Other	3.6			
Mixed		6.1		1.9
Chinese				1.9
Black-Caribbean				

Psoriasis

The *psoriasis* group consisted of 29 males and 26 females. 43.6% were single, 43.6% were married, and 12.7% were divorced. The mean age was 42.25 years (SD= 13.56, range= 22-75 years). Mean number of years in education was 14.85 (SD= 3.78, range 5-22 years). Mean time of onset was 23.96 years (SD=13.85, range= 4-65years). The mean number of years of coping was 18 years (SD=11.38, range=2-51 years). 25.5% of psoriasis patients were also diagnosed with psoriatic arthropathy.

Eczema

The *eczema* group consisted of 11 males and 22 females. 81.8% were single, 12.1% were married, and 6.1% were divorced. The mean age was 35.30 years (SD= 13.31, range= 18-74 years). Mean number of yeas in education was 15.36 (SD=2.48, range=8-20 years). Mean time since diagnosis was 10.93 years (SD=14.57, range= 1month - 60years). The mean number of years of coping was 22.93 years (SD=17.45, range=2-73 years). 34.4% of eczema patients also suffered with asthma.

ii) Control sample

The control sample consisted of 53 healthy participants and 23 participants with a chronic disease (diabetes). One-hundred and ten questionnaires were given out. Of the returned questionnaires, twelve were disregarded as the respondents did not meet the inclusion criteria, three did not answer all items. The control sample comprised of:

- The *normal* control group consisted of 21 males and 32 females. 62.3% were single, 32.1% were married, and 5.7% were divorced. The mean age was 31.39 years (SD=7.36, range= 21-49 years). The mean number of yeas in education were 16.56 (SD= 2.79, range 12-22 years).

- The chronic disease (diabetes) control group consisted of 6 males and 17 females. 73.9% were single, 17.4% were married, and 8.7% were divorced. The mean age was 34.39 years (SD= 11.07, range= 25-72 years). The mean number of years in education were 16.52 (SD= 1.95, range 13-20 years). Mean time since diagnosis was 26.17 years (SD=11.15, range= 11-67years). The mean years of coping with diabetes was 9 years (SD=8.25, range=1-30 years).

In terms of sociodemographic characteristics, significant differences among groups were found: a) in age [$F(3,160)=8.43$, $p<001$]. This difference was due to the psoriasis group being older ($M=42.25$, $SD=13.56$) than the other three groups [eczema ($M=35.30$, $SD=13.31$), normal ($M=31.39$, $SD=7.36$), chronic disease ($M=34.39$, $SD=11.07$)], b) in marital status [$F(3,160)=4.00$, $p<05$]. This difference was due to the fact that there were more married participants in the psoriasis group ($M= 1.69$, $SD=.69$) as opposed to the eczema group ($M=1.24$, $SD=.56$) that were mostly single, c) in years of education [$F(3,159)=3.56$, $p<05$]. This difference was due to participants in the psoriasis group being less educated ($M=14.85$, $SD=3.78$) compared with the eczema group ($M=15.36$, $SD=2.48$). The groups did not differ in any other primary characteristics.

3.3.2 Internal consistency of the YSQ-S Scales in dermatology patients

Internal consistency estimates reliability and measures the extent to which all items in a scale measure the same concept. Cronbach's alpha was used to determine the internal consistency of each of the 15 scales of the YSQ-S for the dermatology patients. Table 3.2 shows the Cronbach's alpha values of the 15 YSQ-S scales.

Table 3.2 Internal consistency of the YSQ-S scales for dermatology patients (n=88).

YSQ scales	Cronbach's Alpha
Emotional Deprivation	.913
Abandonment	.919
Mistrust	.915
Social Isolation	.560
Defectiveness	.886
Failure	.930
Dependence	.845
Vulnerability to harm	.876
Enmeshment	.885
Subjugation	.844
Self-sacrifice	.699
Emotional Inhibition	.860
Unrelenting Standards	.845
Entitlement	.806
Insufficient Self-Control	.846

Results show that for psoriasis and eczema patients the internal consistency is particularly high for the emotional deprivation, abandonment, mistrust, defectiveness, failure, dependence, vulnerability to harm, enmeshment, subjugation, emotional inhibition, unrelenting standards, entitlement and insufficient self-control scales and acceptable for the self-sacrifice scale. In all scales, these alpha levels were well above or equal to .07 described as acceptable (Howell, 1997). The only scale that has a lower Cronbach's value of .560 is social isolation. By inspecting item-total correlation Question 17 (I am fundamentally

different from other people) correlates poorly with the scale (.23). The impact of removing this item on Cronbach's alpha for the scale is a value of .910 which is high. Overall, YSQ-S has a very good internal reliability and it can be used as a tool for assessing maladaptive schemas with dermatology patients.

3.3.3 Differences in YSQ-S scales across groups.

Fifteen one-way between-groups analyses of variance were conducted to explore differences between psoriasis, eczema patients and comparison groups on schemas as measured by the 15 YSQ-S scales. Participants were divided into four groups according to their health status (psoriasis vs. eczema vs. normal vs. chronic disease control). Table 3.3 illustrates the mean scores and standard deviations of the four groups on each of the 15 YSQ-S scales along with the 95% confidence intervals, the ANOVA and Tukey results. An alpha level of .05 was set for the statistic tests. As predicted in Hypothesis 1 that differences on EMS between groups will exist, analyses showed that there were statistically significant differences at the $p<.05$ on nine of the individual YSQ-S scales which were: emotional inhibition, social isolation, defectiveness, failure, dependence, vulnerability to harm, subjugation, emotion inhibition, insufficient self-control. Contrary to Hypotheses 2 and 3 that psoriasis and eczema patients will score higher on certain EMS, results showed that the dermatology groups did not differ relative to each other on but they only differed with control groups on maladaptive schemata.

As indicated in the Table 3.3 above there were several differences between the groups, below we elaborate on some of the most interesting of these and clarify how they relate to each particular group. *Post hoc* comparisons using the Tukey

test were conducted to reduce the risk of Type I error and to determine the pairwise differences that contributed to these overall effects on the individual nine YSQ-scales (Table 3.3). The test indicated that the mean score on *emotional deprivation* for psoriasis (t= .70, p=.010) and the eczema patients (t= .71, p=.031) was significantly greater than the mean score of the normal group. The psoriasis patients and the eczema patients did not differ significantly from each other (t= .00, p>.05) and from the chronic disease group (t= .37, p=>.05) and (t= .38, p>.05) respectively. The same pattern of results was found for the *subjugation* schema (Table 3.3).

The Tukey test indicated that the mean score on *social isolation* (analysis on all five items of the scale) for psoriasis (t= .93, p=.000) and the eczema patients (t= .60, p=.048) was significantly greater than the mean score of group. The psoriasis patients and the eczema patients did not differ significantly from each other (t= .32, p=>.05). The mean score of the psoriasis patients was also significantly greater than the mean score of the chronic disease group (t= .82, p=.011). The eczema and the chronic disease group did not differ significantly from each other (t=.49, p>.05). The same pattern of results was found for the *defectiveness* and *failure* schemas (Table 3.3).

The test indicated that the mean score on *dependence* for eczema patients was significantly greater that the mean score of the normal group (t= .63, p=.003) and the chronic disease group (t=.65, p=.019). The psoriasis patients and the eczema patients did not differently from each other (t=.26, p>.05) and from the chronic disease group (t=.38, p>.05). Also the test indicated that the mean score on

insufficient self control for eczema patients was significantly greater than the mean score of the chronic disease group (t=.75, p=.039) but there were not any other differences with the other two groups. The psoriasis patient did not differ significantly from either three groups. The same pattern of results was found for the *vulnerability to harm* for the psoriasis group (Table 3.3).

Finally, the test indicated that the mean score on *emotion inhibition* for psoriasis patients was significantly greater than the mean score of the normal group (t=.69, p=.003). The psoriasis patients did not differ significantly from the eczema patients (t=.34, p>.05) and the chronic disease (t=.41, p>.05).

Confirmatory analysis based on Confidence Intervals

The mean score on *emotional inhibition* for psoriasis patients was 2.47 (SD=1.31) and for eczema patients was 2.48 (SD=1.42) and the mean score for normal group was 1.77 (SD=.73). Both clinical groups had a greater score than did participants in the normal control group on this maladaptive schema (SEM=.22 and SEM=.25). There is a .95 probability that the obtained confidence intervals, .12-1.27 (for psoriasis and normal) and .04-1.37 (for eczema and normal) contain the true population mean difference. The same pattern of results can be concluded for *subjugation* (Table 3.3). Based on the means and the confidence intervals presented in Table 3.3 (for interpretations of patterns see Appendix Four, p 214) for the maladaptive schemas of *social isolation, defectiveness, failure, dependence, vulnerability to harm, subjugation, emotional inhibition* and *insufficient self-control*, it can be concluded that dermatology patients show greater severity of these maladaptive schemas than comparison groups.

Results support Hypothesis 1 that there would be reliable differences between the dermatology patients and the comparison groups on individual EMS. Psoriasis patients scored higher to both comparison groups on *social isolation*, *defectiveness, failure*, *vulnerability to harm, and emotional inhibition* schemas. While, eczema patients scored higher to comparison groups on *dependence and insufficient self-control*. Contrary to the initial Hypotheses 2 and 3 no significant differences between the psoriasis and the eczema patients were found on any of the individual schemas.

Table3.3 Mean YSQ-S scores, standard deviations, 95% confidence intervals, ANOVA and Tukey among psoriasis and eczema patients and comparison groups.

YSQ-S scales	Psoriasis (n=55) M(SD) 95% CI	Eczema (n =33) M(SD) 95% CI	Normal (n=55) M(SD) 95% CI	Chronic Disease (n=23) M(SD) 95% CI	ANOVA F	p			Tukey t 95% CI	p value
Emotional Deprivation	2.47(1.31)	2.48(1.42)	1.77(.73)	2.10(1.08)	4.191*	.007	psoriasis	eczema	.00 -.66-.65	>.05
	2.12-2.83	1.98-2.98	1.56-1.97	1.63-2.57				normal	.70(*) .12-1.27	.010
								chron dis.	.37 -.37-1.11	>.05
							eczema	normal	.71(*) .04-1.37	.031
								chron dis.	.38 -.43-1.19	>.05
Abandonment	2.24(1.24)	2.35(1.33)	1.89(.79)	2.35(1.34)	1.55	>.05				
	1.90-2.57	1.87-2.82	1.67-2.10	1.77-2.93						
Mistrust	2.60(1.31)	2.63(1.29)	2.04(.92)	2.30(.94)	2.701	>.05				
	2.24-2.96	2.17-3.08	1.79-2.30	1.89-2.71						
Social Isolation	2.70(1.31)	2.37(1.08)	1.76(.85)	1.87(.60)	8.157*	.000	psoriasis	eczema	.32 -.27-.92	>.05
	2.34-3.05	1.99-2.75	1.53-2.00	1.61-2.14				normal	.93(*) .40-1.46	.000
								chron dis	.82(*) .14-1.50	.011
							eczema	normal	.60(*) .00-1.21	.048
								chron dis	.49 -.24-1.24	>.05

Psoriasis YSQ-S scales	Eczema (n=55) M(SD) 95% CI	Normal (n =33) M(SD) 95% CI	Chronic Disease (n=55) M(SD) 95% CI	ANOVA (n-=23) M(SD) 95% CI	F	p		Tukey	t 95% CI	p value
Defectiveness	2.19(1.09) 1.89-2.48	2.14(1.08) 1.76-2.52	1.32(.44) 1.19-1.44	1.61(.67) 1.32-1.91	10.98*	.000	psoriasis	eczema	.04 -.45-54	>.05
								normal	.87(*) .43-1.30	.000
								chron dis	.57(*) .01-1.14	.044
							eczema	normal	.82(*) .32-1.32	.000
								chron dis	.52 -.86-1.14	>.05
Failure	2.21(1.14) 1.90-2.52	2.16(1.29) 1.70-2.62	1.47(.48) 1.34-1.60	1.54(.59) 1.28-1.80	7.36*	.000	psoriasis	eczema	.04 -.49-.58	>.05
								normal	.73(*) .26-1.20	.001
								chron. dis.	.66(*) .05-1.27	.028
							eczema	normal	.68(*) .14-1.23	.007
								chron dis	.61 -.05-1.28	>.05
Dependence	1.77(.79) 1.56-1.99	2.04(1.26) 1.59-2.49	1.40(.52) 1.26-1.55	1.39(.52) 1.16-1.61	5.35*	.002	psoriasis	eczema	.26 -.72-.20	>.05
								normal	.37 -.03-.77	>.05
								chron dis	.38 -.13-.91	>.05
							eczema	normal	.63(*) .16-1.10	.003
								chron. dis	.65(*) .07-1.22	.019

Psoriasis YSQ-S scales	Eczema (n=55) M(SD) 95% CI	Normal (n =33) M(SD) 95% CI	Chronic Disease (n=55) M(SD) 95% CI	ANOVA (n-=23) M(SD) 95% CI	F	p		Tukey	t 95% CI	p value
Vulnerability to harm	2.5(1.26) 2.18-2.87	2.01(1.06) 1.63-2.38	1.47(.58) 1.31-1.63	1.63(.81) 1.28-1.98	11.35*	.000	psoriasis	eczema	.51 -.04-1.08	.083
								normal	1.05(*) .56-1.55	.000
								chronic dis	.89(*) .26-1.53	.002
							eczema	normal	.54 -.02-1.10	.068
								chron. dis	.37 -.31-1.07	.495
Enmeshment	1.66(1.04) 1.38-1.94	1.92(1.05) 1.54-2.29	1.53(.79) 1.31-1.75	1.61(.72) 1.30-1.93	1.18	>.05				
Subjugation	2.17(.95) 1.91-2.43	2.38(1.24) 1.94-2.82	1.70(.68) 1.51-1.89	1.87(.84) 1.51-2.24	4.35*	.006	psoriasis	eczema	.20 -.74-.32	>.05
								normal	.46(*) .00-.93	.049
								chron. dis	.29 -.30-.90	>.05
							eczema	normal	.67(*) .14-1.21	.007
								chron. dis.	.50 -.14-1.16	>.05
Self-sacrifice	3.26(1.17) 2.95-3.58	3.03(1.07) 2.65-3.41	2.90(1.21) 2.56-3.23	3.44(.93) 3.04-3.84	1.64	>.05				

Emotional Inhibition	2.61(1.22) 2.28-2.94	2.26(.97) 1.91-2.61	1.92(.80) 1.69-2.14	2.20(.96) 1.78-2.61	4.22*	.007	psoriasis	eczema	.34 -.23-.92	>.05
								normal	.69(*) .18-1.20	.003
								chronic dis	.41 -.24-1.06	>.05
							eczema	normal	.34 -.23-.93	>.05
								chron dis.	.06 -.64-.78	>.05
Unrelenting Standards	3.65(1.23) 3.32-3.98	3.64(1.19) 3.22-4.06	3.38(1.09) 3.08-3.69	3.80(1.29) 3.25-4.36	.841	>.05				
Entitlement	2.25(.94) 1.99-2.51	2.61(1.06) 2.23-2.98	2.53(.95) 2.27-2.79	2.42(.96) 2.00-2.84	1.17	>.05				
Insufficient Self-control	2.79(1.15) 2.48-3.10	2.93(1.09) 2.55-3.32	2.34(.96) 2.08-2.61	2.18(.74) 1.86-2.50	4.15*	.007	psoriasis	eczema	.14 -.73-.44	>.05
								normal	.44 -.06-.96	>.05
								chron dis	.61 -.05-1.28	>.05
							eczema	normal	.59 -.00-1.18	>.05
								chronic dis	.75(*) .02-1.48	.039

Note n=sample size, M=Mean, SD= Standard Deviation, 95%CI = 95%Confidence Interval, *p<.05

3.3.4 Differences in psychological distress across groups.

Two one-way between-groups analyses of variance were conducted to explore differences between psoriasis, eczema patients and comparison groups on psychological distress (anxiety and depression) as measured by the HADS scales. Participants were divided into four groups according to their health status (psoriasis vs. eczema vs. normal vs. chronic disease). Figures 3.1 and 3.2 illustrate the mean scores of the four groups on HADS anxiety and depression scales.

