DISCUSSION

Stress has become a constant major factor, playing role in our lives. At work, in our relationships, driving through rush-hour traffic – most of us take it for granted that there is nothing unusual about stressful situations occurring on a regular basis. Stress works insidiously to undermine body, mind and emotions (Walker, 2010). But the results can become all too obvious, by showing up on one’s skin. Adam (2004) opined that the inability to adapt to stress was associated with the onset of depression or anxiety. In one study, two-thirds of subjects who experienced a stressful situation had nearly six times the risk of developing depression within that month. Some evidence suggested that repeated release of stress hormones produces hyperactivity in the hypothalamus-pituitary-adrenal axis and disrupts normal levels of serotonin, the nerve chemical that is critical for feelings of well-being. Certainly, on a more obvious level, stress diminishes the quality of life by reducing feelings of pleasure and accomplishment, and relationships are often threatened. Stress is known to be linked with many psychosomatic problems: skin disorders being one.

According to Adam (2004) the adolescent years are in the middle of the most stressful times in a person's life. Adolescence is the time of life when children change into adults. They are going through puberty, meeting the changing expectations of others, and coping with feelings that may be new to them. The rate of change varies from person to person. There are a number of reasons for an adolescent to feel stress. These include: family issues, school related problems, chronic and physical illnesses.

According to Aggarwal et al., (2007) adolescence can be a stressful time for children, parents and adults who work with teens. Children are dealing with the challenges of going through puberty, meeting changing expectations and coping with new feelings. Many also worry about moving from an elementary to a middle or junior high school. And some kids may have to deal with things that their peers don't have to face such as the death of a family member or moving to a new town. Most children meet these
challenges successfully and grow into healthy adults while others have a harder time coping with their problems. During adolescence, the onset of psychological disorders may be fast (days or weeks) or slow (months or years) depending in part on the nature of social adversities. What the exact negative psychological effects are and why the time of onset varies following exposure to negative circumstances, remain almost entirely unknown Aggarwal et al., (2007). An important assumption is that events and difficulties carry a latent and undesirable psychological construct (such as personal threat or negative impact to the self) that can be inferred from a detailed recall of the social characteristics of the experience. Recent advances in neurosciences have opened up possibilities for characterizing in a more direct way the intermediate mental and neural processes responsible for organizing behavioral responses to different forms of adversity.

Adolescence is a period of “storm and stress”. Intense and frequent negative affect during this period has been hypothesized to explain the increased rates of affective disorders, suicide, and accidental death during this time of life. Stress makes youth intolerable to mental health problems. Skin conditions have been identified as one of the most common medical conditions currently affecting adolescents (Stone, 2003). Estimates of the prevalence of skin conditions in the India indicate that approximately 35% of children under the age of 18 are diagnosed with an allergy (National Centre for Health Statistics [NCHS], 2002). Earlier studies have shown that prevalence rates of childhood allergic conditions have increased worldwide over the past decade for unknown reasons (Moos and Lemanske, 1999). Childhood allergies are considered chronic illnesses because they persist for more than three months and cannot be cured (NCHS, 2002). Adolescence allergies include allergic rhinitis, asthma, dermatitis, acne, psoriasises and eczema. The pressures of daily life press adolescence everyday and push them ferociously to not just compete with others, but achieve standards of excellence, that at times only commensurate with unrealistic expectations either in personal or professional life. The segment of population where this problem of stress is most rampant is the young generation. Adolescents come across various kinds of stressors in their everyday lives. According to
Mills et al., (2008) these stressors include losing contact with loved ones, the death of a family member hospitalization (oneself or a family member), injury or illness (oneself or a family member), being abused or neglected, sleep problems, problems at school, fears, repetitive thought patterns: worrying about future events (e.g., waiting for medical test results or job restructuring), unrealistic and perfectionist expectations.

According to the American Academy of Dermatology (2010), skin is the communicator between the outer world and our inner world. It marks our boundaries of expressions and very often when these boundaries have been overstepped, our skin reacts by blushing in shame, flushing in anger, spotting with self doubt or glowing with love and excitement. Any skin blemish is a result of emotional unhappiness. Everyone knows how one’s skin looses its beauty when one is stressed and how it has got a shiny glow when one’s truly happy.

The skin covers our entire body. It is the foundation on which all the other senses are based. Our skin is the interface between our nervous system and the environment in which we live. It connects the outside to our insides, and vice versa. Neuro-anthropologist Virel (2005) opined, "Our skin is a mirror endowed with properties even more wonderful than those of a magic looking glass."

According to Chauhan (2011) the skin is an essential player in the conundrum of our existence, in our striving for radiant well-being and connection to all things. It is our skin that allows us to differentiate between sandpaper and marble, glass and water, hot and cold, pain and pleasure. When we add taste, smell, sight, and hearing to this biological equation, a magnificent symphony of feeling and sensation informs our experience. Without our senses we are like stick figures -- without sense and sensibility, forever ensnared in the modern disease of cerebral reasoning.

According to Virel (2005), the majority of patients suffering with skin disorders feel that people stare at them because of their lesions and that non-sufferers may incorrectly regard their condition as contagious. Many people with skin problems feel 'untouchable' or 'like a leper' and regard their bodies
as ‘unclean’ because of their lesions. It is not surprising, therefore, that chronic skin disease patients anticipate rejection, avoid public places or interpersonal situations and thus reduce the quality of their life and social opportunities.

In view of Gupta (2010), Acne, one of the most common skin complaints in adolescents, may lead to depression and low self-esteem. It is observed that generally adolescents with skin disorders lack self-confidence tend to be introverted, avoid eye contact with other people, try to hide their face by hair styling and usually keep their head down. At this age many teenagers compare themselves to the next person and feel very conscious about their appearances.

Chauhan (2011) reported that skin diseases like Psoriasis and Eczema are known to worsen when patient is under stress. A patient may point out that their very first or their worst episode of psoriasis occurred immediately following some emotional catastrophe, like a death in the family or a divorce or massive business failure. Many teenagers and adults can tell you that during times of stress, their acne gets worse. Stress produces biochemical changes in the body related to neuro-hormones produced by the brain. These affect other chemical systems, including the levels of male and female sex hormones, which in turn are well known to influence acne.

Keeping in view the above the above facts that skin disorders may cause havoc in the lives of adolescents, therefore it was decided to study adolescents with and without skin disorders on Eysenckian dimensions of Personality, Health Locus of Control, State-Trait Anxiety, Self Esteem, Self Efficacy, Mental Health and its dimensions viz. Being Comfortable with Self, Being Comfortable with Others and Ability to meet Life’s demands, dimensions of Stress viz. Stress Symptoms, Perceived Stress, Daily Hassles and Uplifts, Ways of Coping, Anger Expressed and Anger Expression Styles, Perceived Parental Bonding, perception of Family Environment, Dermatology Life Index and Family Dermatology Index.
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Another aim of the study was to identify predictors for Dermatology Life Index and Family Dermatology Index among adolescents with and without skin disorders.

The sample of the study comprised of 400 adolescents in the age range from 16-18 years. 300 adolescents (150 males and 150 females) comprised the sample with skin disorders. They were further selected from three types of skin disorders viz Acne (n=50), Eczema (n=50) and Psoriasis (n=50) for each gender. Sampling was purposive. The healthy controls comprised of 100 subjects (50 males and 50 females) chosen randomly from schools of tricity. Those comprising the Healthy Control group were currently without a history of any kind of skin problem. Care was taken to select the sample from middle socio economic group which matched with the socio economic status of the subjects and other important characteristics such as age, sex and educational background was also taken into consideration.