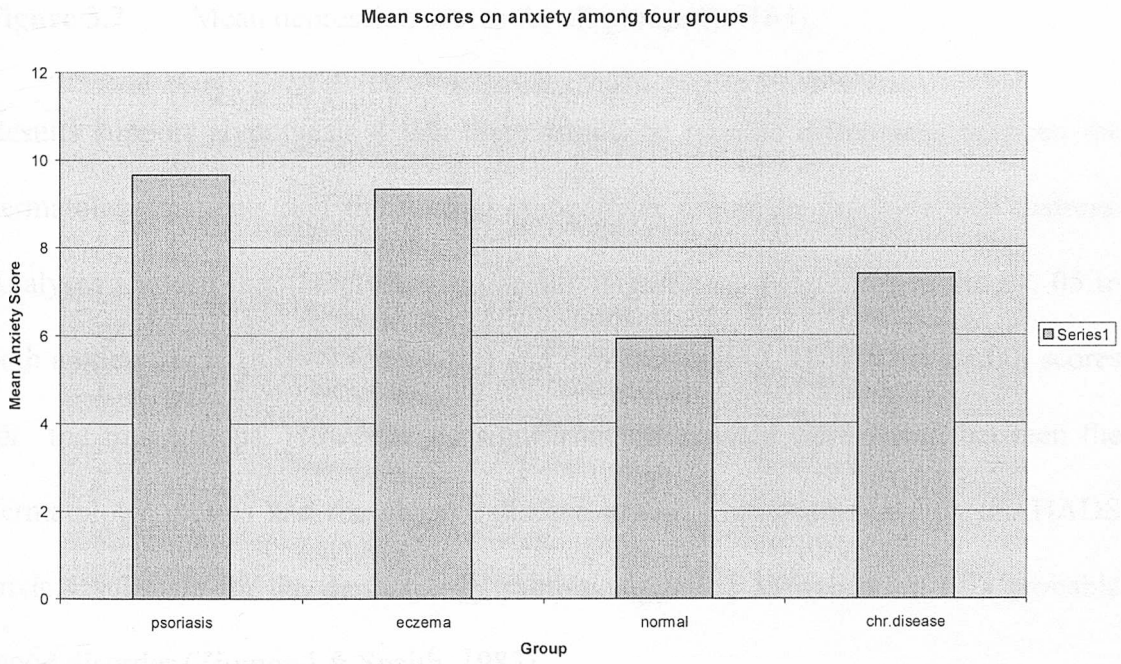


Figure 3.1 Mean anxiety scores for all groups (n=164).

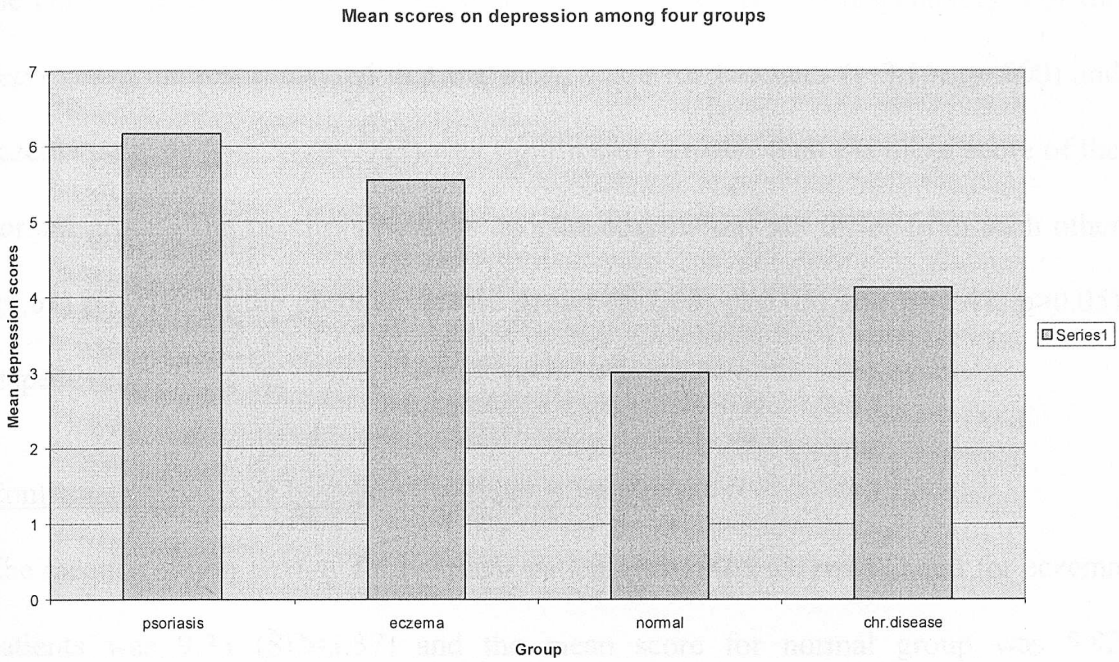


Figure 3.2 Mean depression scores for all groups (n=164).

Results support Hypothesis 4 that there would be reliable differences between the dermatology patients and the normal comparison group on psychological distress. Analyses showed that there were statistically significant differences at the $p<.05$ in both anxiety [F(3, 163)= 9.65, p=. 00] and depression [F(3, 163)=9.48, p=.00] scores for the four groups. However, no significant differences were found between the dermatology groups and the chronic disease group. The mean score on the HADS anxiety subscale for the dermatology sample suggested an indication of a probable mood disorder (Zigmond & Snaith, 1983).

Post hoc comparisons using the Tukey test were conducted to reduce the risk of Type I error and to determine the pairwise differences that contributed to these overall effects on the individual HADS scales. The test indicated that the mean score on HADS *anxiety* subscale for psoriasis (t=3.73, p=.000) and eczema patients (t=3.40, p=.001) was significantly greater that the mean score of the normal group. The psoriasis patients and the eczema did not differ from each other (t= .32, p>.05) and

the chronic disease group (t= .32, p>.05) and (t=1.94, p>.05) respectively. For the *depression*, the test indicated that the mean score for psoriasis (t=3.16, p=.000) and eczema patients (t=2.54, p=.003) was significantly greater than the mean score of the normal group. The psoriasis patients and the eczema did not differ from each other (t=.61, p>.05) and the chronic disease group (t=2.03, p>0.05) and (t=1.41, p>0.05) respectively.

Confirmatory analysis based on Confidence Intervals

The mean score on *anxiety* for psoriasis patients was 9.65 (SD=4.51) and for eczema patients was 9.33 (SD=3.57) and the mean score for normal group was 5.92 (SD=3.38), while the mean score on *depression* for psoriasis was 6.16 (SD=4.07) and for eczema was 5.54 (SD=3.39) and the mean score for normal group was 3 (SD=2.09). Both clinical groups had a greater score than did participants in the normal control group on anxiety (SEM=.75 and SEM=.86) and on depression (SEM= .62 and SEM=.72). There is a .95 probability that the obtained confidence interval for anxiety, 1.77-5.68 (for psoriasis and normal) and 1.15-5.66 (for eczema and normal) and for depression, 1.53-4.79 (for psoriasis and normal) and .66-4.42 (for eczema and normal), contains the true population mean difference. It can be concluded that dermatology patients show greater severity in psychological distress than comparison normal group.

3.3.5 Relationship between YSQ-S and psychological distress in skin disorders

i) Bivariate Correlations

The relationship between the scales of the YSQ and psychological distress as measured by the HADS was investigated using Pearson product-moment correlation

coefficient. Table 3.4 shows correlations (*r*) between HADS and YSQ-S scales for dermatology patients.

Table 3.4 Pearson Product-Moment Correlations between YSQ scales and HADS (n=88)

YSQ-S scales	HADS Anxiety	HADS Depression
Emotional Deprivation	.304(**)	.332(**)
Abandonment	.413(**)	.354(**)
Mistrust	.384(**)	.336(**)
Social Isolation	.349(**)	.379(**)
Defectiveness	.470(**)	.421(**)
Failure	.487(**)	.268(*)
Dependence	.477(**)	.318(**)
Vulnerability to harm	.586(**)	.411(**)
Enmeshment	.199	.193
Subjugation	.369(**)	.390(**)
Self-Sacrifice	.312(**)	.247(*)
Emotional inhibition	.232(*)	.339(**)
Unrelenting Standards	.386(**)	.282(**)
Entitlement	.183	.065
Insufficient Self-control	.333(**)	.346(**)

Note ** p< 0.01 level (2-tailed).
* p < 0.05 level (2-tailed).

Overall, for most of the YSQ-S scales there were significant, positive correlations with psychological distress as measured by HADS for the combined dermatology patients. Consistent with Hypothesis 5 that EMS will be positively correlated with anxiety and depression, results show that several schemas (i.e. vulnerability to harm, failure, defectiveness, dependence, social isolation, subjugation) have a strong positive relationship with the psychological distress experienced by dermatology patients. A regression analysis was thus required to investigate further the relationship between psychological distress and schemas irrespective of years of coping with the disease.

ii) Regression analyses

Two multiple logistic regression analyses with backward sequential elimination were used to examine the relationship between early maladaptive schemas and years of coping (predictor variables) and anxiety and depression (outcome variables) for dermatology patients. The exit criteria was p>.10. Prior to analyses, data were examined and the assumptions of the regression were all met. The number of the independent variables was determined by using the formula [N>50=8m, where N=sample size, m=number of IVs] recommended by Tabachnick and Fidell (2001) so that results can be generalisable. A set of five IVs were entered. The choice of the independent variables was based on the earlier findings of associations and significant differences in maladaptive schemas for the combined dermatology. Thus, for anxiety, the predictors were: years of coping, failure vulnerability, defectiveness, dependence, while for depression the predictors were: years of coping, vulnerability, defectiveness, subjugation, social isolation. Table 3.5 displays the R square, the adjusted R square and the ANOVA for both anxiety and depression.

Table 3.5. Model summary and ANOVA of regression analyses for anxiety and depression (n=88).

	Model	R square	Adjusted R square	ANOVA F	p
a. Anxiety	2	.475	.450	18.76	.000
b. Depression	4	.261	.243	15.00	.000

a. Predictors: failure, years of coping, vulnerability, defectiveness
b. Predictors: vulnerability, defectiveness

a) Anxiety

The model reaches statistical significance (F(4, 83)= 18.60, p<001) meaning that R for regression is statistically different from zero. Altogether 47.5% of variance (45% adjusted) in anxiety was predicted by failure, vulnerability, defectiveness and years of coping. Of these, two variables contributed significantly to the prediction of anxiety, that are vulnerability to harm (beta=.41) and defectiveness (beta=.22). Table 3.6 displays the unstandardised regression coefficients (B), the standardised regression coefficients (Beta) after entry and sequential elimination of all the five variables.

Table 3.6. Statistics of regression model with anxiety as dependent variable and years of coping, failure, vulnerability to harm, defectiveness and dependence as predictor variables (n=88).

Model	Unstandardised Coefficients B	Standardised Coefficients Beta	t	p
Years of Coping	.04	.14	1.72	>.05
Vulnerability to harm	1.42	.41	4.17	.000
Defectiveness	.86	.22	2.35	.021
Failure	.63	.18	1.82	>.05
Dependence	.18	.04	.42	>.05

b) Depression

The model reaches statistical significance (F(2, 85)= 15.00, p<001) meaning that R for regression is statistically different from zero. Altogether 26.1% of variance (24.3% adjusted) in depression was predicted by vulnerability and defectiveness. These two variables, vulnerability to harm (beta=.30) and defectiveness (beta=.32) contributed significantly to the prediction of depression. Table 3.7 displays the

unstandardised regression coefficients (B), the standardised regression coefficients (Beta), and significance after entry and sequential elimination of all the five variables.

Table 3.7 Statistics of regression model with depression as dependent variable and, vulnerability to harm, defectiveness, social isolation, subjugation and years of coping as predictor variables (n=88).

Model	Unstandardised Coefficients B	Standardised Coefficients Beta	t	p
Years of coping	.01	.04	.51	>.05
Vulnerability to harm	.75	.24	2.06	.042
Defectiveness	.99	.42	2.05	.043
Social Isolation	.16	.05	.41	.>.05
Subjugation	.44	.12	1.04	.>.05

3.4. DISCUSSION

3.4.1 Psychological distress in skin disorders.

Present findings are in line with earlier studies that show that dermatology patients report higher levels of psychological distress when compared to the normal population. The mean scores obtained on the HADS in the present study are similar to other published studies (Fortune et al., 2002). Although the HADS cannot provide information sufficient to make a diagnosis, scores obtained on the two HADS subscales from patients with psoriasis and eczema were significantly higher to the scores of healthy participants. Specifically, the mean score on the HADS anxiety subscale for the combined dermatology sample suggested an indication of a probable mood disorder (Zigmond & Snaith, 1983). Results support research that suggests that individuals with chronic dermatological conditions that present in outpatients' clinics fulfil the criteria for psychological disorder, most frequently anxiety (Zachariae et al.,

2004; Picardi et al., 2000; Gupta 2005). Analyses showed that there we no differences between the dermatology groups and the chronic disease, control group (patients with diabetes) on psychological distress. This finding suggests that in general individuals who cope with any chronic delibating medical condition presents them with many challenges regardless of whether the illness is visible or not.

3.4.2 The YSQ-S in skin disorders

The Young Schema Questionnaire-S (Young, 1998) is a short version of a questionnaire designed to assess the presence and severity of Early Maladaptive Schemas. The results from the reliability analysis that was based on a UK sample of outpatients with psoriasis and eczema suggest that the internal consistency of the YSQ-S scales is broadly acceptable and useful in assessing pathological schemas for this population. Social isolation was the only scale that showed lower consistency (r=.560). With regards to this scale, there could be a number of reasons for its lower internal consistency in measurement for this population. By inspecting the item-total correlation, Question 17 ('I am fundamentally different from other people') correlates poorly with the scale (r=.23). The impact of removing this item on the reliability of the scale is a Cronbach's alpha of r=.910 which is high. It is possible that patients with psoriasis and eczema as they often perceive themselves isolated or rejected from others due to their skin condition they may cope with this belief by overcompensating and report something different. Another factor that might account for this finding is that patients might have had problems comprehending this question and especially what defines difference. Anecdotally speaking, there were no queries from participants regarding the questionnaire or the scale. Whether this result is specific to dermatology patients remains to be seen. Further research needs to investigate the

generalisability and importance of this finding. Overall, the YSQ-S seems to be a useful and reliable clinical tool in gaining insight into exactly what are the pathological schemas of patients attending outpatients' dermatology clinics and it can be used in counselling practice with this population.

3.4.3. Differences in core beliefs in skin disorders

In examining differences in the scales of Early Maladaptive Schemas (EMS), contrary to the initial hypothesis, there were no significant differences between patients with psoriasis and atopic eczema in any of the individual EMS. However, results show that there were reliable differences between the combined group of dermatology patients and the normal comparison group. Dermatology patients may be differentiated best by five pathological core beliefs: *emotional deprivation, social isolation, defectiveness, failure, and subjugation.* Dermatology patients saw themselves as emotionally deprived, different and isolated, flawed and unlovable, relatively unsuccessful and unable to cope and subjugated. Findings suggest that it is possible to distinguish broadly the cognitive profiles of individuals suffering with these two skin disorders from those of healthy participants.

Findings suggest there is remarkable similarity in the cognitive profiles of these patients despite that the fact that these two skin disorders are different in some respects. Both psoriasis and atopic eczema represent debilitating, chronic medical skin conditions that they can severely compromise the quality of life of the patient. They are episodic and unpredictable and patients often have no knowledge of when their condition will exacerbate or the different factors that might affect their disease status. They may also be disfiguring and thus affect the identity and emotional well-

being of the patient (Papadopoulos & Walker, 2003). This observation has an important implication for counselling individuals with psoriasis and eczema in terms of both case conceptualizion and therapeutic interventions.

Patterns of core beliefs in psoriasis

In terms of the idiosyncratic skin disorders, findings reveal that the group of patients with psoriasis can be differentiated best by four maladaptive schemas: *social isolation*, *defectiveness, failure*, and *vulnerability to harm.* It appears that these core beliefs may be more prevalent in individuals who suffer from psoriasis and there may be a place for some sort of typology of beliefs in different skin disorders. According to the themes of these four core beliefs, it appears that with patients with psoriasis there is a heightened internal shame of their disorder and of the self. Patients with psoriasis may present with lower self-esteem in their core and with pervasive difficulties in connecting to others and achieving autonomy. Present findings are consistent with studies that report patients with psoriasis to be highly self-conscious, to focus more on their appearance as a source of self-disgust and to be aware of stigmatization by others when compared to other dermatological conditions (Miles, 2002).

Interestingly, patients with psoriasis were differentiated when compared to healthy participants by the schema of *emotional inhibition.* According to schema therapy model (Young et al., 2003), individuals who hold this schema have difficulties with discussing and expressing their emotions, expressing vulnerability or communicating freely of their needs or emotions and so forth. They are affectively flat rather than emotionally expressive and self-controlled rather than spontaneous. In this study, patients with psoriasis perceived themselves more in need to reduce or escape

intolerable emotions compared to the group of healthy participants. This finding is consistent with studies that suggest psoriasis sufferers show more difficulties with emotional processing and score higher than controls on measures of alexithymia (difficulty in identifying feelings; difficulty in describing feelings; paucity of fantasy life and externally-orientated thinking) (Allegranti et al., 1994; Fortune et al., 2002). Fortune and colleagues (2002) found that alexithymia overlapped with somatic aspects of anxiety in patients with psoriasis. Also, Picardi and colleagues (2005) argued that alexithymia might increase susceptibility to exacerbations of diffuse plaque psoriasis, possibly through impaired emotional regulation. Based on present observations, it can be hypothesized that: a) emphasis on overcontrol, rigidity and inflexibility (obsessionality), especially with regards to their attitudes to their disease and b) exacerbations of disease in patients with psoriasis might result from the inability or vulnerability to experience and express intolerable emotions (schema of emotional inhibition). The literature supports both hypotheses, as psoriasis is often cited as a precipitating or triggering factor in individuals who may be predisposed genetically to develop Obsessive-Compulsive Disorder (Gupta, 2005) and psychological stress is considered to be a precipitating factor for psoriasis (Picardi & Abeni, 2001).

Patterns of core beliefs in atopic eczema

With regard to atopic eczema, findings reveal that patients can be differentiated best by two maladaptive schemas when compared to control groups: *dependence* and *insufficient self-control*. The fact that patients with eczema in this study saw themselves as more dependent on others and lacking in control and ability to cope with intolerable states is in line with research on the impact of childhood eczema on

children and their families (Absolon, Cottrell, Edlridge, & Glover, 1997; Titman, 2005). The development of the dependence schema can be readily explained by the impact that eczema might have on the development of the individual, especially when onset is in childhood. Illness in children tends to elicit special attention or care from their parents or caregivers and enables avoidance of responsibilities, which in turn can lead to the development of a basic dependent orientation in the child. Additionally, children with eczema sooner or later realize that because of their skin condition they are often treated differently from their siblings or other children (Atherton, 1995). Absolon and colleagues (1997) found that children with eczema had greater rates of behavioural problems. While, few other skin diseases provoke such intense itch and the need to tolerate and manage constantly scratching and rubbing is heightened. It can be hypothesized that the belief of insufficient control may develop because it reflects a genuine or perceived inability of individuals to cope with symptoms or emotional states associated with symptoms in a more adaptive manner. This finding may help explain why it is often the case that physicians in their clinical practice find themselves in need to deal with patients' with eczema frustration about how to control themselves and not scratch.

3.4.4 The role of EMS in skin disorders

As it was initially hypothesized, thirteen of the Early Maladaptive Schemas scales showed very good patterns of association with anxiety and depression for the combined group of dermatology patients. Regression analyses showed that maladaptive schemas predict psychological distress in patients with psoriasis and eczema irrespective of the years of coping with the disease. These preliminary results suggest that core beliefs mediate psychological symptoms and may be relevant to the understanding and treatment of the psychological impact of skin disease. Two core

beliefs, *vulnerability to harm* and *defectiveness/shame* were best predictors of anxiety and depression. It appears that these two schemas may be involved in the development and/or maintenance of anxiety and depression in dermatology patients. These findings are consistent with proposed cognitive model of dermatological disorders (Kellet, 2002; Kent & Thompson, 2002) where distress arising from disfigurement is linked with themes of dermatological shame and the stigma that characterizes visible disfiguring skin disorders (Miles, 2002; Kellet, 2002). They also support findings from other studies on YSQ-S scales that show maladaptive schemas such as vulnerability to harm, failure, and subjugation to be very predictors of anxiety (i.e. Wellburn et al., 2002). It can be hypothesized that anxiety results from trying to avoid intolerable cognitions and/or emotions linked to perceiving the self as flawed, unattractive and unlovable, which arise from the defectives/shame schema. When recurrent flare-ups of the disease occur, individuals perceive their self as even more unable to cope and to control their symptoms and emotions and in turn feel more hopeless and depressed. Such cognitions might be specifically linked to the vulnerability to harm schema. The links between these core beliefs and anxiety and depression is consistent with studies that report the detrimental effects of appearance of the skin in patients with disfiguring skin disorders (Papadopoulos & Bor, 1999). Discrepancy between a person's perceived skin and ideal skin leads to feeling anxious, hopeless, worthless, helpless and renders the sufferer prone to episodes of depression and/or anxiety disorder rather than developing a resilient sense of self.

3.5 CONCLUSION

This study has demonstrated that YSQ-S is a useful clinical tool in the appraisal of cognitive patterns in skin disorders. Results show that there are reliable differences between the combined group of dermatology patients and the normal comparison

group. Dermatology patients may be differentiated best by five pathological core beliefs: *emotional deprivation, social isolation, defectiveness, failure and subjugation*. These preliminary results also reveal that core beliefs mediate psychological symptoms and they may be relevant to understanding and treatment of the psychological impact of skin disease. In specific, vulnerability to harm and defectiveness/shame are best predictors of anxiety and depression in skin disease. Such findings have important clinical and theoretical relevance for the counselling practice with dermatology patients.

CHAPTER FOUR: STUDY 2

EMOTIONAL SCHEMAS AND PSYCHOLOGICAL DISTRESS IN SKIN DISORDERS

4.1 Introduction

There is good evidence that dermatological conditions such as psoriasis and atopic eczema have an adverse emotional impact on sufferers. Fried and colleagues (1995) examined the psychosocial impact of psoriasis on sixty-four hospital patients and ex-patients. They found a range of self-reported moods; 83% of sufferers had experienced some anxiety during flare-ups, 80% experienced discomfort, 65% experienced anger and 75% reported that they have experienced depression during flare-ups. Among patients with psoriasis and atopic eczema there is an increased preoccupation with their skin and the desire to improve the appearance of their skin. For many, day-to-day activities are based around consideration of what is beneficial or detrimental to the state or appearance of their skin (Murray & Rhodes, 2005). Frequently mentioned emotions are embarrassment and self-consciousness. Sufferers often report being aware of how they appear to others. They may be aware of stigmatisation by others and distressed by the possibility of being rejected (Miles, 2002). Psoriasis is frequently perceived as being contagious and some sufferers have borne the humiliation of being asked to leave swimming pools or other facilities to avoid the potential risk of infecting others (Miles, 2002).

Feelings of external and internal shame can adversely affect quality of life and psychological well-being (Miles, 2002). People with psoriasis and atopic eczema often try to cope through avoidance behaviours and concealment of their skin. In order to minimize the possibility of distress, many sufferers engage in behaviours such as wearing clothes that conceal their disease, avoiding holidaying in warm climates where skin might be exposed and avoiding the gym or the pool. Such coping behaviours can compound problems rather than resolve them.

There is consensus among practitioners that certain psychological difficulties stem from chronic avoidance or overcontrol of core affective experiences. Current models of worry and rumination suggest that these coping styles are maintained by emotional avoidance (Wells, 2002). A significant component of worry as reported by worriers is that worry helps them focus on something less threatening (Papageorgiou & Wells, 1999). Other instances involve the exaggerated expression of affect such as is the depressive hopelessness or hypervigilant anxiety both of which can be the result of avoidance of more primary emotions such as sadness, grief or shame.

Being overly rational and intellectualising in order to protect self-esteem or avoid distress is viewed as characterogical style that prevents emotional processing (Greenberg & Paivio, 2003). Repressive coping style, alexithymia and overemphasis on rationality are associated with long-term somatic problems such as hypertension, cancer, asthma, and general somatic complaints (Leahy, 2002). People with alexithymia find it difficult to acknowledge their innermost feelings and therefore cannot employ them as signals of emotional stress. With regard to dermatological conditions, there is a high prevalence of alexythimic characteristics among patients with psoriasis (Allegranti et al., 1994).

Emotions provide a rich source of information about our reactions to situations. Coping is strongly associated with the regulation of emotion (especially distress), through the stress process (Folkman & Moskowitz, 2004). One of the first coping tasks is to down-regulate emotions, while emotions continue to be integral to the coping process throughout a stressful encounter. A limitation of the original cognitive-based theories of emotional disorder is that they ignored the dynamic aspects of processing such as how a belief leads to different configurations of

thinking style (Wells, 2002). For instance, two people feel that they are inadequate. One engages in problem-focused coping whilst the other one in avoidance. The difference in their coping response style lies in the implicit and explicit rules/beliefs that person holds (Wells, 2002).

New cognitive models stress the important of emotion and its relationship to psychological adjustment. Leahy (2002) has advanced a model of emotional processing in which he proposes that individuals differ in their views of painful emotions and utilize different strategies to cope with these emotions that may either enhance difficulties or improve emotional processing. He offered the term emotional schemas to refer to conceptualisations and strategies employed in response to an emotion. Thus, they can be viewed as a record of subjective lived experience (Greenberg & Paivio, 2003). People hold different emotional schemas associated with significant experiences in their lives that can profoundly influence experience, behaviour and interactions.

Sufferers of psoriasis and eczema often have strong and pervasive emotional experiences. Coping behaviours such as avoidance might exacerbate problems leading to dysfunctional feelings (anxiety, shame, anger) causing even more distress (Folkman & Moskowitz, 2004). As schemas, emotion and coping are linked, it would be of interest to investigate the role of schemas over emotional experience in patients with skin disease. Identifying problematic cognitions concerning emotion in patients with psoriasis and eczema, provides a mechanism for explaining how individuals prolong their emotional distress which in turn may exacerbate their disease. The first aim of this study was to examine the clinical utility of the Leahy's Emotional Schema Scale (Leahy, 2002) with a group of UK outpatients with psoriasis and eczema. The

second aim was to determine differences in the cognitive conceptualisations of emotions of patients with psoriasis and eczema as compared to appropriate matched controls. It was also hypothesized that:

- Psoriasis patients will score higher on emotional schemas such as incomprehensibility, simplistic view of emotion, control, rationalization and rumination compared to other groups given findings on alexithymia (Fortune et al, 2002) and their inability to express feelings such as anger (Gupta & Gupta, 1996).
- Eczema patients will score higher on individual emotional schemas such as blame, guilt and duration compared to other groups given earlier findings of presenting with high levels of neuroticism (White et al., 1990).

The third aim was to examine the association of core conceptualisations of emotions (emotional schemas) with coping strategies employed by psoriasis and eczema patients and with psychological distress. A final aim was to explore the nature of the relationship between emotional schemas and psychological distress for dermatology patients in order to determine if emotional schemas are able to predict psychological distress independently of length of coping with the disease.

4.2 METHOD

4.2.1 Participants

The sample consisted of both clinical (psoriasis and eczema) and comparison (normal and chronic disease) groups. Descriptions of the sample are the same as the sample in Study 1 (See section 3.2.1 Participants).

4.2.2 Design

The study employed four groups (psoriasis vs. eczema vs. clinical control vs. normal control). A cross-sectional design was employed. The dependent variables were emotional schemas as measured by LESS and coping responses as measured by the CRI and psychological distress as measured by the HADS. The independent variable was the health status of the participant.

Self-report, standardized questionnaires were employed to investigate the hypotheses as it appeared to be more suitable at this preliminary stage of the research. The selection of a quantitative design was based on the same criteria as in Study 1(See section 3.2.2 Method).

Power analysis

A power analysis was conducted with an alpha level of 0.05 and the power at 0.8 with effect size at 0.25, in order to determine the appropriate sample size that would enable significant effects to be detected. The sample size of the three groups was determined to be 159 participants (n=53 per group). A smaller clinical, control group was also added to reduce the likelihood of finding spurious differences in comparisons.

4.2.3 Instruments

The following standardized measures were chosen based on their good psychometric properties (Appendix One, p 200).

Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983)

(See section 3.2.3 Instruments)

Leahy Emotional Schemas Scale (Leahy, 2002)

Leahy Emotional Schemas Scale (LESS) (Leahy, 2002) is a self-report measure that consists of 50 items that assess 14 dimensions of conceptualisations of emotions (Appendix One, p.206). These dimensions reflect the ways in which emotions are experienced and what the individual thinks are appropriate plans to execute once an unpleasant emotion has arisen. The 14 subscales address the following schemas:

- *Validation*: The belief that there is a receptive audience for one's emotions.
- *Comprehensibility:* A cognitive appraisal of emotions and whether the emotions make sense to the individual.
- *Guilt*: Shame, guilt and embarrassment about an emotion.
- *Simplistic view of emotion:* The inability to understand that one can have conflicting and complicated feelings about self and others.
- *Higher values:* Recognizing the importance of higher values.
- *Control:* The belief that one has control over emotions (emotions would not go out of control).
- *Numbness* A repressive style of emotional processing.
- *Rationality*: Overemphasis on rationality and logic.

- *Duration.* The belief in longer duration of emotions this belief reflects difficulty in accepting emotions.
- *Consensus:* Recognizing that others have similar feelings.
- *Acceptance:* Allowing self to have feelings and to spend little energy trying to inhibit them.
- *Rumination:* Tendency to ruminate and ask unanswerable questions.
- *Expression:* The willingness to experience and to express feelings.
- *Blame:* Blaming others for one's emotions.

Each item of the LESS is rated on a 6-point scale (1= very untrue of me, 2= somewhat untrue of me, 3= slightly untrue of me, 4= slightly true of me, 5= somewhat true of me, 6= very true of me). The overall score for each subscale is calculated from adding the items in that scale. A higher score indicates a greater presence of the schema for the respondent.

Coping Responses Inventory (Moos, 1993)

Coping Responses Inventory (Moos, 1993) is a self-report measure that consists of 48 items that assess coping responses (Appendix One, p.204). This inventory is helpful in that it allows multidimensional descriptions of situation-specific thoughts and behaviours that people can self-report. It is based on eight scales:

- logical analysis (LA),
- positive reappraisal (PA),
- seeking guidance and support (SS),
- problem-solving (PS),
- cognitive avoidance (CA),
- acceptance (A),

- seeking alternative rewards (AR),
- emotional discharge (ED).

Coping responses are conceptualized according to two major foci, approach and avoidance. Each of these foci is subdivided into cognitive and behavioural coping methods. Thus four overall subscales are created: Approach/cognitive which include logical analysis (LA), positive reappraisal (PA), Approach/behavioural which include seeking guidance and support (SS), problem-solving (PS), avoidance/cognitive which include cognitive avoidance (CA), acceptance (A), avoidance/behavioural which include seeking alternative rewards (AR), emotional discharge (ED).
Respondents are asked to identify the most important problem or stressful situation they had experienced in the last 12 months. The questionnaire is then divided into two parts. Part I consists of 10 items that assess how the stressor is appraised. Part II consists of 48 items and assesses a variety of cognitive and behavioural responses that the respondent employed to deal with the stressor.

Each item is rated on a four-point Likert scale from 0 to 3 (0=no, 1=yes/once or twice, 2=yes/sometimes, 3=yes/fairly open). The overall score for each scale is calculated from the total of the six items in a scale. Evidence of the reliability and the validity of the questionnaire are satisfactory (Moos 1993). The CRI is suitable for use with adult medical and psychiatric patients and the general normal population.

Demographic Information Questionnaire

(See section 3.2.3 Instruments).

4.2.4 Procedure

Procedure followed was the same as in Study 1 (See section 3.2.4 Procedure).

4.2.5 Ethical Considerations

(See section 3.2.5 Ethical considerations).

4.2.6 Data analysis

Data were analysed using the statistical package SPSS 14.0 for Windows. Parametric tests were used. The decision criteria for using parametric tests were the same as in Study 1 (Section 3.2.6 Data analysis). Preliminary analyses were carried out to check that the assumptions of the test used for the main analyses were met. The internal consistency of the LESS scales was calculated for the dermatology (psoriasis and eczema) patients using Cronbach's alpha. One-way analyses of variance with post-hoc comparisons were used to compare groups on the LESS scales. A set of correlations were used to determine dimensional associations of the LESS scales with psychological distress as measured by the HADS for the dermatology patients and with avoidance coping as measured by CRI. Multiple regression analyses were used to determine whether a set of LESS-scales when controlling for years of coping predict psychological distress. The assumptions of regression were met.

4.3 RESULTS

4.3.1 Demographic characteristics of participants

The final sample consisted of 163 participants (psoriasis n=54, eczema n=33, normal/control n=53, chronic disease/control n=23). For description of the sample refer to section 3.3.1 Participants.

4.3.2 Internal consistency of the LESS Scales in skin disorders

Cronbach's alpha was used to determine the internal consistency of each of the 14 scales of the LESS for the dermatology patients. Table 4.1 shows the Cronbach's alpha values of the 14 LESS scales.

Table 4.1. Internal consistency of the LESS scales for dermatology patients (n=87).

LESS scale	Cronbach's Alpha
Validation	.166
Comprehensibility	.768
Guilt	.667
Simplistic View of Emotion	.670
Higher Values	.216
Control	.749
Numbness	.299
Rational	.490
Duration	.973
Consensus	.620
Acceptance of feelings	.555
Rumination	.513
Expression	.590
Blame	.471

Results show that for psoriasis and eczema patients the internal consistency is acceptable for the comprehensibility, guilt, simplistic view of emotion, control, duration, consensus, acceptance of feeling, rumination, and expression scales of the LESS (Howell, 1997). The scales of the LESS that have low Cronbach's values (of less than .5) are validation, numbness, rational, and blame. Therefore, only some of the scales of the LESS that assess emotion schemas can be used with this population.

4.3.3 Differences in LESS scales across groups

As not all scales of the LESS were shown to have a good internal consistency, it was considered appropriate to conduct analyses only on the scales found to have acceptable internal consistency.