To measure dimensions of Personality, many tests were used. Eysenck's Personality Questionnaire – Revised (1985) was used to get scores on Extraversion/Introversion, Psychoticism, Neuroticism and Social Desirability. The Personality dimensions of Externality / Internality were studied using Health Locus of Control Scale (HLOC) devised by Wallston and Wallston (1982). The State-Trait Anxiety Inventory (STAI) derived by Spielberger et al, (1970) was used to measure the variables of State and Trait Anxiety. Self esteem was measured by using Rosenberg's Self Esteem Scale by Rosenberg, (1965). Self Efficacy was measured by Generalized Self Efficacy Scale by Jerusalem and Schwarzar (1995).

For measuring Mental Health, the WHO Measure of Mental Health adapted for use in India by Wig (1999) was used which has three dimensions viz. Being Comfortable with Self, Being Comfortable with Others and Perceived Ability to Meet Life's Demands.

For measuring dimensions of Stress, the Stress Symptoms Rating Scale developed by Heilbrun and Pepe (1985) and Perceived Stress Scale by Cohen et al., (1983) were used. Daily Hassles and Uplifts were assessed through Daily Hassles and Uplifts Scale by Delongis et al (1982).
The Coping Styles Inventory by Carver et al. (1989) was used to measure three types of Coping styles viz., Task Focused Coping, Emotion Focused Coping and Avoidant Focused Coping.

Anger Expressed and Anger Expression Styles were assessed with the help of Spielberger’s State - Trait Anger Expression Inventory which was developed by Spielberger (1988).

Perceived Parental Bonding was measured by Parental Bonding Instrument by Parker et al., (1979). It has two dimensions viz Perceived Parental Care and Perceived Parental Overprotection. Family Environment dimensions were measured by using Family Environment Scale (FES) by Moos and Moos, (1994). It has three dimensions viz. Family Environment Relationship dimension, Family Environment Personal Growth dimension and Family Environment System Maintenance dimension.

Satisfaction with life was measured by using Satisfaction with Life Scale, developed by Diener et al., (1985).

Dermatology Index was measured by using Dermatology Life Index by Finlay and Khan (1992). Family dermatology index was measured by using Family Dermatology Index by Basra and Finlay (2007).

All the subjects were explained about the nature and aim of the investigation and were requested to volunteer as respondents. Their informed consent was obtained before they were enlisted as subjects.

The raw scores consisted of scores on all the above mentioned 47 variables viz. Eysenckian Personality Questionnaire (Extraversion/Introversion, Psychoticism, Neuroticism), Locus of Control and its dimensions viz. Internal and External Locus of control, State-Trait Anxiety, Self Esteem, Self Efficacy, Total Mental Health (Being Comfortable with Self, Being Comfortable with Others and Ability to meet Life Demands), Stress Symptoms, Perceived Stress, Daily Hassles and Uplifts, Coping Styles (Task, Emotion and Avoidant Focussed Coping), Anger Experienced (State-trait Anger) and Anger Expressive Styles (Anger In, Anger Out, Anger Control), Parental Bonding dimensions (Perceived Parental Care and Perceived
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Parental Overprotection, Family Environment Dimensions (Relationship Dimensions, Cohesion, Expressiveness, Conflict, Personal Growth Dimension, Independence, Achievement Orientation, Intellectual Cultural Orientation, Active Recreational Orientation, Moral Religious Emphasis, System Maintenance Dimension, Organization, Control) and Dermatology Quality of Life Indices viz. Dermatology Life Index and Family Dermatology Index.

The raw scores were analyzed using appropriate statistical analyses viz. Descriptive statistics, t-test, Anova, Discriminant Functional Analysis, Inter-Correlations and Regression analysis.

Group Comparisons (comparing adolescents with and without skin disorders)

1. **Stress, Coping and Skin Disorders**

   Based on the review of literature the following hypotheses were proposed:

1.1. Adolescents with skin disorders were expected to score higher than adolescents without skin disorders on different stress dimensions viz. Stress Symptoms, Perceived Stress and Daily Hassles.

1.2 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Uplifts.

1.3 Adolescents with skin disorders were expected to score higher than adolescents without skin disorders on Emotion Focused Coping and Avoidant Focused coping.

1.4 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Task Focused Coping.

   A glance at t-ratios (Table 2.1) revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Stress Symptoms (t = 14.06, p < .01), Perceived Stress (t = 6.52, p < .01) and Daily Hassles (t = 11.79, p < .01). Adolescents with skin disorders scored lower than adolescents without skin disorders on Uplifts (t= 10.32, p< .01).
A glance at t-ratios (Table 2.1) also revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Emotion Focused Coping \( (t = 7.06, p < .01) \) and Avoidant Focused Coping \( (t = 4.81, p < .01) \). Adolescents with skin disorders scored lower than adolescents without skin disorders on Task Focused Coping \( (t = 7.46, p < .01) \).

A perusal of Analysis of Variance tables (Table 3.15, 3.18-3.20, 3.25, 3.26 and 3.46) revealed the following:

The F-ratios for group comparisons on variables of Stress Symptoms \( (F=9.29, p<.01) \), Daily Hassles \( (F = 4.39, p<.05) \) and Uplifts \( (F=6.57, p<.05) \) emerged significant. The F-ratios for group comparisons on variables of Task Focused Coping \( (F = 24.79, p < .01) \) and Emotion Focused Coping \( (F = 15.41, p < .01) \) also emerged significant. A glance at the table of mean scores revealed that on Stress Symptoms and Daily Hassles, adolescents with Acne scored the highest followed by adolescents with Psoriasis and Eczema. On Perceived Stress adolescents with Psoriasis scored the highest followed by adolescents with Eczema and Acne. On Uplifts, adolescents with Eczema scored the highest followed by adolescents with Acne and Psoriasis. On Task Focused Coping, adolescents with Eczema scored the highest followed by adolescents with Psoriasis and Acne; on Emotion Focused Coping, adolescents with Eczema scored the highest followed by adolescents with Acne and Psoriasis; on Avoidant Focused Coping, adolescents with Acne scored the highest followed by adolescents with Psoriasis and Acne. A glance at table of mean scores also revealed that Healthy controls scored the lowest on Stress Symptoms, Daily Hassles, Perceived Stress, Emotion Focused and Avoidant Focused Coping. They scored the highest on Uplifts and Task Focused Coping.

A glance at the Discriminant Functional Analysis (Table 4.1) revealed that variables Stress Symptoms, Perceived Stress, Uplifts and Daily Hassles emerged as discriminants when adolescents with and without skin disorders were compared. Table 4.1 also revealed that variable Avoidant Focused Coping emerged to have a significant discriminating power between
adolescents with and without skin disorders. A glance at the table of mean scores revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Stress Symptoms Perceived Stress, Daily Hassles and Task Focused Coping. A glance at the table of mean scores also revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Avoidant Focused Coping. Thus the hypotheses were upheld in majority of the cases.

Review of earlier studies also revealed similar trends.

During the last 30 years there has been an increasing realization of the place of psychological factors in the production or precipitation of certain skin disorders. Wilkinson et al., (1950) studied series of patients with specific skin disorders in an endeavour to assess the importance of psychological factors in their pathogenesis. Psychological factors such as stress, anxiety, depression and anger have been very closely linked with skin conditions and these are known to have an adverse affect on the patient suffering with a skin problem.

Kraus (1970) reported that emotional stress is accompanied by an exacerbation of acne vulgaris lesions and an increase in skin surface free fatty acids (ffa) surface total lipids shows a statistically significant change during the period of stress. A cause and effect relationship has not been established between skin surface free fatty acids and acne vulgaris, but this and other indirect evidence suggest that free fatty acids may play an important role in the pathophysiology of acne.

Most studies relating acne with psychiatric morbidity have been conducted with severe and cystic acne patients; however, most clinical acne patients have acne of mild or moderate severity. Gupta et al. (1990) reported that all 10 of their acne patients with mild-moderate severity recovered psychologically after acne treatment. Their levels of shyness decreased, they were more satisfied with their general appearance, and their body perceptions were more positive. Mild moderate acne severity also leads to important levels of stress and anxiety, and these patients, as much as the patients with
more severe acne, may also experience social anxiety and other psychological problems (Gupta et al., 1990).

According to Philips et al., (1995) acne is considered stressful and today’s life, where adolescents are bombarded continually with images of media idols who have seemingly perfect bodies and complexions, a culture in which parents often have unrealistic expectations of their children, the onset of acne can be devastating. Not able to compete with the perfection of the idealized personalities or peers, even minimal lesions may serve to confirm for adolescents their worst fears. Youngsters feel ugly, dirty, and flawed and have impoverished self esteem and self-conscious feelings that everyone is looking and criticizing, with a certainty that the lesions proclaim to the world some dark secret about the self.

Coping is an active process which relies on a range of techniques used at different times. These vary from seeking social support to venting emotions and confronting risk. In a review by Moss and Savin (1995), the coping strategies of people with some form of disfigurement were examined. The authors found that the concept of coping was divided into the broad categories of emotion focused coping and problem focused coping. The former deals with the way people attend to threat. That is trying to change the way they think about a threat and their perception of it, so as to neutralise it or make it less threatening. An example of this is when one might challenge one’s view of a social situation where one feels that the way one looks is being scrutinised. The latter involves doing something about it, such as using practical tools for how to deal with staring and rude comments and how to confront other difficult social situations. This may include making eye contact with the other person, having a quick, rehearsed response to rude comments, and how to confront other difficult social situations. This may include making eye contact with the other person, having a quick rehearsed response to rude comments or changing the subject and diverting the other person’s attention (Savin, 1995). In cases where one can exert control over the threat, problem focused coping is effective whereas in cases where the threat is not directly controllable emotion focused coping is more useful. In most cases both strategies are used both during and after a stressful event and the extent to
which they prove to be useful will depend on the context in which they are used.

In view of Partridge (1995) psychological treatments that have been designed to limit the severity of skin diseases (usually eczema, acne and psoriasis) have included different but complementary aspects such as working on the reduction of scratching behaviours and the reduction of stress. Research has shown that patients with severe eczema who received instruction in relaxation, as well as in what are called techniques to reduce scratching, showed vastly diminished eczema severity and medication use.

According to Su et al., (1997) the use of a relaxation-type treatment has been successful with children whose eczema was considered to be resistant to the usual dermatological treatments. The children's treatment consisted of listening to tapes of 'magic music' to increase relaxation and reduce scratching at bedtime. Most children unproved on scratching, itching and sleep disturbance and, importantly, a follow-up a few years later revealed that the majority of patients had maintained these gains. This implies the role of stress and stress management in skin disorders.

According to Zinn et al., (1998) the skin has long been known as an organ system that responds to emotional stress and to psychological influences with both short- and long-lasting effects. Over the years, occasional observational and experimental studies have reported a range of skin responses to hypnotic suggestion and other psychological interventions, including the disappearance of warts. Studies have also been conducted to determine if psychological symptoms in acne patients are different than the symptoms reported in patients with other dermatological and non-dermatological illness. Gupta and Gupta (1998) reported that patients with acne have higher scores for depression when compared to alopecia, atopic dermatitis, and psoriasis patients. Kellet and Gawkrodger (1999) reported that patients with acne have greater levels of emotional stress and anxiety than patients with general dermatological illnesses.

Wahl et al., (1999) opined that there have been few studies carried out in relation to coping by patients with chronic skin diseases. Most of the studies
performed have evaluated coping with chronic dermatological diseases in general without focusing on specifically stressing clinical settings, such as exacerbation of disease symptoms. It has previously been reported that strategies of the optimistic and control type were most often used to deal with stress and problems related to daily living and functioning with psoriasis. Studies have shown that people with psoriasis using emotional coping reported greater disability, poorer mental health and quality of life. Mallon et al., (1999) reported psychological scores (state-trait anxiety and perceived stress) of acne patients were higher than those of patients with epilepsy, diabetes, asthma, and coronary artery disease.

Schmaling and Sher (2000) reported that when skin disease leads to relationship strain, it is not uncommon for patients to feel guilty for demanding more resources from their partner or to harbour fears of being rejected. Taking on the role of caregiver or care-receiver and no longer that of lover or partner can quickly destroy a couple’s relationship. Psychological distress may also affect appraisal of the relationship itself. Sufferers who are in an upset mood often shift perspective towards the negative, and this can extend to perceptions of their partners. Research shows that when one partner is depressed, couples display more interpersonal negativity, report less relationship satisfaction and experience more stressful life events. Coping with the complexities of skin disease can thus test the commitment two people have towards one another by challenging both partners to work within new parameters.

In view of Police et al., (2001) research on children with skin diseases has focused on the role of the family environment in the maintenance of the symptoms. Different kinds of stress and family organisational structures have been researched with respect to how they affect the severity of children’s eczema. It has been shown that less severe eczema symptoms were associated with a more organised and independent family structure and severe eczema symptoms in children were shown in poorly organized family structure. The levels of stress in children with poorly organized family structures were higher in comparison to the children living with organized independent families. The researchers concluded that more organised
families were better at protecting their children from stress and better at carrying out treatment programmes than those that were not so well organized.

Gupta (2002) reported that most dermatologic disorders influenced by psychosocial factors are associated with psychosocial stress, which exacerbates the condition, psychologic and psychiatric disease, such as depression, anxiety disorders, and body image problems. In addition to stress from major life events, a psychosocial stressor in some disorders, such as psoriasis and atopic dermatitis, also affects patients’ lives. This disease-related stress can result in flare ups of the disorder. In contrast to other stress-reactive dermatoses, such as urticaria, acne, alopecia areata, and atopic eczema, psychosocial stressors more frequently predate onset or exacerbation of psoriasis, suggesting that psoriasis is more sensitive to stress than some other stress-reactive dermatologic disorders. Disease-related stress and the effect of psoriasis on patients’ lives may be assessed within a developmental context. In general, psoriasis patients who are between 18 and 45 years old experience more frequent problems related to appearance and socialization and to occupation and finances than older people do. Adverse effects are reduced in those older than 45, with a further decline in those older than 65. This most likely reflects the fact that in earlier adulthood, people are establishing social relationships and starting careers; therefore social stigma associated with cosmetically disfiguring disorders has the greatest effect.

In view of Griffiths et al., (2002) persons with chronic dermatologic diseases who were admitted to the dermatology ward cope with an exacerbation of the disease. The results indicated that optimistic, confrontational and belief in oneself strategies were most often used in the period prior to admission. Furthermore it was found out that emotional strategies were used more by patients with eczema and by women. Another finding is that long illness duration is related to the more frequent use of strategies of the type belief-in-oneself and less frequent use of supportive strategies.
According to Dogra (2002) the skin is the largest and the most visible organ of the human body but, for people with skin disease, this visibility is often the worst aspect of their condition. It is the one that is often underestimated by all but the sufferer. A healthy, normal skin is essential to a person's physical and mental well-being and is an important aspect of their sexual attractiveness, a fact that is exploited by advertisements. Skin diseases, however, are very common in developing countries like India. Handicap due to skin diseases may not be as explicit as that associated with a broken limb, but the psychological consequence of skin diseases, which include ‘failure of display’, may be just as important. It has been shown that relatively minor skin complaints often cause more anguish to people than more serious medical problems. It is the product of high prevalence and moderate morbidity that makes skin diseases very important from public health point of view.