Nine one-way between-groups analyses of variance were conducted to explore differences between psoriasis, eczema patients and comparison groups on emotional schemas as measured by the LESS scales. Participants were divided into four groups according to their health status (psoriasis vs. eczema vs. normal vs. chronic disease control). Table 4.2 displays the means and standard deviations of the four groups on each of the analyzed LESS scales along with the ANOVA and Tukey results. An alpha level of .05 was set for the statistic tests. As predicted in hypothesis 1 that there would be reliable differences between the dermatology patients and the comparison groups on negative emotional schemas, analyses showed that there were statistically significant differences at the $p<.05$. in four of the individual LESS scales which were comprehensibility, guilt, control, and consensus. As partially predicted in Hypothesis 2, significant differences were found between the psoriasis patients and the normal comparison group on *comprehensibility, control, guilt* and *consensus* emotional schemas. Contrary to Hypothesis 3, for the eczema and the normal group significant differences were only found on *guilt* emotional schema.

As indicated in Table 4.2 above there were several differences between the groups, below we elaborate on some of the most interesting of these and clarify how they relate to each particular group. *Post hoc* comparisons using the Tukey test were conducted to reduce the risk of Type I error and to determine the pairwise differences that contributed to these overall effects on the four individual LESS-scales (see Table 4.2). The test indicated that the mean score on *comprehensibility* for psoriasis was significantly greater from the mean score of the normal group ($t=3.77$, $p=.000$). The psoriasis and the eczema patients ($t=1.50$, $p>.05$) did not differ significantly from each other and from the chronic disease group ($t=2.74$, $p>.05$). The eczema patients

did not differ significantly from the normal (t=2.26, p>.05) and the chronic disease (t=1.23, p>.05). The same pattern of results was found for the *control* and *consensus* emotional schemas (Table 4.2).

The test also indicated that the mean score on *guilt* for psoriasis (t=2.62, p<.05) and eczema patients (t=3.12, p<.05) was significantly greater from the mean score of the normal group. The psoriasis patients and the eczema patients (t=.49, p>.05) did not differ significantly from each other and from the chronic disease group (t=1.38 p>.05). While, the eczema patients did not differ significantly from the chronic disease (t=1.88, p>.05).

Confirmatory analysis based on Confidence Intervals

The mean score on *comprehensibility* for psoriasis patients was 16.03 (SD=5.15) and the mean score for normal group was 19.81 (SD=3.97). The normal group had a greater score than did participants with psoriasis on this emotional schema (SEM= .91). There is a .95 probability that the obtained confidence interval, -6.14 to -1.39 (for psoriasis and normal) contains the true population mean difference. The same pattern of results is found for *controllability and consensus* (Table 4.2). The mean score on *guilt* for psoriasis patients was 10.77 (SD=4.93), for eczema patients was 11.27 (SD=4.57) and for the normal group was 8.15 (SD=3.26). The clinical groups had a greater score than did participants in normal group on this maladaptive emotional schema (SEM= .83 and SEM= .95). There is a .95 probability that the obtained confidence interval, .46-4.78 (for psoriasis and normal) and .64-5.59 (for psoriasis and chronic disease) contains the true population mean difference.

Based on the means and the confidence intervals indicated in Table 4.2 it can be concluded that dermatology patients show greater severity of these maladaptive schemas about emotions than the normal comparison group.

Results support Hypothesis 1 that there would be reliable differences between the dermatology patients and the comparison groups on negative emotional schemas. Contrary to hypotheses 2 and 3 that psoriasis and eczema patients will score higher relative to each other and to comparison groups on certain emotional, results showed that there were no significant differences between the psoriasis and the eczema patients on any of the emotional schemas.

Table 4.2 Mean LESS scores, standard deviations, 95%confidence intervals, ANOVA and Tukey among psoriasis and eczema patients and comparison groups.

LESS scales	Psoriasis (n=55) M(SD) 95%CI	Eczema (n =33) M(SD) 95%CI	Normal (n=55) M(SD) 95%CI	Chronic Disease (n-=23) M(SD) 95%CI	ANOVA F	p value		Tukey t 95%CI	p value
Comprehensibility	16.03(5.15) 14.63-17.44	17.54(5.08) 15.74-19.34	19.81(3.97) 18.71-20.90	18.78(4.77) 16.71-20.84	5.99*	.001	psoriasis	eczema 1.50 -.4.22-1.20	>.05
								normal 3.77(*) -6.14-1.39	.000
								chron dis.2.74 -5.80-.31	>.05
							eczema	normal 2.26 -4.98-.45	>.05
								chron dis.1.23 -4.57-2.09	>.05
Guilt	10.77(4.93) 9.43-12.12	11.27(4.57) 9.64-12.89	8.15(3.26) 7.25-9.04	9.39(4.40) 7.48-11.29	4.88*	.003	psoriasis	eczema .49 -2.96-1.97	>.05
								normal 2.62(*) .46-4.78	.010
								chron dis. 1.38 -1.39-4.16	>.05
							eczema	normal 3.12(*) .64-5.59	.007
								chron dis.1.88 -1.15-4.91	>.05
Simplistic View of emotion	13.27(4.81) 11.96-14.59	14.27(4.26) 12.75-15.78	13.84(4.04) 12.73-14.96	15.30(4.66) 13.28-17.32	1.19	>.05			
Controllability	12.11(4.81) 10.79-13.42	12.78(3.32) 11.60-13.96	14.71(2.90) 13.91-15.51	13.52(3.87) 11.84-15.19	4.34*	.006	psoriasis	eczema .67 -2.88-1.52	>.05
								normal 2.60(*) -4.53	.003
								chron. dis1.41 -3.89-1.07	>.05
							eczema	normal 1.92 -4.14-.28	>.05
								chron. dis..73 -3.44-1.97	>.05

LESS scales	Psoriasis (n=55) M(SD) 95%CI	Eczema (n =33) M(SD) 95%CI	Normal (n=55) M(SD) 95%CI	Chronic Disease (n-=23) M(SD)	ANOVA F	p value			Tukey t 95%CI	p value
Duration	6.77(1.88) 6.26-7.29	5.87(1.81) 5.23-6.52	5.88(2.01) 5.33-6.44	6.69(2.34) 5.68-7.70	2.61	>.05				
Consensus	12.94(4.56) 11.69-14.19	13.84(4.21) 12.35-15.34	15.47(4.16) 14.32-16.62	13.91(4.44) 11.99-15.83	3.07*	.00	psoriasis	eczema	.94 -3.40-1.59	>.05
								normal	2.52(*) -4.71- -.34	.016
								chron. dis.	.96 -3.78-1.84	>.05
							eczema	normal	1.62 -4.12-.88	>.05
								chron. dis.	.06 -3.13-3.00	>.05
Acceptance	27.67(6.42) 25.91-29.42	28.33(4.75) 26.64-30.01	29.69(3.96) 28.60-30.79	28.60(5.37) 26.28-30.93	1.37	>.05				
Rumination	17.03(4.87) 15.70-18.36	17.96(4.77) 16.27-19.66	15.56(3.30) 14.65-16.47	16.47(5.22) 14.22-18.73	2.15	>.05				
Expression	7.14(3.05) 6.31-7.98	8.33(2.52) 7.43-9.22	8.43(2.76) 7.67-9.19	8.34(2.51) 7.26-9.43	2.38	>.05				

Note n=sample size, M=Mean, SD= Standard Deviation, 95%CI = 95%Confidence Interval,
*p<.05

4.3.4 Relationship between LESS scales, psychological distress and avoidance coping in skin disorders.

i) Bivariate Correlations

The relationship between the scales of the LESS, psychological distress and avoidance coping as measured by the CRI was investigated using Pearson product-moment correlation coefficient. Table 4.3 shows the correlations between emotional schemas, anxiety depression and avoidance coping.

Table 4.3. Pearson Product-Moment Correlations between LESS, HADS and CRI avoidance scales (n=87).

	HADS		CRI			
LESS scales	Anxiety	Depression	CA	Acc	AR	ED
Comprehensibility	-.527(**)	-.473(**)	-.274(*)	-.250(*)	-.186	-.528(**)
Guilt	.416(**)	.417(**)	.211(*)	.314(**)	.095	.304(**)
Simpl. View Emot.	.342(**)	.216(*)	.128	.194	.038	.280(**)
Control	-.548(**)	-.485(**)	-.113	-.284(**)	-.002	-.365(**)
Duration	.093	.086	-.030	-.114	-.019	.17
Consensus	-.412(**)	-.331(**)	-.209	-.211(*)	-.016	-.282(**)
Rumination	.408(**)	.456(**)	.093	.126	-.121	.339(**)
Expression	.001	-.099	-.029	.186	.123	.09

Note: HADS= Hospital Anxiety and Depression Scale; CRI=Coping Responses Inventory; LESS=Leahy Emotional Schemas Scale, Simpl. View Emot.= Simplistic View of Emotion, CA,=Cognitive Avoidance, Acc=Acceptance; AR= Alternative Rewards, ED=Emotional Discharge.
** p< 0.01 level (2-tailed).
*p < 0.05 level (2-tailed).

Overall, as hypothesized results showed that for most of the LESS scales there were significant positive and negative correlations with psychological distress as measured by HADS for the combined dermatology patients. Anxiety was related to greater guilt over emotions, less comprehensibility of emotions, a simplistic view of emotion, lack of control over emotions, less consensus with others on emotions and rumination. Depression was related to greater guilt over emotion, less comprehensibility of emotions, perception of lack of control over emotions, less consensus with others on

emotions and rumination. Results support that the hypothesis that dermatology patients who view their emotions in a negative way as evidenced by the belief that their emotions are shameful, incomprehensible, escalating, dangerous or unique will be more inclined to feel distressed.

In terms of avoidance coping, emotional discharge (behavioural avoidance coping strategy) has a strong relationship with the emotional schemas of comprehensibility, guilt, simplistic view emotion, control, consensus and rumination. Acceptance (cognitive avoidance coping strategy) related strongly to greater guilt over emotions and perception of less control over emotions. The rest of avoidance coping strategies did not have a significant relationship with emotional schemas, therefore, no further analyses were conducted on coping strategies. Regression analyses were conducted to find how much emotional schemas contributed to psychological distress for dermatology patients irrespective of length of coping with disease.

ii) Regression analyses

Two multiple logistic regression analyses with backward sequential elimination were used to examine the relationship between emotional schemas, years of coping (predictor variables) and anxiety and depression (outcome variables) for dermatology patients. The exit criteria was $p>.10$. Prior to analyses, the data were examined and the assumptions of regression were all met. The number of independent variables was determined by using the formula [N>50=8m, where m=number of IVs] recommended

by Tabachnick and Fidell (2001) so that results can be generalisable. A set of five IVs were entered. The choice of the independent variables in terms of the emotional schemas was based on the earlier findings of associations and differences in emotional schemas for the combined dermatology group. Thus, for anxiety, the predictors were: years of coping, comprehensibility, controllability, guilt and consensus. For depression the predictors were: years of coping, comprehensibility, controllability, guilt and rumination. Table 4.4 displays the R square, the adjusted R square and the ANOVA for anxiety and depression for dermatology patients.

Table 4.4. Model summary and ANOVA of regression analyses for anxiety and depression (n=87).

	Model	R square	Adjusted R square	ANOVA F	p
a. Anxiety	3	.361	.338	15.63	.000
b. Depression	4	.318	.302	19.62	.000

a Predictors: comprehensibility, control, consensus
b Predictors: rumination, control.

a) Anxiety

The model reaches statistical significance ($F(3, 83)= 15.63$, $p<001$) meaning that R for regression is statistically different from zero. Altogether 36.1% of variance (30% adjusted) in anxiety was predicted by comprehensibility, control, and consensus after the years of coping and guilt were removed. Of these three variables, control (beta=.-.28) contributed significantly to the prediction of anxiety. Table 4.5 displays the unstandardised regression coefficients (B), the standardised regression coefficients (Beta) after entry and sequential elimination of all the five variables for dermatology patients.

Table 4.5 Statistics of regression model with anxiety as dependent variable and comprehensibility, guilt, control, years of coping and consensus as predictor variables (n=87).

Model	Unstandardised Coefficients B	Standardised Coefficients Beta	t	p
Comprehensibility	-.22	-.27	2.02	.046
Guilt	-.01	-.01	.15	>.05
Control	-.28	-.28	2.16	.033
Years of coping	.03	.12	1.43	>.05
Consensus	-.15	-.16	1.75	>.05

b) Depression

The model reaches statistical significance ($F(2, 84)= 19.62$, $p<001$) meaning that R for regression is statistically different from zero. Altogether 31.8% of variance (30% adjusted variance) in depression was predicted by control and ruination after the years of coping, guilt and comprehensibility were removed. These two variables, control (beta=-.27) and rumination (beta=.27) contributed significantly to the prediction of depression. Table 4.6 displays the unstandardised regression coefficients (B), the standardised regression coefficients (Beta), and significance after entry and sequential elimination of all the five variables for dermatology patients.

Table 4.6 Statistics of regression model with depression as dependent variable and comprehensibility, guilt, years of coping, control and rumination as predictor variables (n=87).

	Unstandardised Coefficients	Standardised Coefficients		
Model	**B**	**Beta**	**t**	**p**
Comprehensibility	-.02	-.03	.24	>.05
Guilt	.09	.12	.98	>.05
Years of coping	-.01	-.04	.42	>.05
Control	-.24	-.27	2.02	.046
Rumination	.21	.27	2.44	.017

4.4 DISCUSSION

4.4.1 Reliability of LESS in skin disorders

The Leahy Emotional Schemas Scale (LESS) (Leahy, 2002) is designed to assess fourteen dimensions of conceptualizations of emotions. These dimensions reflect the way in which emotions are experienced and dealt with. A reliability analysis that was based on a clinical sample of UK outpatients with psoriasis and eczema revealed that the internal consistency of the scales of comprehensibility, guilt, simplistic view of emotion, control, duration, consensus, acceptance of feeling, rumination, and expression are acceptable and useful in assessing pathological schemas of emotions for this population. With regards to four scales of LESS: validation, numbness, rationality, and blame results show a low internal consistency. A number of reasons could account for the lack of consistency of measurement of some of the scales of LESS obtained in this study. Firstly, the number of items in these scales may be not sufficient to measure the constructs. Also, items in these scales may have been unsuitable for administering to a sample of medical patients and comprehension may have been an issue. However, anecdotally speaking, this appeared not to be the case

since no more queries arose concerning the LESS questionnaire than the other questionnaires. Future research is required to explore validation of the questionnaire with this population and to replicate findings.

4.4.2 Differences in emotional schemas in skin diosrders

In examining differences in the scales of the LESS (Leahy, 2002) that proved to be acceptable in assessing emotional schemas, findings show that there were not actually any significant differences between patients with psoriasis and atopic eczema. This is consistent again with earlier findings of study 1 on EMS. It seems that patients who suffer from these two skin disorders may be more similar than different to each other.

Patterns of emotional schemas in psoriasis

Findings indicate that important differences existed between the group of patients with psoriasis and the normal comparison group. Patients with psoriasis may be differentiated best by four problematic conceptualizations of emotions: *comprehensibility, guilt, control,* and *consensus* relative to the normal comparison group. Findings reveal that patients with psoriasis viewed their emotions as less comprehensible, felt guilty about them, believed that they had less control over them and perceived them as being unique and not similar to others' emotions. These four beliefs seem to be central to patients with psoriasis. It is proposed that patients with psoriasis have more problematic views about their emotions and they may in turn experience more problems with emotional processing compared to healthy individuals. According to the meta-cognitive model of emotional processing, problematic beliefs about emotions are linked to attempts to inhibit emotions and suppress their expression (Leahy, 2003). This finding supports the earlier finding of

the presence of schema of emotional inhibition in patients with psoriasis. It is also compatible with research that suggests that these patients experience difficulties with emotional processing (Allegranti et al., 1994; Fortune et al., 2002). For example, patients with psoriasis have been reported to show difficulties with expressing anger (Ginsburg, 1995).

Patterns of emotional schemas in atopic eczema

With regards to patients with eczema, findings show that they differed to healthy participants only in the emotional dimension of *guilt*. Contrary to the initial hypothesis, that there were not any significant differences between patients with atopic eczema and other groups in any other individual scale of the LESS. Patients with atopic eczema felt more guilt and embarrassment about emotions relative to the normal control group. Individuals with this schema believe that it is wrong to have certain feelings as opposed to accepting emotions and fantasies as part of human experience (Leahy, 2002). Individuals presenting with Obsessive-Compulsive Disorder often appraise their emotions/thoughts in such way and these appraisals are linked to their ritualistic behaviours (Wells, 1995). Interestingly, literature has already made some links between OCD and atopic dermatitis (Gupta, 2005). Failure to differentiate patients with eczema from any of the control groups with regards to having other problematic views of emotion suggests that these patients may not have as negative attitudes towards their emotions as patients with psoriasis when compared with other individuals from the community.