Kanwar (2002) reported that skin conditions are usually visible and society greets people who have them, in much the same way as it does anyone else who appears to be different. They are stared at or subjected to whispered comments, antagonism, insults or isolation. People with skin conditions often develop negative feelings about it, which are reinforced by their experiences over a number of years. In addition, many skin conditions have no lasting cure and these patients' lives may be punctuated by periods of remission and exacerbation. This adds to the stress.

A (2002) Stanford University School of Medicine study reported by the Acne Resource Centre Online, revealed that students who experienced the most stress during exam time also had the greatest worsening of their acne. Some scientists believe that stress causes acne by increasing the production of certain hormones, while also slowing down the body's healing process.

According to Gupta and Gupta (2003) psychiatric and psychological factors play an important role in most of the dermatologic disorders. In many cases the impact of the skin disorders upon the quality of life is a stronger predictor of psychiatric morbidity than the clinical severity of the disorder as per physician ratings. Furthermore, in certain disorders such as acne and
psoriases, the psychiatric co-morbidity, which can be associated with psychiatric emergencies such as suicide, is an important measure of the overall disability experienced by the patient. The severity of depression and increased suicide risk are not always directly correlated with the clinical severity of the dermatologic disorder. Consideration of psychiatric and psychosocial factors is important both for the management, and for some aspects of secondary and tertiary prevention of a wide range of dermatologic disorders. It is useful to use a biopsychosocial model which takes into account the psychological (e.g. psychiatric co-morbidity such as major depression and the impact of the skin disorder on the psychological aspects of quality of life) and social (e.g. impact upon social and occupational functioning) factors, in addition to the primary dermatologic factors, in the management of the patient. Some dermatology patients are likely to benefit from psychotherapeutic interventions and psychotropic agents for the management of the psychosocial co-morbidity, in addition to the standard dermatologic therapies for their skin disorder.

According to Cork et al., (2003) it is important for teachers and parents to help dispel some of the fears that other children or parents may have about the child’s skin condition. Common misperceptions are that the condition may be contagious or may be very painful if the skin looks red or inflamed. Before the child starts at school it is important for the parent to meet with the child’s teacher to explain the condition and to provide information about it, particularly if it is very rare or if the condition may be affected by factors within the school, such as temperature or sitting on a carpet. If appropriate, the teacher can spend some time with the whole class helping them to understand the condition and promoting friendships.

The Proceedings of the National Academy of Sciences (2003) and Acne Resource Centre Online, revealed that corticotropin-releasing hormone (CRH) released during stress leads to sebum production, which eventually worsens acne conditions. Stress not only worsens acne, but in turn affects the quality of life of the patient suffering with acne and a stressful condition makes an individual depressed and low.
Adam (2004) reported that stress has been related to skin allergies. In fact, some research suggests that stress and not indoor pollutants, may actually be a cause of the so-called sick-building syndrome, which produces allergy-like symptoms, such as eczema, headaches, asthma, and sinus problems, in office workers. Stress plays a role in exacerbating a number of skin conditions, including hives, psoriasis, acne, rosacea, and eczema. Unexplained itching may also be caused by stress.

Zouboulis et al., (2004) reported that despite the high prevalence of acne vulgaris in adolescents and the numerous reports linking stress with a worsening of this condition, few studies have actually addressed the pathophysiology of this apparent link. Previous research has examined the effect of stress on the skin microenvironment, particularly skin barrier function, cytokine secretion and T-cell activity. A study investigated by (Zouboulis et al., 2004) revealed the factors involved in acne pathogenesis sebum production and how they relate to stress and exacerbation of acne. It was found by the researchers that there was a positive and significant correlation between self-reported stress and increased severity of acne.

There is a well-known impact of skin disorders on personal life i.e. on quality of life and how stress is related to them. A study by Wolkenstein et al., (2003) showed that 28.7% of the French people having at least one skin disorder reported that it caused real impairment, which was said to be permanent in 20.6% of cases. According to the survey subjects, the most impairing skin problem was by far chronic pruritus. It was found out that skin disorders was considered as a major problem which increased the level of stress, when compared it with other problems such an diabetes, asthma etc.

According to Zachariae et al., (2004) some of the most persuasive indications of a link between stress and psoriasis came from patients themselves, with studies illustrating that 37% to 88% of patients believe stress or psychologic distress is a factor in the manifestations of their condition. In recent years, the conceptualization of stress in the context of psoriasis has developed to embrace the assertion that stress not only concerns significant life events, which have been shown to be important but also may entail chronic, recurrent, low-grade stresses or daily hassles that occur largely as a
result of living with a chronic disfiguring disease. In one of the largest surveys involving approximately 6000 patients in Norway, Zachariae and colleagues (2004) examined reports of stress as associated with disease onset and activity from patients and members of numerous national psoriasis associations. Out of 71% of members of psoriasis associations and 66% of patients examined recalled exacerbations of psoriasis at times of stress. Self-reported psoriasis “stress reactors” was more found in females and to have a family history of psoriasis, greater disease severity, higher levels of psoriasis related stress, and greater impairment in psoriasis related quality of life. The researchers found that stress aggravated the skin condition which lead to impaired quality of life, in turn the individuals suffering with psoriasis have a low self esteem. Stressful conditions in skin problems are inevitable. Stress and other negative emotions have been known to be involved in skin disorders.

A causative link between emotional stress and skin disorders has long been postulated. There is mounting evidence for the same. Bohm et al., (2004) reported that stress was recorded as the cause of acne in all the patients suffering with acne. Changes in acne severity correlated highly with increasing stress, suggesting that emotional stress from external sources may have a significant influence on acne.

According to Walker (2005) stress, and the problems relating to having the skin disease, play an important role in the maintenance of the child’s condition; treatment involving stress reduction has been shown to be effective. According to Chaturvedi et al., (2005) dermatologic disorders generally have a major impact on patients' daily activities, psychologic and emotional state, and social relationships. The intensity of impact of skin disease on an individual person is extremely variable and depends on natural history of the disorder; the patient's demographic characteristics, personality, character, and value; the patient's life situation; and the attitudes of society. Social stigma toward dermatologic disorders in the Indian society is quite widespread, especially toward leprosy. Dermatologists are expected to consider quality of life issues along with social aspects, nature of disorder,
efficacy, and tolerability of various therapeutic options to optimize relief and comfort to their patient.

Chuh et al. (2006) reported that psychological stress may be an acquired factor affecting the expression of atopic dermatitis. Specifically stress is thought to exert effects on immunomodulation which turns on a hypersensitivity response (Wright et al., 2005). Emotional stress is a precipitating factor in acute attacks of plaque psoriasis, both in children and adults. Dermatological disorders have a profound effect on the emotional and social aspects of patient’s life.

Qassim et al., (2006) reported that the possibility of an influence of stress especially of stressful life events on the course of various skin diseases has long been postulated. The results in the past have revealed that the influence of stress factor have been postulated on the course of psoriasis, vitiligo and alopecia areata. High percentage of patients with vitiligo (54.0%) and alopecia areata (62.2%) mentioned stress as cause of their disease. Statistically this was significant for vitiligo (P- 0.01708) and highly significant for alopecia areata (P- 0.00012) but not on psoriasis (p=0.656). It was also found that stress made the state of disease worse only to be highly significant in psoriasis (P= 0.00288) and significant in alopecia areata (P= 0.02141), OR =1 739 and 95 CI of OR= 1.08-2.79) but not on vitiligo (p=0.10589). The study confirmed that significant association were detected between stress factor and each of psoriasis, vitiligo and alopecia areata.

According to Diana et al., (2006) young people with acne are at increased risk of depression, anxiety and suicide attempts. Attention should be paid to their mental health, and the importance of asking directly regarding suicide is emphasized. Acne is a skin problem that commonly affects adolescents worldwide. There is an increasing recognition of the association of a skin problem with mental health. Severe acne has been associated with increased embarrassment and lack of enjoyment and participation of adolescents in social activities. There are anecdotal reports of impaired self image, self esteem, increased level of stress, depression and anger among adolescents suffering with acne.
In a study by Wahl et al., (2006), data based on survey forms completed upon admission to the dermatology ward from 212 patients with chronic dermatological diseases, 146 with psoriasis and 66 with eczema. 108 were men, average age 48 years. The Norwegian versions of the standardized survey questionnaires, Jalowiec Coping scale and Dermatological Life Quality Index, were used to evaluate coping and quality of life. It was found that optimism, belief in one self and confrontational coping strategies were most frequently used. Long duration of the disease was correlated to the belief in one self strategy, while short duration was related to supportive strategies. More frequent use of confrontational and optimistic modes was significantly related to better quality of life. More frequent use of emotional and evasive modes was significantly related to poorer quality of life. There was no significant difference between the psoriasis and eczema groups in terms of use of coping strategies, with exception of emotional strategies. Knowledge of coping strategies and quality of life among patients with chronic dermatological diseases is important for improvement in health services for these patients.

In a study conducted by Mork et al., (2006), the patients were asked about the coping strategies they used to face their disease during the last weeks before admission in a dermatology ward, and to determine and indicate how much they used each coping strategy in terms of skin disease related problems on a scale rating from 0-3, where 0 indicates non use and 3 frequent use. In this study, it was decided to use relative score. For each coping category is divided by the average score for all of the categories. Relative scores have the advantage that they compensate for discrepancies in numbers of questions in each scale as well as for individual differences in responses. Relative scores, therefore, indicate how much of a person’s coping can be related to the individual coping category. The results indicated that the optimistic, belief-in-oneself and confrontational strategies were the most frequently used among patients who were admitted to the dermatology ward for treatment of chronic dermatologic diseases.

Ahmed and Ahmed (2007) reported that presence of psychological and emotional problems is very common in general population as well as clinics of general practitioners and consultants. Disfigurement of skin can
be a potential source of emotional distress and psychiatric illness, leading to impairment of psychological adjustments. The frequency of depression among dermatological patients can be as high as 25% to 40% in comparison with the frequency of 6% to 8% in general clinics. Acne has a demonstrable association with depression and anxiety; it affects personality, emotions, self image and self esteem, feelings of social isolation and ability to form relationships. Lankveld et al., (2007) reported that most of the patients with skin disorders perceived skin deformity as annoying, making skin deformity the second main stressor of the disease, only preceded by fatigue.

The impact of acne on psychosocial health has been well documented. Psychological abnormalities include depression, anxiety psychosomatic symptoms such as discomfort, embarrassment and social inhibition, and even suicidal ideation. In a study conducted by Rigopoulos et al., (2007) effective treatment of acne has been shown to be associated with improvement in self-esteem, self confidence, and body image. In the population under study a significant percentage (64.4%) of pupils with acne believed that acne was compromising their self-image. About half of the students (91/187) considered the problem to influence relationship with friends. Both of these results confirm those reported by other studies.

According to Rehn et al., (2008) a skin disorder such as acne is a visual disease and starts in adolescents; it affects the psyche of the adolescents in a harsh manner. Adolescence is an important and vulnerable period in most people’s lives as it is the lime of transition between the dependence of childhood to the independence of adulthood. There is, however, conflicting evidence about a coexistence of acne and mental health problems. Some studies have found a strong association between stress and skin disorders in adolescents.

Weisshaar et al., (2008) investigated whether the itch severity obtained in the scoring of atopic dermatitis (SCORAD) correlated with quality of life and coping behaviour in children and parents. There were significant but low correlations between the severity of atopic dermatitis and the itch intensity. Itch and sleeplessness were significantly correlated. Significant
correlations of itch with the coping behaviour and quality of life in parents of children with atopic dermatitis were measured. The coping and itching behaviour of children (8-12 years) and adolescents (13-18 years) had higher significant correlations with the itch compared with the parents’ answers. Quality of life in children (8-12 years) and adolescents (13-18 years) showed a significant negative correlation with itch intensity. Quality of life, itch intensity and coping strategies should be considered when treating patients with atopic dermatitis.

According to Nauert (2008) current research suggests that stress may activate immune cells in one’s skin, resulting in inflammatory skin disease. Skin provides the first level of defence to infection, serving not only as a physical barrier, but also as a site for white blood cells to attack invading bacteria and viruses. The immune cells in skin can over-react, however, resulting in inflammatory skin diseases such as atopic dermatitis and psoriases. Stress can trigger an outbreak in patients suffering from inflammatory skin conditions. This cross talk between stress perception, which involves the brain, and the skin is mediated the through the “brain-skin connection.” Yet, little is known about the means by which stress aggravates skin diseases.

Yolac et al., (2008) reported that skin disorders such as acne, its appearance during adolescence, a period when frequent, intensive social and physical changes are observed, identity formation is taking place, and chronic psychological dysfunction may develop. Therefore, acne should be considered as an illness to the same degree as other dermatological illnesses are, with a potential to significantly disrupt the psychological and emotional functioning of patients. Psychiatric evaluations and psychological support should be a part of the acne treatment plan.

Stressful events that range from commonplace daily hassles to chronic calamities can produce immune alterations that are consequential for health. Psychological stress can slow wound healing, diminish the strength of immune responses to vaccines, enhance susceptibility to infectious agents, and reactivate latent viruses Glaser et al., (2009). Researchers examined how stress and anxiety influenced skin prick testing a major diagnostic
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procedure and a clinically relevant surrogate for allergic symptomatology in allergic rhinitis (AR). Researchers concluded by supporting that coping strategies are an important and a significant tool taken into consideration in the management of a skin disorder.

According to Magin et al., (2009) the relationship of skin disorders with depression and anxiety, in particular, have been examined. Studies suggest depression is more prevalent among patients with skin disorders than among control subjects. Other uncontrolled studies have found rates of depression high among those with skin disorders than general population. An association of anxiety with skin disorders has been suggested by the results of controlled and uncontrolled studies. Furthermore, overall psychiatric morbidity in controlled studies was found to be higher among those with skin disorders than in general population.

According to Burger et al., (2009) Acne can be defined as a multifactorial, chronic, common disorder of the pilosebaceous unit. The reported incidence of acne among adolescents in Western societies is 79% to 95%, although various forms of this disease can affect people of all ages. Acne has shown to have negative effects on the social functioning and emotions of patients, and can be associated with anxiety, depression and even unemployment.

In view of Verhoeven et al., (2009) many patients with skin disorders such as Acne, Psoriasis, Eczema, etc believe that there is a causal relationship between stressors and their skin disease and this relationship has received increasing attention over the years. Although some earlier studies have found that over 60 of the patients with psoriasis retrospectively report to have experienced stressful life events in the month before the exacerbation of their skin disease, evidence for a prospective relationship between stressors and disease outcome is, thus far, lacking.

According to Tran et al., (2010) skin disorders such as Atopic dermatitis, Acne are pruritic inflammatory disease in which stress clearly exacerbates itch. They worsen when patients are under stressful conditions involving hard work or conflicting human relationships. Patients feel severe itch and cannot refrain from scratching. Scratching worsens the dermatitis and
creates more itch, resulting in a scratch-itch cycle that further perpetuates a high state of anxiety. Consequently, anxiety and active disease lead to a decline in the quality of life of patients with skin disorders, which most notably include their quality of sleep. Atopic dermatitis alters the immune response in the skin, damages barrier function, and contributes to systemic dysregulation of the homeostatic neural, endocrine and immunologic pathways.