4.4.3 The role of emotional schemas in skin disorders.

Emotional schemas and psychological distress

Analyses showed good patterns of association between six dimensions of emotional schemas and anxiety and depression for the combined group of dermatology patients. Anxiety was related to greater guilt over emotions, less comprehensibility of emotions, a simplistic view of emotion, lack of control over emotions, less consensus with others on emotions and rumination. Depression was related to greater guilt over emotion, less comprehensibility of emotions, perception of lack of control over emotions, less consensus with others on emotions and rumination. Findings support the initial hypothesis that dermatology patients who view their emotions in a negative way as evidenced by the belief that their emotions are shameful, incomprehensible, escalating, dangerous or unique will be more inclined to feel distressed. These data are consistent with findings of Leahy (2002) presented in his seminal paper. They are also in line with the meta-cognitive model of anxiety advanced by Wells (1995). For example, it can by hypothesized from a meta-cognitive point of view, the psoriasis or eczema sufferer, who focuses on their anxiety over their skin condition might perceive their emotion as a state that should be controlled and/or they may feel that others do not share this feeling. Pathologising of their internal state in turn results in further increase of anxiety/stress (Leahy, 2002) and possibly in exacerbations of disease. Clinical observations have suggested stress as a possible precipitating factor for the onset or exacerbation of psoriasis and eczema (Saraceno, 2006; Picardi & Abeni, 2001; Ehlers et al., 1995).

At the symptomatic level, regression analyses showed that problematic beliefs about emotions do predict psychological distress in patients with psoriasis and eczema irrespective of the years of coping with the disease. The perception of less control

and rumination were the best predictors of depression, whereas the belief of less control over emotions was the best predictor of anxiety. Findings show that these dimensions of emotion may be also relevant to understanding the psychological distress experienced by sufferers of skin disease. Meta-cognitive models propose that appraisals regarding uncontrollability are linked with symptoms of anxiety and depression (Beck, 1995; Wells, 1995). Present findings are in line with this. Among dermatology patients the belief that they have less control over their emotions was a core predictor of both anxiety and depression, while rumination has been an important predictor of depression. Meta-cognitive theory suggests that the tendency to ruminate is linked to depression as it leads to preservative appraisal and self-monitoring of cognition (Wells, 1995). It is proposed that prolonged periods of rumination are linked to avoidance behaviour (Papageorgiou & Wells, 2001). Findings show that rumination was only significantly associated with emotional-discharge, which is emotion-focused, avoidance strategy. It can be thus hypothesized that rumination in dermatology patients might maintain vigilance and/or thinking about personal implications of disfigurement and symptoms of disease. In order to avoid dealing with depressive feelings, they might engage in avoidance behaviour that could take the form of emotional discharge. This is in line with studies that report links between increased alcohol intake and psoriasis. Ginsburg and Link (1993) found that experiencing rejection due to psoriasis predicted greater alcohol consumption without conscious awareness of feeling stigmatized by psoriasis. They argued that patients used alcohol as a way of discharging their feelings but without realizing the connection. Depression may thus lead to self-medication with alcohol (Ginsburg, 1995).

Emotional schemas and avoidance coping

With regards to avoidance coping, findings suggest that only two of the four avoidance strategies were associated with problematic views about emotions. Emotional-discharge was associated with six emotional schemas: comprehensibility, guilt, simplistic view of emotion, control, consensus and rumination. Dermatology patients who viewed their emotions as incomprehensible, felt guilty of, believed them uncontrollable etc would be more inclined to use this avoidance strategy. Emotional-discharge is generally defined as an behavioural avoidance coping strategy and it is theoretically linked to greater dysfunction (Billings & Moos, 1984). This finding is consistent with Leahy's (2002) meta-cognitive model of emotion. It may also explain why pruritus severity in psoriasis and atopic eczema has been noted to correlate with severity of depressive symtopms in the patient (Gupta, 2005). Symptoms of depression such as decrease in enjoyment, feelings of worthlessness, guilt and indecisiveness can complicate dermatological symptoms like pruritus and adherence to medical treatment. The psychomotor agitation and emotional distress experienced can be dealt with behaviours such as rubbing, scratching or picking the skin (Gupta, 2005).

Finally, acceptance related strongly to greater guilt over emotions and to lack of control over emotions. Acceptance refers to the recognition that the person is not able to handle their disease and submit to its adverse consequences (Evers, Kraaimaat, van Lankveld, Jongen, Jacobs, Bijlsma, 2001). Results show that the more patients with psoriasis and eczema believe that they lack control over their emotions or feel guilty about them, the less inclined are to engage in this type of avoidance coping. This finding supports Leahy's (2002) conceptualization of problematic emotional

processing. It may help us understand why patients who feel particularly upset or distressed from their skin disorder display an increased need for visiting clinics and a constant effort to find 'a cure' to their skin condition as opposed to being able to develop a level of acceptance of it.

Interestingly, no other important links between problematic conceptualizations about emotion and avoidance coping were found. A significant issue to consider is that the scale of LESS (Leahy, 2002) is new and little research has been conducted on it as yet, especially with patients with skin disorders. It is possible that other beliefs other the ones investigated in the present study might be linked to the use of avoidance in this population. However, it is recognized that present findings are preliminary and future research is required to provide a greater appreciation of the role of emotional processing in patients who suffer with skin disorders.

4.5 CONCLUSION

This study has demonstrated that although the LESS (Leahy, 2002) is a useful clinical tool in assessing emotional schemas when counselling dermatology patients, further work is required to explore the validation of the questionnaire with this population and to replicate findings. Analyses based on the scales that proved to have good reliability, show that psoriasis may be differentiated best by four problematic conceptualizations of emotions: *comprehensibility, guilt, control,* and *consensus* relative to the normal comparison group, while atopic eczema by guilt. It appears that patients with psoriasis may experience greater difficulties with emotional processing. Results also suggest that emotional schemas mediate psychological symptoms. The perception of less control and rumination are found to be best predictors of depression, whereas the belief of less control over emotions to be best predictor of

anxiety. With regards to avoidance coping, dermatology patients who viewed emotions as incomprehensible, felt guilty of, believed them uncontrollable etc would be more inclined to use the avoidance strategy of emotional-discharge. Present findings have a clear relevance to theoretical and clinical practice.

CHAPTER FIVE:

A SCHEMA-FOCUSED MODEL OF SKIN DISEASE

5.1 Overview

Findings from these studies demonstrate the presence of pathological beliefs (cognitive and emotional) in psoriasis and atopic eczema. Significant differences were found in cognitive patterns of dermatology patients and control groups. Findings also provide support for the role of certain maladaptive schemas in psychological distress experienced by dermatology patients, as they appear to be significant predictors of both anxiety and depression. This chapter will consider the theoretical implications of this research and propose an integrative schema-focused model of skin disease derived from the results of this research.

5.2 An integrative schema-focused model of skin disease

Cognitive-behavioural conceptualizations and treatments for dermatological conditions have been put forward (Papadopoulos & Walker, 2003). These models focused either on general CBT conceptualizations (Thompson, 2005) or on the model of dermatological shame (Kellet, 2002). Although these models have demonstrated the importance of schema-level beliefs, none has specifically considered the content of such beliefs in formulating cases. Present research provides support for the role of more general schema-level beliefs in psoriasis and atopic eczema in formulating cases. Findings demonstrate that a comprehensive model of skin disorders should include different patterns of cognitive and emotional content, where central cognitions encompass more than beliefs about appearance and illness.

The model proposed is an attempt to integrate present findings in already proposed models and thus build a schema-focused, cognitive model of skin disease. It draws on the work of Young and colleagues' (2003) schema therapy and the meta-emotional

model of Leahy's (2002). The overall aim is the construction of a comprehensive model of skin disease that can be readily used a) for individual case-formulations, b) for informing effective treatment interventions and c) for generating testable model-based hypotheses with patients with skin disease. The theoretical underpinnings of such a model for patients with psoriasis and eczema are discussed.

5.2.1 Conceptualisation: The development and maintenance of psychological distress in skin disorders.

According to this proposed integrative, schema-focused model of skin disease, skin disease is developed through the presence of genetic susceptibility and activation via triggers. Possible predisposing factors of the origin of maladaptive core beliefs include: toxic or traumatic early childhood and later life experiences, temperamental vulnerabilities (alexithymia, neuroticism etc), age of onset of skin disorder, prevalent values and ideals in the surrounding culture and community; management and treatment factors of the disease. Such experiences might all contribute to the development of maladaptive and self-defeating cognitive and emotional patterns that view the self as defective, different, unlikable, unattractive, vulnerable (defectiveness, social isolation, failure, etc) and others are critical, more important or not caring (emotional deprivation, subjugation etc). For sufferers that developed the disease in adulthood the onset of the skin disorder may contribute to reinforce and /or elaborate existing maladaptive schemas or serve to disconfirm existing positive schemas.

Certain events in the environment might activate or trigger latent maladaptive schemas. Such triggering events can be: a) the recurring experience of physiological

symptoms of skin disease such as pain, itching, lesions and treatment of symptoms (attending hospital appointments, medication etc); b) social and interpersonal situations (attending social events, making friendships and intimate relationships, socializing etc); achievement situations (career opportunities and choices, education etc).

According to the proposed model, when maladaptive schemas are activated emotions and appraisals/metabeliefs of emotions and events arise. For example, emotions may be labelled as shameful, fearful, or uncontrollable. Pathological beliefs give rise to various maladaptive coping behaviours (emotional and social avoidance, concealment, seeking perfectionism), physiological symptoms (stress response, skin disease etc) and psychological symptoms (anxiety, depression, low self-esteem). Patterns of interaction between all these factors perpetuate the strength and validity of the maladaptive schemas and underlie chronic Axis I symptoms (such as anxiety, depression, psychosomatic disorders). Figure 5.1 provides a schematic representation of the factors implicated in the proposed schema-focused conceptualization of the development and maintenance of psychological distress in skin disorders

I **Predisposing Factors**

Genetic susceptibility: Skin disease is developed though the presence of genetic susceptibility. Early/late onset of skin disease via triggers of skin disturbance.

Early life experiences: Various experiences in family of origin, with peers, the surrounding culture and community, experiences of stigmatization, management of the skin condition.

II. **Schemas (cognitive & emotional)** ↑↓

Self: Unlovable, unattractive (defectiveness)
Not important as others (subjugation,)
Different, isolated (social isolation)
Unable to cope, ill (vulnerability to harm)
Failure, incompetent (failure)
Lonely, empty, alone (emotional deprivation)

Others: Other will reject, not empathise, ridicule, criticise, not show love/interest (emotional deprivation, defectiveness).
Others are more competent, more important, different to self (subjugation, failure, social isolation).

↑↓

Metabeliefs

Schemas over emotions: Emotions are shameful
Emotions are less comprehensible,
Emotions are uncontrollable
Emotions are not similar to the emotions of others.

↑↓

III. **Triggers**

Social, interpersonal, achievement situations.

Skin disease: Course, severity, remission, flare ups, medical treatment

Maintaining Factors

IV. **Emotions** ↑↓

Fear, anger shame, sadness, hopelessness etc

↑↓

V. **Coping Behaviours**

Overcompensation: Perfectionism, compulsions

Avoidance: Concealment, emotional avoidance, social avoidance

Surrender: Dependence on others, compliance, pleasing to others

Cognitive: Rumination, worry

↑↓

VI.	**Psychological**	&	**Physiological Symptoms**
	Low self-esteem		Skin disease severity
	Anxiety		Stress/Increased Physiological arousal
	Depression		Other somatic symptoms

Figure 5.1. A schema-focused model of psychological distress in skin disorders.

In order to exemplify the proposed model, the reader can refer to the case of a psoriasis sufferer named Colin (see Appendix Three, p.211). The relevance of maladaptive schemas to skin disease (as indicated in the present research) should become clear in terms of how they can inform the therapeutic process. In Colin's case the schemas of defectiveness and social isolation as well as his problematic views about emotions led him to rationalising, isolating, avoiding socializing and expressing his feelings. His way of coping reinforced and exaggerated his beliefs that he was defective and increased his anxiety over and need to control his skin disease. This conceptualization adds to the understanding of patients with psoriasis and how they conceptualise their world and illness. This becomes integral to the way that they will approach therapists in the therapeutic relationship.

5.3 Conclusion

The proposed integrative, schema-focused model of skin disease represents a way to expand current CBT models of skin disease by integrating ideas from schema therapy and meta-emotional models. It tries to expand on current models of skin disease by placing greater emphasis on schemas and their role in psychological distress of people with dermatological conditions. It aims to link conceptualizations of the development and perpetuation of schemas within skin disease and to provide a broader understanding of relevant psychological theory when conceptualising reactions of individuals to their skin disease. The benefits of adopting such an approach are evident for the therapeutic practice and are discussed further in the next chapter.

CHAPTER SIX: DISCUSSION

6.1 Overview

The aim of the present research was twofold: a) to investigate general schema-level cognitions in psoriasis and atopic eczema, by focusing on Early Maladaptive Schemas as conceptualized by Young (1994) and on emotional schemas as conceptualized by Leahy (2002); b) to investigate the relative contribution of these schemas to psychological distress experienced by patients with chronic skin disorders. Findings demonstrate the presence of pathological beliefs (cognitive and emotional) in psoriasis and atopic eczema. Significant differences were found in the general cognitive patterns of dermatology patients and control groups. Contrary to the initial hypothesis, there were no significant differences in maladaptive schemas between patients with psoriasis and atopic eczema. This research has a clear relevance to therapeutic practice in the area of psychodermatology. This chapter will consider the implications of this research for the field of counselling psychology and will also discuss the implications of practice within psychodermatology. Methodological issues as well as directions for future research are considered.

6.2 Counselling Psychology in the context of Pychodermatology.

Health care has changed dramatically with the acknowledgement of the importance of social and psychological factors associated with medical problems. Research over the past 30 years has demonstrated biological pathways that link the body and the brain and show the importance of interaction between emotions, beliefs and physical states in the experience of health and illness. For example, studies showed that patients who convert their feelings of pain, grief and anger about life events into anxiety and depression double their risk of disease, including asthma, arthritis, headaches, ulcers and heart disease (Friedman & Boothby,-Kewley, 1987). A new

view of health has emerged in which psychological, social and spiritual as well as biological and genetic factors are viewed as having direct impact on well-being and illness (Coughlin Della Selva, 2006). Management of symptoms rather than amelioration of underlying causes have become the focus of medical attention. Many medical specialties such as obstetrics, oncology and HIV-medicine among others have added psychological treatment not only to meet more effectively the needs of patients but benefit the medical condition itself.

Unlike other theoretical models like those that take a more biomedical approach or even the more pathologizing approach of clinical psychology, counselling psychology's emphasis on the reflective-practitioner approach lends itself very well to the field of psychodermatology. The need for counselling and psychological treatment for patients with dermatological conditions is now well recognized (Papadopulos & Bor, 1999). The concerns, preoccupations and worries of individuals who suffer from dermatological conditions have been shown to focus dramatically on appearance and on the impact their skin disease might have on their social relationships and quality of life. The most common reactions of patients are distress, shame and anxiety. Recognizing the dermatology patient's feelings and concerns seems to be important as research indicates that the presence of stress often precedes the onset or exacerbation of many dermatological conditions (Saraceno et al, 2006).

The key motive behind the present research has been to investigate schemas and learn more about the psychological processes of individuals who suffer from psoriasis and eczema. Within counselling psychology, there has always been the emphasis that each individual is separate and unique and it tries to elevate these beliefs to the heart

of clinical practice. Fundamentally, interest in investigating into schemas stresses the subjective experience and the world of the client and the importance for the clinician to work as a collaborator in seeking to understand the client's personal and interpersonal patterns and to relate that knowledge to the therapeutic context (Woolfe, 1996).

Moreover, there is a developing awareness of the need of science-practitioner basis for counselling. The issue of the link between science and practice has always been an important one. (Lane & Corrie, 2006). Among counselling psychology, there always has been the expectation that research will provide a more structured and critical examination of the therapeutic practice with the aim of generating knowledge (Woolfe, 2006). This work aimed to provide a basis for developing interventions for clinical practice with dermatological conditions.

The emotional impact of skin disease has been the subject of earlier investigations. However, little is known about the exact nature of the cognitive profiles of these patients and how this might affect psychological distress and possibly clinical symptoms of skin disease and compliance to treatment. Present findings provide some initial understanding of the sufferer's psychological functioning and personality and can inform well the practice of counselling individuals affected by disfiguring, chronic skin conditions.

Finally, in accordance with counselling psychology's emphasis in promoting wellness, this work attempted to put an emphasis on deeper-level, characterological patterns of the skin patient. It aimed to contribute to the understanding of the

patient's individuality, shifting focus away from the skin condition or the appearance of the skin.