Taborda et al., (2010) reported that some dermatoses affect the personal, professional and social lives of patients as a result of their unsightliness. It is important to pay appropriate attention in the overall evaluation of these individuals in order to implement a more effective therapeutic approach. Results of the study conducted by the author revealed that one thousand patients were interviewed, 77.2 of whom were women. Most patients were in the 41-60 year age-group. Dermatoses had no effect at all on the quality of life of 21.5 of patients, a small effect in 34.2 of cases, a moderate effect in 21.6, a very large effect in 19.3 and an extremely large effect in 3.4 of patients. Patients with psychological distress reported that their skin condition had a very large or extremely large effect on their quality of life. Taborda (2010) concluded that this study highlights the fact that many skin diseases affect the quality of life and psychological state of the sufferer, affecting his/her health in general, the progression of the skin condition and the patient's response to therapy.

According to Bryner (2010) stress may trigger and aggravate the skin and impairing the skin's barrier function, making it more vulnerable to allergens, irritants and infection. Stress hormones like adrenaline, cortisol and DHEA can produce increased inflammation and sebaceous gland activity, as well as decrease immune system response.

American Academy of Dermatology, (2010) reported that dermatologists have discovered that when they treat both stress and skin health in conjunction, their patients' skin clears faster than it would have with the skin treatment alone. This is perhaps because stress reduction inhibits the release of pro-inflammatory stress hormones and other chemicals. When ongoing stress interferes with the treatment of skin conditions, dermatologists may refer patients to mental health professionals for stress management.
In a study conducted by Fava et al., (2011); a consecutive unselected series of 60 in-patients suffering from dermatologic disorders (psoriasis, chronic urticaria and fungal infections of the skin) were examined. Twenty patients with each illness were included. Stressful life events immediately before illness onset, levels of psychological distress, and alexithymic traits were investigated. Patients with psoriasis and chronic urticaria were exposed to stressful life situations before disease onset and suffered from psychological distress (anxiety, depression, inadequacy) significantly more than those with fungal infections. Implications for psychosomatic research and treatment are discussed.

According to Matzer et al., (2011) the role of psychiatric comorbidity and personality traits in skin disorders, report a clear prevalence of psychiatric comorbidity, in particular anxiety and depression, among patients with skin disorders. Psychological research on Acne and eczema has shown that the disease has a dramatic impact on patients’ lives and is often associated with adverse effects on psychological well-being and quality of life. The authors conducted a study in which they found out that even if life events and stress experiences play a minor role in the first onset of a skin disorder, the disease can lead to higher perceived stress, which could in turn, negatively affect the course of a disease via stress mediators and psychoneuroimmunological pathways. Although it has not yet been proven that psycho emotional stress can trigger skin problems in humans, neuroendocrine research supports the concept that psychological stress maybe able to influence the disease process. In addition, patients with skin disorders may have increased activity of hypothalamic-pituitary-adrenal axis, which is involved in stress response causing an inability to adapt to stressors.

2. Eysenckian Personality dimensions, Health Locus of Control, Self Esteem, Self Efficacy, State-Trait Anxiety and skin disorders

Based on the review of literature following hypotheses were proposed:

2.1 Adolescents with skin disorders were expected to score higher than adolescents without skin disorders on Neuroticism, Psychoticism and Externality.
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2.2 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Extraversion and Internality.

2.3 Adolescents with skin disorders were expected to score higher than adolescents without skin disorders on State-Trait Anxiety.

2.4 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Self Esteem and Self Efficacy.

A glance at t-ratios (Table 2.1) revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Psychoticism (t = 6.24, p < .01) and Neuroticism (t = 4.76, p < .01). Adolescents with skin disorders scored lower than adolescents without skin disorders on Extraversion (t = 8.18, p < .01). A glance at t-ratios (Table 2.1) also revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on External Locus of Control (t = 4.89, p < .01). A glance at t-ratios (Table 2.1) revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on State Anxiety (t = 4.22, p < .01) and Trait Anxiety (t = 2.56, p < .05). The table also revealed that adolescents with skin disorders scored lower than adolescents without skin disorders on Self Esteem (t = 12.64, p < .01) and Self Efficacy (t = 5.76, p < .01).

A perusal of Analysis of Variance tables (Table 3.7-3.10, 3.16-3.17, 3.22-3.23) revealed the following:

The F-ratios for group comparisons on Psychoticism (F=11.55, p < .01) emerged significant. A glance at the table of mean scores revealed that on Psychoticism, adolescents with Eczema scored the highest followed by adolescents with Psoriasis and Acne. F-ratio for group comparisons on Neuroticism emerged insignificant. Healthy controls scored the lowest on Psychoticism. The F-ratios for group comparisons on variables Internal Locus of Control and External Locus of Control emerged insignificant. The F-ratios for group comparisons on variables State-Trait Anxiety, Self Esteem and Self Efficacy emerged insignificant.

A glance at Discriminant Functional Analysis (Table 4.1) revealed that variable Neuroticism emerged to have a significant discriminating power.
between adolescents with skin disorders and adolescents without skin disorders. A glance at the table of mean scores revealed that adolescents with skin disorders scored higher than adolescents without skin disorders. Table 4.1 also revealed that variables State-Trait Anxiety and Self Esteem emerged to have a significant discriminating power between adolescents with and without skin disorders. A glance at the table of mean scores revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on State-Trait Anxiety. It also revealed that adolescents with skin disorders scored lower than adolescents without skin disorders on Self Esteem and Self Efficacy.

Thus the hypotheses were upheld in many cases. Review of earlier studies also revealed similar trends.

Graham and Wolf (1950) correlated life history material obtained from 30 patients suffering from urticaria with the appearance and subsidence of symptoms; they also made use of stress interviews. According to their clinical observations most of the patients studied adopted a rather passive attitude towards punishment from parents or superiors and, in general, not only failed to express hostility but did not even tend to feel it. This behaviour was shown to be due to early exposure to authoritarian and frightening parents who tolerated no expression of aggression. The majority of attacks of urticaria occurred at times of helpless resentment. Graham and Wolf's (1950) experimental studies indicated that the disease was the result of extreme dilatation of both arterioles and minute vessels in the skin that occurred as part of the patients' reactions to such situations. The researchers concluded that these are the same changes as those which occur after actual trauma of the skin and bring about certain personality changes in the patient.

In Acne vulgaris a widely held view is that of Mitchell Heggs (1950), who states that "acne subject is often of unstable, nervous make up and is prone to emotional disturbance", Characteristics of the acne sufferer noted by other authors were: obsessionality and feeling of inadequacy giving rise to difficulty in social contacts (Halliday, 1949), a tendency to anxiety obsessionality, and introversion (Smith 1951) and self-consciousness (Moloney, 1947).
In view of Wittkower (1953) evidence obtained regarding the personality of patients suffering from urticaria suggests that urticaria is a disease which occurs in individuals who have been or have felt chronically deprived of affection, who have always longed for it and felt frustrated because their basic need was not gratified. It has been shown that situations which objectively or subjectively intensified either their need for affection or their sense of frustration precipitated the onset or recurrence of urticaria.

According to Rogers (1961) in the field of health psychology, self-esteem is considered a personal resource and it has been found to moderate the effects of disfiguring conditions, incapacitating illness, injury or threatening life events. In the field of counselling psychology, it is seen as a dynamic personality dimension that is affected by a person's interpretation of their world, the extent to which their 'real self' measures up to their 'ideal self' and the way they believe themselves to be perceived by others. Self esteem thus plays an important role in skin disorders.