6.3 Implications for counselling practice with skin disease

Counselling psychologists and other clinicians have an important role to play in helping people with dermatological conditions. There is no doubt that providing psychological treatment can benefit sufferers not only by reducing psychological distress but also by improving health-related quality of life. Counselling with dermatological conditions may involve working with individuals or groups using a variety of techniques. Cognitive-Behaviour Therapy (CBT) has been successfully applied among other dermatological conditions to patients with psoriasis (Fortune et al., 2002; Fortune et al., 2004; Zacharie et al., 1996) and atopic eczema (Ehlers et al., 1995). Studies have employed mostly standard CBT protocols that tried to improve social skills, coping with itching and scratching, and overall emotional-well-being (body image, distress). However, CBT has not been specifically tailored to the management of individuals with skin disorder (Main et al., 2000). Given the proposed schema-focused conceptualization of skin disease, it appears that one could incorporate elements of schema-focused therapy (Young et al, 2003; Padesky, 1994) along with emotion-focused therapy (Leahy, 2003; Greenberg, & Paivio, 2003) in treatment protocols. Individuals suffering with psoriasis or eczema frequently present with shame or extreme anxiety over appearance. They may therefore benefit from individually tailored interventions that are able to consider the relevant underlying schemas (Kent & Thompson, 2002). Building treatment protocols that uniquely address the needs of dermatology patients is in line with good evidence-based therapeutic practice.

Drawing upon the obtained cognitive profiles of psoriasis and atopic eczema groups, schema-level interventions would work to bring about a structural change in patient's personality and a change in emotionally avoidant and concealment behaviours. This would be achieved by: a) separating the self from the disease; b) healing aspects of the self irrespective of the body and appearance, c) enhancing emotional processing, especially with patients with psoriasis. Practitioners working with individuals with dermatological conditions may involve working at all these levels. Table 5.1 depicts the cognitive profiles of psoriasis and eczema groups that were constructed based on present findings. There is always the risk in wrongly assuming sameness among patients. Such proposition only aims to capitalize on main findings and to inform the therapist's counselling practice.

Table 5.1 Cognitive profiles of psoriasis and eczema groups.

	EMS	**Emotional Schemas**
Psoriasis	*emotional deprivation,* *social isolation,* *defectiveness,* *failure,* *vulnerability to harm,* *subjugation.* *emotional inhibition*	*comprehensibility* *guilt* *consensus* *control*
Eczema	*emotional deprivation,* *social isolation,* *defectiveness,* *failure, ,* *subjugation.* *dependence* *insufficient self-control*	*guilt*

6.3.1 Therapeutic Relationship

Present findings on maladaptive schemata of patients with psoriasis and eczema indicate the importance and nature of *relating* to this population. As in other forms of psychotherapy, the therapeutic relationship is a vital component of achieving schema change. According to schema therapy (Young et al, 2003) two features of the therapy relationship are important: a) the therapeutic stance of emphatic confrontation, b) the limited reparenting. The main aim of the therapist within the counselling relationship is to create an environment that is accepting and safe, in which the client can form a bond with the therapist. This is particularly important for dermatology patients where experience of shame, inexpressivess of emotions and social avoidance are characteristic ways of relating with others. Thus, according to present findings, the basic model of the therapeutic relationship with dermatology patients should be that of empowering this client group and strengthening the healthy aspect of the self.

As therapists it is inevitable that through interactions with clients one can expose others in one's own schemas and beliefs. Therefore, practitioners working with dermatology patients should be aware of their schemas and monitor own reactions to dermatology patients. Quite often therapist's reactions can be valuable resource in assessing the client's schemas and the relationship can become the vehicle for change (Young et al., 2003). Consequently, self-knowledge and reflection can help the clinician remain focused on helping the client in the most effective manner.

Counselling is a dynamic, interactional process and the strength of the therapeutic relationships is affected by client-therapist's schemas. It is important hence practice to be well informed and draw upon sound psychological theory.

6.3.2 Treatment Strategies

Schema and emotion-focused therapy can inform well the practice of counselling and practitioners working with dermatology patients can draw on various strategies to modify maladaptive schemas depending on the sufferer's own needs and presenting issues:

i) Schema-focused interventions

Schema-focused interventions (Young et al., 2003) might provide symptomatic relief for distressed dermatology patients by:

- Highlighting ways in which the sufferer is similar with other individuals who do not suffer from a chronic disfiguring condition and ways that are different yet compatible (*social isolation*)
- Emphasizing patient's core self over superficial attributes such as appearance or skin and increasing patient's self-esteem. Encouraging acceptance of flaws through caring about the patient, teaching imperfection, complimenting positive attributes and focusing on developing a positive view of self irrespective of skin disease (*defectiveness*).
- Supporting sufferer's achievements and abilities other than only focusing on disease and symptoms (*failure).*
- Getting sufferers to lower their estimation of the likelihood of catastrophic events and to raise their understanding of their coping abilities. Individuals should come to realize that their fears are greatly exaggerated and that even if something did happen (i.e. flares of the disease) they are able to cope adequately (*vulnerability to harm*).

- Enabling sufferers to understand that they have a right to express their needs and feelings and seek relationships that will allow them to do so (*subjugation).*
- Helping sufferers to accept their emotional needs as natural and correct and teaching them to ask for what they need in their relationships and to abandon reliance on avoidance (*emotional deprivation*).
- Enabling sufferers to become more emotionally expressive. Emphasis placed on teaching sufferers to appropriately discuss and express many of the emotions they may suppress, to express anger appropriately, to talk about their feelings and not feel shame about them, to value emotions as much as rationality and to abandon control strategies (*emotional inhibition*).
- Increasing sufferers' sense of competence and decreasing dependence on other people. Emphasis placed on building both confidence and skills, overcoming avoidance and increasing confidence in order to generate their own solutions to problems (*dependence*).
- Helping sufferers abandon short-term gratification for achieving long-term goals. Teaching sufferers to exercise self-control and self-discipline and to tolerate frustration (i.e adhering to boring or long routines of using creams for the skin, tolerating itch and/or pain, acceptance of disease symptoms).

ii) Emotion-focused interventions

Experiential work emphasises the integration of emotion with cognition, motivation and behaviour (Young et al., 2003; Greenberg, & Paivio, 2003). Present findings reveal that psoriasis sufferers reported problematic schemas that are linked to inhibition of emotional processing and to psychological distress. Much emphasis is thus placed in incorporating such interventions in protocols with dermatology

patients and especially patients with psoriasis. Employing emotionally-focused interventions in skin disorders would aim to modify pathological beliefs and to develop more adaptive beliefs about emotions and their expression.

Emotion-focused interventions (Leahy, 2003; Greenberg & Paivio, 2003) might provide symptomatic relief for distressed dermatology patients by:

- Identifying and changing problematic beliefs about having feelings. Teaching sufferers that their experiences can be shared and by expressing their emotions they would not get out of control.
- Helping make the transition from knowing intellectually that their schemas are wrong to believing emotionally through imagery.
- Helping sufferers vent anger to rejecting figures, to express sadness about their disease, to share their emotions and validate them as important parts of their experience through role play.
- Helping sufferers to not feel shame or guilt about their emotions by providing a context for their experience
- Teaching sufferers to express feelings appropriately rather than relying on avoidance.

6.3.3 Doctor-patient consultations

The use of outpatients' services is of primary importance for individuals suffering with chronic dermatological conditions. Dermatologists act as the primary care physician for such patients. Thus, they are in the unique position to recognise psychological morbidity and to take appropriate measures. Although dermatologists report a high level of awareness of the psychological needs of patients, there is

limited evidence to support the tenet that patients' needs are appropriately identified and addressed. (Richards, Fortune, Weidmann, Sweeney & Griffiths, 2004). Many reasons are cited for this: time pressure within consultations, reluctance in referring due to fear of stigmatising patients, patients' not openly expressing their concerns or emotional issues; no enquiries made over such issues by the dermatologist (Morgan & Killoughery, 2003)

The lack of breadth of knowledge of psychosocial issues and how this can be addressed certainly promotes questions as to how well dermatologists are able to respond appropriately to patients' psychological difficulties that arise within consultations. Richards and colleagues (2004) found that dermatologists experienced considerable difficulty in identifying clinical significant psychological distress. Even when they did identify patients as being anxious and/or depressed, in the majority of case no further action was taken following consultation. Given the high prevalence of psychological distress in patients with psoriasis and eczema, there is an obvious need to appropriately recognize and manage it (Gupta, 2005; Richards et al., 2004).

Drawing from clinical experience in working in a psychodermatology unit, understanding the dermatology patient within a biopsychosocial framework can ensure that the needs of patients are holistically met. Dermatologists and other health professionals today are arguably more sophisticated in their understanding of medicine and they actively seek other approaches that can sit adjunctive to standard treatment. Unfortunately, there can be stigma associated with using psychological therapy (Walker, 2005b) and many dermatologists cite this as reason for being discouraged to refer to such services (Morgan & Killoughery, 2003). It is important

therefore for dermatologists and other health professionals firstly to understand that the psychological burden their patients present with is linked to a constellation of intricate psychosocial factors and not simply to disease severity. Secondly, it is important to educate patients themselves about the links between the psyche and skin disease. This may improve the likelihood of dermatology patients being referred to counselling psychologists so as to help them appropriately address their emotional concerns (Walker, 2005b).

In line with this, the present research tried to provide an initial understanding of the psychological processes of patients with psoriasis and eczema and to explain how it may be able to predict psychological distress. Such findings can provide useful cues to dermatology professionals about how the psychology of patients may enact not in patient's own lives but in their consultations as well. Moreover, present research attempted to provide a useful framework to aid identification and management of psychological problems in dermatology. Hence, given present findings, difficulties in doctor-patient's interactions and possibly adherence and compliance to medical treatment may be explained as follows:

General

- Patients with psoriasis and eczema are characterized by typical cognitive structures (clusters of maladaptive schemas) that present the core of their pathology. These schemas are central to their sense of identity.
- Consultations or medical treatment can act as triggers of these beliefs.
- Maladaptive schemas may influence health behaviour and patterns of interaction with others, for instance reassurance-seeking behaviour or non-

compliance with medication, difficulties in building a good doctor-patient relationship (Picardi et al., 2000).

- Maladaptive core beliefs mediate symptoms of anxiety and depression. They may reveal themselves in hopelessness about disease improvement, emotional difficulties etc.
- Core beliefs are resistant to modification. Thus, psychological treatment adjunct to medical treatment may be the recommended plan of management.

Specific

- Patients with psoriasis appear to have particular problematic schemas about emotion and experience difficulties with emotional processing. Specific problems with consulting these patients might be that they avoid recognising and expressing feelings and place an emphasis on overcontrol and perfectionism.
- Patients with atopic eczema appear to have problematic views of their abilities to act independently, to assume responsibility in their lives and display poor models of self-care. Thus, they might appear to be particularly dependent on their physicians for the management of their disease. They may also have problems to tolerate frustration and control themselves and this might affect compliance with routines of applying creams.

Such ideas introduce ways that might help dermatologists and other health professionals to improve their consultations. By understanding and recognising better the psychological processes of the sufferer as opposed to the skin symptom, physicians might be able to recognize the emotional cues offered by their patients.

Improvement can also be achieved simply by increasing the patients' own psychological awareness of the links that exist between the psyche and skin disease and by validating their emotional states. It is often reported by patients that doctors have little understanding of different psychosocial aspects of their skin disease and are left feeling minimized (Papadopoulos & Walker, 2003). Providing some level of education regarding psychological impact of skin disease might be an important tool to building alliance and compliance with treatment. Finally, if dermatologists are able to identify clinically significant psychological distress then they might be in a position to instigate further action by liaising with psychology services. In conclusion, a better understanding of factors affecting patient's psychological adjustment to their diseases is essential as it would further support dermatologists and other health professionals in diagnostic and treatment options and for improving care for patients at risk.

6.4 Implications for the discipline of Counselling Psychology.

The current study portrays an initial understanding of core cognitive patterns of patients with psoriasis and eczema and of the complex nature of the psychological distress experienced by people with chronic disfiguring skin disorders. Findings contribute to the knowledge basis of scientific community of counselling psychology and highlight the need for better understanding and management of those patients.

6.4.1 The challenge of specialization

As a profession, counselling psychology is ever changing with the needs of clients and society (Gladding, 2004). It is therefore important for the counselling psychologist to remain abreast with developments. Findings of these studies tried to

highlight the need for specialization in counselling specific populations such as patients with dermatological conditions. Findings also reveal the need for incorporation of new routes within the discipline towards achieving an improved holistic management of patients with skin disorders but also within the training of counselling psychologists.

6.4.2 The challenge of evidence-based practice

The link between theory and practice has always been an important one. This work provides support on how important it is that the nature of counselling psychology remains that of scientist-practitioner (Woolfe, 1996). There has been a significant rise of late in the acceptance of psychological well-being to quality of life. Present findings indicate how important is to acknowledge and to understand the personality of person and to reflect on the psychological processes of the individual who suffers from a skin disorder. There is always the risk in wrongly assuming sameness among patients. Counselling psychology has a significant role in producing rigorous research that strongly enhances psychological functioning and the individuality and it puts the ideology of such values in the heart of clinical practice. This work tried to provide the basis for building individually, schema-driven treatment protocols that could effectively meet the needs of dermatology patients by conceptualizing them in accurate and relevant ways.

6.4.3 The challenge of the role within a medical setting

Giving information, support and therapy are some of the most important tasks performed by counselling psychologists within the context of dermatology. However, there are many other ways that counselling psychologists can be useful. Dermatologists or other medical staff do not always have the time available or the skills to provide information in a sensitive manner or to support their patents. The role of the counselling psychologist could be valuable in this regard. Moreover, patient non-compliance with treatment regimes is thought to be widespread in dermatology. Patients with psoriasis and eczema often need to make important decisions over treatment with highly toxic drugs. This is becoming more common with the recognition of the importance of allowing the patient choice of treatment (Corney, 1996). Thus, the involvement of a counselling psychologist might be valuable in making sure that concerns or worries concerning treatment are appropriately addressed and resolved.

The interface between counselling psychology and dermatology is multidimensional. Indeed, this multidimensionality has been one of the key motives behind this research. Current studies have intended to tap important clinical issues with people with dermatological conditions in order to emphasize the recognition of the role of counselling psychology in such departments. Findings provide support for the important role of counselling psychology might play in dermatology and the need of governmental policies and bodies to acknowledge that.

6.5 Limitations

i) Methodological considerations

An attempt was made to avoid methodological shortcomings. However certain limitations need to be taken into account when considering the results. First, an effort was made for the number of participants in each group to be balanced. Unfortunately, the time frame as well as the slow response rate precluded having equal sample sizes among groups. Since, this study is an ongoing project balancing the sample size of the eczema and the chronic disease groups is to be achieved in the future. Nevertheless, even though numbers were not balanced this did not have a statistically significant effect on the findings as both groups had enough participants to make the results meaningful.

With regard to variables associated with psychological distress, it should be emphasised that the present studies had a cross-sectional design. Therefore, the identification of a variable does not imply that this variable plays an aetiological role in promoting psychological disturbance in skin disease. It would have been interesting to compare patients in terms of their age of onset (early versus late onset). As schemas are variables that originate early in life, it would be of interest to see whether any differences exist in the schemas held by patients who differed in their age of onset.

Moreover, another limitation that should be considered is that the approach used was quantitative and therefore it was not possible to capture any other possible issues or core themes stemming from the way patients with psoriasis and eczema experience their disease. The use of self-reported questionnaires has been criticized on the

grounds that in contrast with interview-based techniques, it does not permit clarification regarding an individual's responses (Shaughnessy, et al, 2000). A greater and/or deeper appreciation of the cognitive experience of the person was not possible. A qualitative approach might have obtained information that structured tests might miss. It should be noted that the present investigation has been a preliminary step and the use of self-reported questionnaires was appropriate in generating some initial evidence for the content of core beliefs in patients with psoriasis and eczema.

ii) Sample

The psoriasis group differed in certain sociodemographic characteristics such age, marital status and years of education from the other groups. Adjusting for these differences would be advisable. Nevertheless, previous research has shown that demographic variables add little in explaining variability in distress and disability (Fortune et al., 2002). Moreover, the sample was composed mostly of Caucasian individuals despite findings of high prevalence of atopic eczema in Afro-Caribbean families. This occurred as patients attending clinics at the Royal Free Hospital, London, UK were predominantly Caucasian. It should be noted that the schemata of individuals of different ethnic and cultural groups might have different themes. Nevertheless, issues of generazability accompany any random sampling procedure (Shaughnessy et al., 2000).

There is the possibility that selection bias might account for results. The sample consisted of individuals that willingly accepted to take part and completed the questionnaires and who attended outpatients' clinics; thus making difficult to generalize findings to a) less motivated or unwilling patients, b) patients that fail to

attend such clinics. This often presents an issue with research of this nature. Even if the presentation of the specific schemas is at risk of being overestimated due to selection, anecdotally the symptomatic presentation of these more psychologically distressed outpatients is what is faced by dermatologists and GPs in practice.

iii) Instruments

With regards to the psychometric utility of both scales (YSQ-S & LESS), the clinical population studied was patients with psoriasis and atopic eczema which means that the conclusions are generalisable within this population but may limit extrapolation of conclusions to the broader field of dermatological conditions. It is necessary to determine the clinical utility of both scales across various dermatological conditions. Then, the YSQ–S and the LESS would be a readily usable clinical and research tools for assessing the level of core beliefs and how they are implicated in skin disease.

A single self-report measure was used to determined psychological distress making data susceptible to demand. It might have enhanced the study design to use additional measures of psychological distress or even disease-specific measures of disability. However, this research was a preliminary investigation and the HADS questionnaire is a valid and reliable instrument that is often used a measure of psychological distress in psychodermatology.

iv) Researcher's contribution

An attempt was made to reduce possible bias from the researcher's own presence in the process of the research. Thus, present research tried to control for such bias: a) by employing standardized self-report measures, b) by providing information sheets that

explained the purposes of the study, c) through the use of supervision and continuous discussion with colleagues and self-reflection throughout the research process. Nevertheless, it should be noted that in every research the researcher's contribution to the construction of meanings has always a central place. Hence, interpretation of findings as well as ideas offered is surely linked to the researcher's expertise on schema therapy and clinical experience derived from working within the area of psychodermatology.

6.6 Directions for future research

The present research addressed the nature of schema content and their role in psychological distress in psoriasis and atopic eczema. It is acknowledged as a first step and much more additional work needs to be done to unravel the precise manner that schemas manifest in skin diseases. As a cross-sectional research design was used, such design may not capture the complexity of the processes that may be involved, particularly if one is trying to understand relationships. Therefore, future work would be advisable to employ a) longitudinal designs where the time frame is wider and it can capture variations in development of schemas and their links to symptomatology of dermatology patients, b) qualitative designs where more clarifications with regards to the core cognitive themes of patients with psoriasis and eczema might be obtained and/or any possible variations within the groups might be captured as well.

The reliability analyses conducted on the YSQ-S (Young, 1994) and the LESS (Leahy, 2002) produced some interesting findings. Future work needs to determine the generalizability of these findings and further work with other dermatological conditions such as acne, alopecia areata and vitiligo is necessary. Also, while the

reliability analysis is informative work, investigation into the validity of the instruments within dermatology would also be useful as an avenue for future research.

Following these preliminary findings further research with larger samples of patients with dermatological conditions is needed to show how similar (or not) the maladaptive schemas of patients with psoriasis and eczema obtained in this study are generalisable across chronic, disfiguring dermatological conditions. It would be advisable such research to include populations not only from specialist settings or charities but also from the community and primary care settings in order to replicate and enhance the findings above.

Future work should also investigate the degree to which maladaptive schemas correlate with disease-specific disability and severity of symptoms. Since only one measure of psychological distress was employed, it would be of interest to future research to investigate the links between pathological core beliefs disorder-specific disability and severity of symptoms. More empirical work is thus needed to address disease-specific issues in order to provide clearer answers and frameworks as to how schemas might interact with skin disease.

Future studies should investigate in more detail differences in schemas held between patients with early and late onset of disease. The relative importance of onset might be important as patients with early and late onset of psoriasis often show different clinical features (Ferrándiz, Pujol, Garcia-Patos, Bordas, & Smandia, 2002). As schemas are variables that originate early in life, it would be of interest to see

whether any differences exist in the schemas held by patients who differed in their age of onset.

It was beyond the remit of this investigation to create a set of results that would allow us to determine how the two sets of schemas (cognitive and emotional) relate to each other and predict psychological distress in dermatology patients. Thus, it would be of interest to investigate their in-between associations and how they both predict anxiety and depression in dermatology patients.

Finally, future research should investigate the possible therapeutic effects of tailored schema-focused CBT for dermatology patients. Specifically, the impact of CBT employing schema-level interventions on variables such as disease severity, drug use and frequency of medical consultations would be particularly interesting to investigate. Treatment outcomes would provide further evidence for the importance of addressing core cognitive factors in psychological treatment of skin disorders and it would also advocate for the need of holistic care of patients with skin disease.

6.7 Concluding Remarks: Counselling in Psychodermatology.

Attention has increasingly been given to the psychosocial impact of dermatological conditions. The observed importance of psychological factors represents a move toward the recognition that coping with a disfiguring, chronic skin disorder represents a complex, multidimensional and ongoing biopsychosocial process. Indeed, present research provides support for the existence and links of important cognitive factors such as schemas with the psychological problems experienced by patients with psoriasis and eczema. Results demonstrate that the complex disabilities associated with chronic and recurrent skin conditions are unlikely to be explained solely by physical signs and symptoms. It thus argues that conceptualization of skin diseases goes beyond medical diagnosis (Main, et al, 2000).

The skin is a vital organ of communication and social interaction. Disease in the skin at any time of life can be associated with disruptive or damaging experiences to self and with serious psychiatric morbidity (Gupta 2005; Picard et al, 2000). The interface between counselling psychology and dermatology is multidimensional. Indeed, this multidimensionality has been the key motive behind this research. Present studies have intended to tap important clinical and theoretical issues in order to clarify even further the important links between counselling psychology and dermatology. The schema construct has been the cornerstone of cognitive theories as conceptualized to form the core of the individual's self-concept (Padesky, 1994). By incorporating such factor into the assessment and management of skin disorders one enhances knowledge of underlying mechanisms affecting not only adjustment but possibly the disease severity itself.

Lazarus (1990) has argued that psychological stress depends on cognitions relating to the person and the environment. The cognitive appraisal of a stressor may be more important than the objective characteristics of the stressor. For example, some events may seem relatively minor to one individual but have a substantial impact on another. Indeed, encountering a negative reaction or comment maybe avoidable. Difference in the impact that such event might have on the sufferer obviously lies in the meanings attached to its occurrence. Adjustment seems undoubtedly linked to the ways people think about themselves, others and their internal states. In this regard, schemas and meanings derived from them have a central place in clinical work and research in dermatology. Individual differences in adjusting to long-term dermatological illness might be largely explained by dimensions of maladaptive thinking; meaning the different ways of cognitive evaluations or re-evaluations that people place on the adverse nature of the disease.

The present studies also demonstrate that the psychology of the dermatology patient is not only complex and but also distinct from non-suffers. Many dermatology patients experience a fundamental sense of shame and stigma making them especially vulnerable to interactions with others. According to Northoff (1992), the skin could easily become a predominating figure among individuals with skin diseases. It could be perceived as a 'wall' or a 'prison' without doors through which neither entry nor exit is possible. Findings are in line with this view as individuals with psoriasis and eczema experienced themselves as unattractive, unlovable, different and ugly and these perceptions were the source of feelings of sadness, despair, and anxiety. Thus, sickness is not isolated in itself. Especially, when one lives in a body-conscious culture where stereotypes of beauty, youthfulness and health are so prevalent.

A practical expertise as well as solid theoretical conceptualization of skin disease is of utmost importance for mental health practitioners and counselling psychologists in order to adequately address the complex needs of dermatology patients (Walker, 2005b). A central argument is that practitioners should use specific treatments and techniques that are based on case conceptualizations which in turn are based in good theoretical models of the impact of skin disorders. Counselling psychologists are primarily responsible for maintaining the theoretical integrity of treatment (Wells, 1995). Present research has provided preliminary evidence for the need of expanding proposed cognitive models of skin disease. Findings suggest that there are cognitive and emotional underpinnings that have not been fully incorporated into present conceptualizations and treatment protocols.

The proposed integrative schema-focused conceptualization of skin disease opens possibilities in tailoring therapeutic interventions to specific skin disorders. Such approach might be arguably more effective in addressing psychological distress or symptomatology in skin disorders than general treatment protocols. This certainly remains to be seen. As discussed earlier, identification and management of psychological needs are critical as evidence suggests that adherence to medical treatment and clinical outcomes are optimized when patient's psychological needs are addressed (Richards et al, 2004). While, a common characteristic of chronic skin diseases is their inherently threatening and recurrent nature. Reducing psychological symptoms such as anxiety and/or depression may even ameliorate the course of skin disease. Overall, as therapists we need to develop the means to understand how skin disease relates to the identity of the patient and how this intricate relationship might affect the course of the disease and adjustment to it.

The field of psychodermatology has suffered from distinct demarcation between the physiological and psychosocial research (Walker, 2005b). A need to bridge this gap is crucial. An important issue for future research is to strengthen the links between the two fields. Dermatology practitioners as well as counselling psychologists and other clinicians need to keep informed of latest developments in the fields and to jointly develop models of understanding and treating psychodermatoses. It has already proven that in treatment of dermatological conditions any monoform treatment is bound to be ineffective (Papadopoulos and Bor, 1999). These studies attempted to contribute to current knowledge basis of counselling psychology and psychodermatology to help broaden our perspective in the hope that individuals who suffer from skin disorders receive a greater level of service in whatever health context they use.

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APPENDICES

APPENDIX ONE: INSTRUMENTS

INFORMATION SHEET

CONSENT FORM

HOSPITAL ANXIETY AND DEPRESSION SCALE (HADS)

COPING RESPONSES INVENTORY (CRI)

YOUNG SCHEMA QUESTIONNAIRE SHORT FORM (YSQ-S)

LEAHY EMOTIONAL SCHEMAS SCALE (LESS)

DEMOGRAPHIC QUESTIONNAIRE

INFORMATION SHEET

PARTICIPANT INFORMATION SHEET

Study Title: Personality, schemas, and quality of relationship: A preliminary investigation in dermatology patients.

What is this research about?

My name is Alexandra Mizara and I am a chartered counselling psychologist. I am conducting research into skin diseases such as psoriasis and eczema. I am investigating how psychological factors are implicated in the onset and development of skin diseases. Specifically, I am investigating the implication of factors such as personality traits, strongly held beliefs and quality of relationships. Our beliefs about ourselves affect how we deal with emotions and affect our coping. The overall aim of the research will be to look at the ways factors such as personality traits, strongly held beliefs and quality of relationships might affect (medically & psychologically) skin disorders. This shall help improve the management of patients with skin conditions by addressing such factors in psychological treatment protocols. This research is being supervised by Dr Linda Papadopoulos and Dr McBride. It will be undertaken in the Department of Dermatology at Royal Free Hospital. I hope that you will help us by completing this collection of questionnaires and retuning them to us in the stamped envelope provided.

What am I being asked to do?

A collection of questionnaires along with a consent form will be given to you by the nurses. You will be asked to complete them at your own time. You are expected to answer different types of questions by deciding which response best describes you. For example, you will be asked to answer questions about how you describe yourself or how you deal with a problem. Remember that there are not right or wrong answers.

Do I have to fill them out?

You do not have to complete these questionnaires out but it would give us some useful information if you could fill it out and return it. Whether you decide to complete them or not, it will not make any difference to the standard treatment that you are currently receiving.

How long will it take?

It should take about 30 to 45 minutes. However, please free to take as long as you need to complete them.

Will anyone know what I have written?

All information gathered will be treated with complete *confidentiality* and no one except from the research team will have access to this information. The questionnaires are anonymous.

Are there any adverse effects when taking part?

None are anticipated. However, in case any distress or discomfort is caused by completing the questionnaires, support and counselling will be made available to you. A counsellor will be available at any point in the study. Should you need to receive support, you can contact the counsellor in the following contact details:

Konstantina Kolonia

CONSENT FORM

Centre Number: :
Study Number:
Patient Identification Number for this trial:

CONSENT FORM

Title of Project: Personality, schemas, and quality of relationships: A preliminary investigation in dermatology patients

Name of Researcher: Alexandra Mizara

Please initial box

1. I confirm that I have read and understand the information sheet dated ..... (version .....) for the above study. ☐
I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected. ☐

3. I understand that relevant sections of any of my medical notes and data collected during the study, may be looked at by responsible individuals from Royal Free Hospital, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐

4. I agree to my GP being informed of my participation in the study. ☐

5. I agree to take part in the above study. ☐

Name of Patient	Signature	Date
Name of Person taking consent (if different from researcher)	Signature	Date
Researcher	Signature	Date

HOSPITAL ANXIETY AND DEPRESSION SCALE (HADS)

Hospital Anxiety and Depression Scale (HADS)

NFER-NELSON
INFORMING YOUR DECISIONS

Name: _____ Date: _____

Clinicians are aware that emotions play an important part in most illnesses. If your clinician knows about these feelings he or she will be able to help you more.

This questionnaire is designed to help your clinician to know how you feel. Read each item below and **underline the reply** which comes closest to how you have been feeling in the past week. Ignore the numbers printed at the edge of the questionnaire.

Don't take too long over your replies, your immediate reaction to each item will probably be more accurate than a long, thought-out response.

FOLD HERE

I feel tense or 'wound up'
- Most of the time
- A lot of the time
- From time to time, occasionally
- Not at all

I still enjoy the things I used to enjoy
- Definitely as much
- Not quite so much
- Only a little
- Hardly at all

I get a sort of frightened feeling as if something awful is about to happen
- Very definitely and quite badly
- Yes, but not too badly
- A little, but it doesn't worry me
- Not at all

I can laugh and see the funny side of things
- As much as I always could
- Not quite so much now
- Definitely not so much now
- Not at all

Worrying thoughts go through my mind
- A great deal of the time
- A lot of the time
- Not too often
- Very little

I feel cheerful
- Never
- Not often
- Sometimes
- Most of the time

I can sit at ease and feel relaxed
- Definitely
- Usually
- Not often
- Not at all

I feel as if I am slowed down
- Nearly all the time
- Very often
- Sometimes
- Not at all

I get a sort of frightened feeling like 'butterflies' in the stomach
- Not at all
- Occasionally
- Quite often
- Very often

I have lost interest in my appearance
- Definitely
- I don't take as much care as I should
- I may not take quite as much care
- I take just as much care as ever

I feel restless as if I have to be on the move
- Very much indeed
- Quite a lot
- Not very much
- Not at all

I look forward with enjoyment to things
- As much as I ever did
- Rather less than I used to
- Definitely less than I used to
- Hardly at all

I get sudden feelings of panic
- Very often indeed
- Quite often
- Not very often
- Not at all

I can enjoy a good book or radio or television programme
- Often
- Sometimes
- Not often
- Very seldom

Now check that you have answered all the questions

A D

TOTAL

Code 4460 01 4 Printed in Great Britain 1(6.94)

COPING RESPONSES QUESTIONNAIRE (CRI)

Dealing with a problem or situation

Please think about the most important problem or stressful situation you have experienced *DURING THE LAST 12 MONTHS* (for example, having troubles with a relative or friend, experiencing the illness or death of a relative or friend, having an accident or illness, having financial or work problems). Describe the problem in the space provided below. If you have not experienced a major problem, then list a minor problem that you have had to deal with.

Describe the problem or situation .....

.....

.....

Part I

Please answer the following questions about the problem you have listed.
Place an 'X' in the appropriate box.

	Definitely No 0	Mainly No 1	Mainly Yes 2	Definitely Yes 3
1. Have you ever faced a problem like this before?	☐	☐	☐	☐
2. Did you know this problem was going to occur?	☐	☐	☐	☐
3. Did you have enough time to get ready to handle this problem?	☐	☐	☐	☐
4. When this problem occurred, did you think of it as a threat?	☐	☐	☐	☐
5. When this problem occurred, did you think of it as a challenge?	☐	☐	☐	☐
6. Was this problem caused by something you did?	☐	☐	☐	☐
7. Was this problem caused by something someone else did? ..	☐	☐	☐	☐
8. Did any thing good come out of dealing with this problem? ..	☐	☐	☐	☐
9. Has this problem or situation been resolved?	☐	☐	☐	☐
10. If the problem has been worked out, did it turn out all right for you?	☐	☐	☐	☐

COPING RESPONSES INVENTORY

Part II

Please think again about the problem you described at the beginning of this inventory; indicate which of the following you did in connection with that situation.