According to Lucas et al., (1961) skin diseases figure prominently in the growing literature on psychosomatic disorders. In some conditions it has come to be accepted probably correctly, that psychological factors are important in others their role is uncertain and the evidence is conflicting.

Until recently, quality of life was defined in terms of length of survival and frequency of symptoms that an ill or handicapped person had to endure, with very little consideration given to the psychosocial consequences of the illness or the effects of treatment. Quality of life is a subjective experience which involves a series of evaluations and judgments made by the patient. The importance of the subjective nature of life quality was underscored by Jachuck and his colleagues (1982) who found that although 100% of the physicians in their study reported that their patients' quality of life had improved following treatment with medication, only half of these patients actuary agreed with this. More recently, the measurement of quality of life has placed less emphasis on objective indicators of physical functioning and more emphasis on subjective psychosocial factors. This may lead to patients with skin disorders feeling more anxious.
Sigelman et al., (1986) reported that unlike adults, young children often stare openly at a child who looks different, and sometimes make hurtful comments or ask questions in quite a disinhibited way. In addition, they often react with disgust or horror without any attempt, to disguise their reaction because it may upset the person concerned. Young children have been shown to have clear preferences for children who look attractive and so a child who is visibly different can easily feel rejected or excluded by his or her peers. Managing these types, of reactions can be very difficult for a young child with a skin condition and may result in them becoming increasingly self-conscious. This obviously has an impact on the child’s self-esteem and can also set up a negative mind set which results in the child becoming increasingly sensitive and behaves aggressively to other’s comments and at worst withdrawing from or avoiding social situations because of this. This can at times also result in embarrassment and increased levels of anxiety in the child, which in turn can also lead to isolation.

Rubino and colleagues (1995) reported that patients with psoriasis have an underlying personality style which is contentious. To date research has not addressed adequately the role of normal and abnormal personality features in adjustment to the condition and in terms of interacting with the disease process in psoriasis. Rubino and colleagues (1995) assessed patients using the Millon Clinical Multiaxial Inventory and found that psoriasis patients reported higher scores and frequencies on the inventory than a comparison group of dental and surgical patients. Using a cluster analysis from the Delusions-Symptom-States Inventory, they reported that only 18.2% of patients had no personality disorder. This finding has been challenged on the basis of inappropriate control groups and poor appreciation that the psychologic stress of living with a medical condition can bring about a short-term change in one’s personality traits. One study has suggested that onset of psoriasis before age 40- a time when personality is being established-may lead to poorer emotional regulation with concomitant effects on patients’ ability to deal with stress.

Recent dermatologic literature revealed increasing emphasis on the role of emotional conflict in the exacerbation, as well as the causation, of skin
disturbances. A study conducted by Allerhand et al., (1999) was primarily concerned with an investigation of psychologic and attitudinal traits which appeared to bear a close relationship to certain skin disorders. The results revealed that there has been a growing interest in the psychologic factors related to dermatologic problems. It was noted that patients suffering from neurodermatitis had an increased level of anxiety and depression in comparison to the healthy controls. The healthy controls represented lesions of lesser severity in acne and eczema than those of the experimental design.

An area not previously researched is the role of taunting or teasing in the psychological sequelae of acne. Taunting was a considerable problem for a few subjects in a study conducted by Thompson et al., (1999) and was linked with impaired self-esteem and self-image. This finding is consistent with findings in other areas, such as eating disorders and obesity, where associations between teasing and self-esteem and self-image have been studied.

Koblenzer (2000) reported that adolescence itself is stressful. It is a time when there is a restructuring of personality and when physical changes of the maturing body must be integrated into the body image and into the sense of self. All these changes contribute to a sense of loss of control, making adolescence perhaps the most difficult time for patients to develop skin disease. The developmental task of the adolescent is to separate emotionally from the parents and define individual identity and personality. Skin problems and its relationship with personality have long been postulated. Researchers are of the view that adolescents suffering with skin problems tend to have changes in their personality characteristics because of the tension and anxiety caused by the disease. For example even mild acne may feel like the end of the world, a feeling that is aggravated by the cruel comments of siblings and peers who, like younger children, are trying to master their own anxiety about what they see. During this time, body image problems emerge, which cause a distorted perception of the severity of skin lesions. Emotional regression and academic difficulties ensue.

Kuhl et al., (2001) in a study conducted on patients with urticaria found indications of compulsive thoughts and behaviour. Researchers found a
personality style characterized by carefulness. Carefulness is our non-pathological-analogue of the compulsive personality disorder. Characteristics are: rigid perfectionism, rigid rules for behaviour, compulsive behaviour and compulsive thoughts. Patients suffering from skin disorders often show an excessive working behaviour without leisure-time or relaxation. Because this personality type is very sensitive to punishment, the focus of attention often lies on discrepancies between the actual situation and the real need status. Compulsive behaviour can be one way of avoiding negative feelings or fear. In summary, skin disorders are characterized by specific interaction of personality variables rendering as distinct entities on a psychological level.

According to Richards et al., (2001), studies of anxiety in psoriasis have tended to employ different methods of assessment and to report on different aspects of the experience. The proportion of patients meeting criteria for an anxiety disorder is notably higher than that for depression in patients with psoriasis. Richards and colleagues (2001) found 43% of attendees at a tertiary clinic for psoriasis were cases for anxiety as defined by the Hospital Anxiety and Depression Scale. This level of anxiety was much higher than figures of 20% reported in other major chronic medical conditions such as cancer. Some studies have not found that patients with psoriasis have elevated levels of anxiety. Devrimci-Ozguven and colleagues (2000) reported no significant differences between patients with psoriasis and controls on levels of anxiety as assessed by the Speilberg State-Trait Anxiety Scale. The sample size was small (n=50), and the authors emphasize that the concentration of low psoriasis severity scores may have influenced results. Fear of negative evaluation gives a particular social component to the anxiety experienced by patients with psoriasis, and social anxiety/avoidance has been reported to be higher in patients with psoriasis than in patients with atopic or contact dermatitis, acne, and vitiligo.

Shame-proneness is another personality factor linked to early relationships (Gilbert & Miles, 2002). Feelings of shame have frequently been described by some people living with chronic skin conditions. Skin problem have been associated with shame and body image primarily because most of the skin conditions are visible in nature and the patients feel very
conscious about themselves which in turn brings about a change in their personalities. Indeed, it has been argued that shame, self-esteem, appearance consciousness, fear of negative evaluation, and social anxiety are all similar concepts, in terms of their developmental origins, their relation to one's sense of being accepted by others, and their underlying cognitive processes (Thompson, 1998). This may explain why some earlier studies have found self-esteem to be closely related to adjustment (Van der Donk et al., 1994).

According to Walker and Papadopulous (2003) specific personality traits in people with dermatological problems have been studied. Researchers have examined the extent to which anger played a part in the onset and maintenance of atopic dermatitis, and whether patients felt that they could cope with and manage their anger better than psoriasis patients and matched controls. The results indicated that patients with atopic dermatitis became angry more easily but were less inclined to display their anger than were matched controls. The patients in this group were also found to be more anxious and less assertive than the controls.

According to Hull and Arcy (2003) self-esteem has been most studied in relation to acne and studies have clearly demonstrated that adolescents with acne have lower self-esteem than non-affected adolescents. Unfortunately, one of the more effective types of medication used for acne has been linked with concerns about depression and suicide in young people, although the evidence as to the drug's causal role in this is not clear as yet.

According to Fortune et al., (2004) the emotional impact of skin disease that starts in, or continues into, adulthood depends on the specific disease and the restrictions that it may impose. There may be occupations or leisure-time activities that are precluded, restrictions in dress, and expenditures in time and money that are substantial, all of which may generate resentment and interfere in relationships.