Did you:	NO 0	YES, once or twice 1	YES, some-times 2	YES, fairly often 3
1. Think of different ways to deal with the problem?	☐	☐	☐	☐
2. Tell yourself things to make yourself feel better?	☐	☐	☐	☐
3. Talk with your partner or other relative about the problem?	☐	☐	☐	☐
4. Make a plan of action and follow it?	☐	☐	☐	☐
5. Try to forget the whole thing?	☐	☐	☐	☐
6. Feel that time would make a difference – the only thing to do was wait?	☐	☐	☐	☐
7. Try to help others deal with a similar problem?	☐	☐	☐	☐
8. Take it out on other people when you felt angry. or depressed?	☐	☐	☐	☐
9. Try to step back from the situation and be more objective?	☐	☐	☐	☐
10. Remind yourself how much worse things could be?	☐	☐	☐	☐
11. Talk with a friend about the problem?	☐	☐	☐	☐
12. Know what had to be done and try hard to make things work?	☐	☐	☐	☐
13. Try not to think about the problem?	☐	☐	☐	☐
14. Realize that you had no control over the problem?	☐	☐	☐	☐
15. Get involved in new activities?	☐	☐	☐	☐
16. Take a chance and do something risky?	☐	☐	☐	☐
17. Go over in your mind what you would say or do?	☐	☐	☐	☐
18. Try to see the good side of the situation?	☐	☐	☐	☐
19. Talk with a professional person (e.g. doctor, lawyer, clergy)?	☐	☐	☐	☐
20. Decide what you wanted and try hard to get it?	☐	☐	☐	☐

COPING RESPONSES INVENTORY

Questions about how you handled the problem you described at the beginning of this Inventory (continued)

Did you:	NO 0	YES, once or twice 1	YES, some-times 2	YES, fairly often 3
21. Daydream or imagine a better time or place than the one you were in?	☐	☐	☐	☐
22. Think that the outcome would be decided by fate?	☐	☐	☐	☐
23. Try to make new friends?	☐	☐	☐	☐
24. Keep away from people in general?	☐	☐	☐	☐
25. Try to anticipate how things would turn out?	☐	☐	☐	☐
26. Think about how you were much better off than other people with similar problems?	☐	☐	☐	☐
27. Seek help from persons or groups with the same type of problem?	☐	☐	☐	☐
28. Try at least two different ways to solve the problem?	☐	☐	☐	☐
29. Try to put off thinking about the situation, even though you knew you would have to at some point?	☐	☐	☐	☐
30. Accept it; nothing could be done?	☐	☐	☐	☐
31. Read more often as a source of enjoyment?	☐	☐	☐	☐
32. Yell or shout to let off steam?	☐	☐	☐	☐
33. Try to find some personal meaning in the situation?	☐	☐	☐	☐
34. Try to tell yourself that things would get better?	☐	☐	☐	☐
35. Try to find out more about the situation?	☐	☐	☐	☐
36. Try to learn to do more things on your own?	☐	☐	☐	☐
37. Wish the problem would go away or somehow be over with?	☐	☐	☐	☐
38. Expect the worst possible outcome?	☐	☐	☐	☐
39. Spend more time in recreational activities?	☐	☐	☐	☐
40. Cry to let your feelings out?	☐	☐	☐	☐
41. Try to anticipate the new demands that would be placed on you?	☐	☐	☐	☐

Questions about how you handled the problem you described at the beginning of this Inventory (continued)

Did you:	NO 0	YES, once or twice 1	YES, some-times 2	YES, fairly often 3
42. Think about how this event could change your life in a positive way?	☐	☐	☐	☐
43. Pray for guidance and/or strength?	☐	☐	☐	☐
44. Take things a day at a time, one step at a time?	☐	☐	☐	☐
45. Try to deny how serious the problem really was?	☐	☐	☐	☐
46. Lose hope that things would ever be the same?	☐	☐	☐	☐
47. Turn to work or other activities to help you manage things?	☐	☐	☐	☐
48. Do something that you didn't think would work, but at least you were doing something?	☐	☐	☐	☐

This completes the Inventory. Thank you very much for your help.

YOUNG SCHEMA QUESTIONNAIRE SHORT-FORM (YSQ-S)

M33

YSQ-S1

Developed by Jeffrey Young, Ph.D.

Name _____ Date _____

INSTRUCTIONS: Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When there you are not sure, base your answer on what you emotionally feel, not on what you **think** to be true. Choose the **highest rating from 1 to 6** that describes you and write the number in the space before the statement.

RATING SCALE:

1 = Completely untrue of me
2 = Mostly untrue of me
3 = Slightly more true than untrue
4 = Moderately true of me
5 = Mostly true of me
6 = Describes me perfectly

1. _____ Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.

2. _____ In general, people have not been there to give me warmth, holding, and affection.

3. _____ For much of my life, I haven't felt that I am special to someone.

4. _____ For the most part, I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.

5. _____ I have rarely had a strong person to give me sound advice or direction when I'm not sure what to do.

•ed

6. _____ I find myself clinging to people I'm close to because I'm afraid they'll leave me.

7. _____ I need other people so much that I worry about losing them.

8. _____ I worry that people I feel close to will leave me or abandon me.

9. _____ When I feel someone I care for pulling away from me, I get desperate.

10. _____ Sometimes I am so worried about people leaving me that I drive them away.

•ab

11. _____ I feel that people will take advantage of me.

12. _____ I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.

13. _____ It is only a matter of time before someone betrays me.

14. _____ I am quite suspicious of other people's motives.

15. _____ I'm usually on the lookout for people's ulterior motives.

•ma

16. _____ I don't fit in.

17. _____ I'm fundamentally different from other people.

18. _____ I don't belong; I'm a loner.

19. _____ I feel alienated from other people.

20. _____ I always feel on the outside of groups.

•si

21. _____ No man/woman I desire could love me one he/she saw my defects.

22. _____ No one I desire would want to stay close to me if he/she knew the real me.

23. _____ I'm unworthy of the love, attention, and respect of others.

24. _____ I feel that I'm not lovable.

25. _____ I am too unacceptable in very basic ways to reveal myself to other people.

26. _____ Almost nothing I do at work (or school) is as good as other people can do.

27. _____ I'm incompetent when it comes to achievement.

28. _____ Most other people are more capable than I am in areas of work and achievement.

29. _____ I'm not as talented as most people are at their work.

30. _____ I'm not as intelligent as most people when it comes to work (or school).

31. _____ I do not feel capable of getting by on my own in everyday life.

32. _____ I think of myself as a dependent person, when it comes to everyday functioning.

33. _____ I lack common sense.

34. _____ My judgment cannot be relied upon in everyday situations.

35. _____ I don't feel confident about my ability to solve everyday problems that come up.

36. _____ I can't seem to escape the feeling that something bad is about to happen.

37. _____ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.

38. _____ I worry about being attacked.

39. _____ I worry that I'll lose all my money and become destitute.

40. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.

41. _____ I have not been able to separate myself from my parent(s), the way other people my age seem to.

42. _____ My parent(s) and I tend to be overinvolved in each other's lives and problems.

43. _____ It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.

44. _____ I often feel as if my parent(s) are living through me--I don't have a life of my own.

45. _____ I often feel that I do not have a separate identity from my parents or partner.

46. _____ I think if I do what I want, I'm only asking for trouble.

47. _____ I feel that I have no choice but to give in to other peoples' wishes, or else they will retaliate or reject me in some way.

48. _____ In relationships, I let the other person have the upper hand.

49. _____ I've always let others make choices for me, so I really don't know what I want for myself.

50. _____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.

51. _____ I'm the one who usually ends up taking care of the people I'm close to.

52. _____ I am a good person because I think of others more than of myself.

53. _____ I'm so busy doing for the people that I care about that I have little time for myself.

54. _____ I've always been the one who listens to everyone else's problems.

55. _____ Other people see me as doing too much for others and not enough for myself.

56. _____ I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).

57. _____ I find it embarrassing to express my feelings to others.

58. _____ I find it hard to be warm and spontaneous.

59. _____ I control myself so much that people think I am unemotional.

60. _____ People see me as uptight emotionally.

61. _____ I must be the best at most of what I do; I can't accept second best.

62. _____ I try to do my best; I can't settle for "good enough."

63. _____ I must meet all my responsibilities.

64. _____ I feel there is constant pressure for me to achieve and get things done.

65. _____ I can't let myself off the hook easily or make excuses for my mistakes.

66. _____ I have a lot of trouble accepting "no" for an answer when I want something from other people.

67. _____ I'm special and shouldn't have to accept many of the restrictions placed on other people.

68. _____ I hate to be constrained or kept from doing what I want.

69. _____ I feel that I shouldn't have to follow the normal rules and conventions other people do.

70. _____ I feel that what I have to offer is of greater value than the contributions of others.

71. _____ I can't seem to discipline myself to complete routine or boring tasks.

72. _____ If I can't reach a goal, I become easily frustrated and give up.

73. _____ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.

74. _____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.

75. _____ I have rarely been able to stick to my resolutions.

LEAHY EMOTIONAL SCHEMAS SCALE (LESS)

FORM 8.4. Leahy Emotional Schemas Scale

We are interested in how you deal with your feelings or emotions—for example, how you deal with feelings of anger, sadness, anxiety, or sexual feelings. We all differ in how we deal with these feelings, so there are no right or wrong answers. Please read each sentence carefully and rate it, using the scale below, as to how you've dealt with your feelings during the past month. Put the number of your response next to the sentence.

Scale:
1 = very untrue of me
2 = somewhat untrue of me
3 = slightly untrue of me
4 = slightly true of me
5 = somewhat true of me
6 = very true of me

1. ____ When I feel down, I try to think about a different way to view things.
2. ____ When I have a feeling that bothers me, I try to think of why it is not important.
3. ____ I often think that I respond with feelings that others would not have.
4. ____ Some feelings are wrong to have.
5. ____ There are things about myself that I just don't understand.
6. ____ I believe that it is important to let myself cry in order to get my feelings "out."
7. ____ If I let myself have some of these feelings, I fear I will lose control.
8. ____ Others understand and accept my feelings.
9. ____ You can't allow yourself to have certain kinds of feelings—like feelings about sex or violence.
10. ____ My feelings don't make sense to me.
11. ____ If other people changed, I would feel a lot better.
12. ____ I think I have feelings that I am not really aware of.
13. ____ I sometimes fear that if I allowed myself to have a strong feeling, it would not go away.
14. ____ I feel ashamed of my feelings.
15. ____ Things that bother other people don't bother me.
16. ____ No one really cares about my feelings.
17. ____ It is important for me to be reasonable and practical rather than sensitive and open to my feelings.
18. ____ I can't stand it when I have contradictory feelings—like liking and disliking the same person.
19. ____ I am much more sensitive than other people.
20. ____ I try to get rid of an unpleasant feeling immediately.
21. ____ When I feel down, I try to think of the more important things in life—what I value.
22. ____ When I feel down or sad, I question my values.
23. ____ I feel that I can express my feelings openly.

(continued)

Leahy Emotional Schema's Scale *(page 2 of 2)*

24. ____ I often say to myself, "What's wrong with me?"
25. ____ I think of myself as a shallow person.
26. ____ I want people to believe that I am different from the way I truly feel.
27. ____ I worry that I won't be able to control my feelings.
28. ____ You have to guard against having certain feelings.
29. ____ Strong feelings only last a short period of time.
30. ____ You can't rely on your feelings to tell you what is good for you.
31. ____ I shouldn't have some of the feelings I have.
32. ____ I often feel numb emotionally, like I have no feelings.
33. ____ I think that my feelings are strange or weird.
34. ____ Other people cause me to have unpleasant feelings.
35. ____ When I have conflicting feelings about someone, I get upset or confused.
36. ____ When I have a feeling that bothers me, I try to think of something else to think about or do.
37. ____ When I feel down, I sit by myself and think a lot about how bad I feel.
38. ____ I like being absolutely definite about the way I feel about *someone else.*
39. ____ Everyone has feelings like mine.
40. ____ I accept my feelings.
41. ____ I think that I have the same feelings other people have.
42. ____ I aspire to higher values.
43. ____ I think that my feelings now have *nothing* to do with how I was brought up.
44. ____ I worry that if I have certain feelings, I might go crazy.
45. ____ My feelings seem to come from out of nowhere.
46. ____ I think it is important to be rational and logical in almost everything.
47. ____ I like being absolutely definite about the way I feel about *myself.*
48. ____ I focus a lot on my feelings or my physical sensations.
49. ____ I don't want anyone to know about some of my feelings.
50. ____ I don't want to admit to having certain feelings, but I know that I have them.

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

Instructions: Please tick the box that applies to you.

Q1. Gender	Male	☐	Q2. Marital status	Single	☐
	Female	☐		Married	☐
				Divorced	☐
				Widowed	☐
Q3. Skin disorder	Psoriasis	☐			
	Eczema	☐			
	Other	☐	_____		

Instructions: Please answer the following questions to the space provided.

Q4. What is your ethnic background?_____

Q5. No of years in education _____

Q6. What is your age? _____

Q7. What is your occupation?_____

Instructions: Please answer the following questions relevant to your skin problem to the space provided

Q8. What is the type of your skin disease?

_____

Q9. How long have you been coping with your skin disease?

_____

Q10. When was your skin disease first diagnosed?

Age (onset) _____

Q11. What part of your body is affected by your skin disease?

_____

_____

Q12. Are you on any medication?

Yes ☐ No☐

If yes, please give details

_____

_____

Q13. Do you suffer from any other disease?

Yes ☐ No☐

If yes, please describe

_____

Please return to the next page

Instructions: Please answer the following questions as needed to the space provided

Q14. Are you currently in a relationship? Yes ☐ No ☐
If yes, for how long? _____

Q15. Have you ever received psychological help? Yes ☐ No ☐
If yes, please explain. _____

Q16. Have you ever been on psychiatric medication? Yes ☐ No ☐
If yes, please explain. _____

Thank you for completing this questionnaire!

APPENDIX TWO: ETHIC RELEASE FORMS

CAMDEN & ISLINGTON COMMUNITY LOCAL RESEARCH ETHICS COMMITTEE-APPROVAL

ROYAL FREE TRUST HAMPSTEAD NHS TRUST APPROVAL FOR R&D PROJECTS

CAMDEN & ISLINGTON COMMUNITY LOCAL RESEARCH ETHICS COMMITTEE-APPROVAL

ROYAL FREE TRUST HAMPSTEAD NHS TRUST APPROVAL FOR R&D PROJECTS

APPENDIX THREE: CASE STUDY OF COLIN

CASE EXAMPLE OF COLIN: PSORIASIS SUFFERER

CASE EXAMPLE OF COLIN: PSORIASIS SUFFERER

Colin, is a 39 year-old psoriasis suffer who developed the condition when he was 15 years old. He grew up in a highly controlled, unaffectionate family environment that was characterized by lack of affection and of emotional expression. He was the only person in his family who suffered from a skin disease. Colin was teased at school about his skin condition. He always perceived himself as a loner and he felt different within his family and his peers. He learnt to subjugate his needs and feelings and to express emotions was perceived as sign of weakness and loss of control. He always covered his skin and he construed his psoriasis as the ultimate evil in his life. Colin was referred to therapy due to his immense anxiety over his psoriasis and his fixation to find a 'cure' to clear his skin.

Colin's main core beliefs were: defectiveness, social isolation, subjugation and emotional inhibition. He also had problematic views about emotions such guilt and uncontrollability. He tended to ruminate about the 'disgusting' appearance of his skin, which became an object of scrutiny and a way to berate himself. He would cope by rationalising, isolating, avoiding socializing and expressing his feelings. His way of coping reinforced and exaggerated his beliefs that he was defective, inferior or unlovable. This further increased his sense of isolation and his anxiety. He was caught in a vicious cycle, driven by his maladaptive schemas.

This example illustrates the importance of incorporating schema-level cognitions in formulating and treating cases presenting with skin disorders. Conceptualizing skin disorders in such way provides a much richer and holistic level of understanding of symptoms as it is based on a unifying theory. More importantly it signifies to the

sufferer that dermatological conditions permeate much deeper than the surface of the skin. It thus allows sufferers to talk about their experiences and feelings and it provides a framework for understanding the patterns that perpetuate their current symptomatology and how these may be implicated in their skin disease.

APPENDIX FOUR: INTERPETATIONS OF CONFIDENCE INTERVALS

CONFIRMATORY ANALYSIS BASED ON CI FOR EMS

CONFIRMATORY ANALYSIS BASED ON CI FOR EMS

The mean score on *social isolation* for psoriasis patients was 2.70 (SD=1.31) and for eczema patients was 2.37 (SD=1.08) and the mean score for normal control group was 1.76 (SD=.85) and chronic disease was 1.87 (SD=.60). The psoriasis group had a greater score than did participants in both control group on this maladaptive schema (SEM=.20 and SEM=.26) and eczema patients had a greater score than did participants in the normal control group (SEM=.23). There is a .95 probability that the obtained confidence intervals .40-1.46 (for psoriasis and normal) and .14-1.50 (for psoriasis and chronic disease) and .00-1.21 (for psoriasis and normal) contain the true population mean difference. The same pattern is found for *defectiveness* and *failure* (Table 3.3).

The mean score on *dependence* for eczema patients was 2.04 (SD=1.26) and and the mean score for normal control group was 1.40 (SD=.52) and chronic disease group was 1.39 (SD=.60). The eczema group had a greater score than did participants in both control groups on this maladaptive schema (SEM=.18 and SEM=.22). There is a .95 probability that the obtained confidence intervals .16-1.10 (for eczema and normal) and .07-1.22 (for eczema and chronic disease) contains the true population mean difference.

The mean score on *insufficient self-control* for eczema patients was 2.93 (SD=1.09) and the mean score for chronic disease group was 2.18 (SD=.74). The eczema group had a greater score than did participants in chronic disease group on this maladaptive schema (SEM=.28). There is a .95 probability that the obtained confidence interval, .02-1.48 (for eczema and chronic disease) contains the true population mean difference.

The mean score on *vulnerability to harm* for psoriasis patients was 2.53 (SD=1.26) and the mean score for normal control group was 1.47 (SD=.58) and chronic disease group was 1.63 (SD=.81). The psoriasis group had a greater score than did participants in both control groups on this maladaptive schema (SEM=.18 and SEM=.24). There is a .95 probability that the obtained confidence intervals .56-1.55 (for psoriasis and normal) and .26-1.53 (for psoriasis and chronic disease) contain the true population mean difference.

The mean score on *emotional inhibition* for psoriasis patients was 2.61 (SD=1.22) and the mean score for normal control group was 1.92 (SD=.80). The psoriasis group had a greater score than did participants in normal control group on this maladaptive schema (SEM=.19). There is a .95 probability that the obtained confidence interval, .18-1.20 (for psoriasis and normal) contains the true population mean difference.