According to Willebrand et al., (2004) chronic burn-related pruritus is rather common and psychological factors such as anxiety related traits and coping are significantly associated with its presence. The contributions of
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personality and coping are more pronounced in those with persistent pruritus than in those with occasional pruritus, and the predictive model was statistically stronger for persistent pruritus. This indicates that one should think of individuals with differing amounts of pruritus as comprising separate subgroups, and that individuals in these subgroups might benefit from different means of support or treatment. More specifically, the personality trait Psychic Trait Anxiety, i.e. to worry a lot in advance and display low self-confidence, predicted a higher likelihood of reporting occasional pruritus. Persistent pruritus was predicted by submissive personality traits (Lack of Assertiveness), being more inclined to seek practical help/advice and to utilize highly structured problem solving (Instrumental Action), and being less support seeking (Emotional Support).

According to Urpe et al., (2005) personality and coping styles reflect individual differences in appraisal and response to stressors that may influence immune function. Reflecting the broader field of psychosomatic medicine at the time, much of the work before 1970 attempted to link personality traits to various diseases. For example, some researchers attempted to identify personality variables that predisposed individuals to allergic disorders; skin reactivity to injected allergens (ie, wheal and flare size) was weaker in individuals who had personality styles described as passive, negative, withdrawn, unhappy, anxious, dissatisfied, and impulsive. Clinical observations show a well defined link between acute or chronic emotional stressors, psychiatric diseases, conflict, hostility, personality, mood swings, anxiety and skin problems. Specific personality characteristics, such as academic achievement, motivation and aggression are associated with immunologic alterations.

According to Rigopoulos et al., (2006) the impact of skin problems on psychosocial health has been well documented. Psychological abnormalities include depression, anxiety psychosomatic symptoms such as discomfort, embarrassment and social inhibition, and even suicidal ideation. Effective treatment of skin problems has been shown to be associated with improvement in higher self efficacy, self-esteem, self-confidence, and body image.
Brook et al., (2006) conducted a study on 54 female adolescents diagnosed with acne. 58 adolescent girls without acne were in the control group. The results indicated that after neuroticism for the girls with acne which explained 19% of the variance, extraversion was a better predictor for the feeling of well being; while for the girls without Acne, psychoticism was a better predictor explaining 23% of the variance. The coherence levels for girls with acne were related to their tendencies of being outgoing, looking for excitement and social in relations; while for the control group, their psychoticism measure - their inability to control and inhibit themselves was more important for their feelings of well-being, and negatively related to the sense of coherence. It was found out that females with acne were more prone to emotional and psychological disturbances.

According to Jones et al., (2006) many patients with acne have self-esteem problems and difficulties with relationships. 50% of patients describe having suffered from comments or jokes about their cutaneous problem. Furthermore, the researchers have found higher unemployment indexes in individuals with acne, as well as job promotion problems in adults. Anxiety and depression are the most frequent psychological alterations, and even mild to moderate acne can be associated with significant depression and suicidal ideation. This situation contrasts with the classical view of the disease something purely physiological or even trivial.

According to Diana et al., (2006) reported that acne vulgaris is a skin disease that commonly affects adolescents worldwide. There is now increasing recognition of association of skin problems with mental health. The developmental tasks of young people including developing a sense of identity and self worth, and so they are potentially vulnerable to any adverse psychological effects associated with acne. There are anecdotal reports of impaired self-image, self esteem and socialization among people with acne, as well as increased depression, anger and unemployment. Severe acne has been found to be associated with increased embarrassment, and lack of enjoyment and participation in social activities in secondary school students.

According to Bahmer et al., (2007) emotional factors play a role in the development and course of many chronic skin diseases. Over the last few
years, evidence increasingly suggests that the human neuroendocrine network might be influenced by emotional stress. It has been shown that emotional stressors, such as life-events or daily stressors, profoundly influence immunological function. Atopic dermatitis, psoriasis and urticaria are common immunologically mediated skin diseases with complex pathogenesis. Beside genetic predisposition factors in atopic dermatitis and psoriasis, stress is regarded as an antecedent of the onset and maintenance of these diseases. Specifically, environmental factors and emotional disturbances can be regarded as stressors. The level of social support and the method of coping play an additional role in the severity and course of chronic skin diseases. Personality and skin problems has little been investigated, though the review of earlier studies shows a link between the two clearly showing a change in the personality structure of an individual suffering with a skin problem. Until now, patients with atopic dermatitis and psoriasis have been trained within the same psycho-dermatological prevention programme setting. Based on the important psychological differences Bahmer et al., (2007) found concerning affect, needs, goals and personality structure, a global and common prevention programme for both skin diseases alike is probably not effective. No specific intervention or prevention concept based on a psycho-diagnostic instrument of assessing personality aspects exists thus far for patients with psoriasis. Furthermore, existing prevention programmes are based solely on knowledge transfer, dietary advice and reduction of stress using different relaxation techniques or hypnosis. A study conducted by Bahmer et al., (2007) found out differences between in the personalities of patients between three disease groups namely Psoriasis, Atopic Dermatitis and Urticaria. These were examined with respect to various psychological variables and deviations from a group of healthy controls. A total of 56 patients with atopic dermatitis (n = 21), psoriasis (n = 20) and urticaria (n = 15) were tested with the “Assessment of personality Functioning in Therapy” Inventory, which consists of psychometric scales for basic needs (affiliation, achievement, power) enactment of needs-related behaviour, stress, emotional of needs-related behaviour, stress, emotional dispositions, cognitive styles and various self-regulation functions. Significant differences with respect to needs and motivational goals, cognitive styles and
self-regulation competence were found between the three disease groups, which showed considerable overlap between atopic dermatitis and urticaria, but only a little overlap with psoriasis. From a psychological viewpoint, patients with psoriasis seem to carry a higher risk of developing mental disorders. Patients with psoriasises showed a considerable level of helplessness. According to the learned helplessness paradigm, people become helpless when they are confronted with a situation in which they are not able to avoid a negative outcome. Usually an early onset of the disease is present in patients suffering with psoriasises and eczema but a late onset can cause a change in the personality make up and bring about a general unstability in one's attitude.

According to Hart and Valiente (2007) “Personality changes in children can be predicted by the interaction of family risk with susceptibility to autonomic arousal, with children characterized by both families at high risk and highly reactive autonomic nervous systems showing maladaptive change”. This hypothesis was tested in a six-year longitudinal study in which personality prototype, problem behaviour, and negative emotional intensity were measured at two-year intervals. The results indicated that children with exaggerated skin conductance responses, a measure of autonomic reactivity, and living in families with multiple risk factors, were most likely to develop towards an under-controlled personality type and exhibit increases in problem behaviour and negative emotional intensity. Researchers have found out that adolescents with low levels of social support are at high risk of stress, anxiety and an unstable personality. These adolescents tend to overact in normal situations and with a presence of a skin problem it only aggravates the problem.

According to Terracciano et al., (2008) personality traits are dimensions of individual differences in cognitive, emotional, and behavioral patterns hypothesized to influence health and longevity. In part, this association is thought to be based on the impact of personality on health risk behaviors, such as those contributing to obesity, skin conditions, sexually transmitted disease, or cigarette smoking, which are leading preventable causes of disability and death. In addition, personality traits are related to
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psychopathology, coping mechanisms, adherence to medical treatment, well-being, as well as interpersonal relations and social integration, which in turn are all related to health outcomes. Terracciano et al., (2008) in a study reported that adolescents with skin disorders scored higher than adolescents without skin disorders on Neuroticism and lower on extraversion scores of personality. It was found that adolescents with skin problems also had increased levels of stress, anxiety and depression.

A study conducted by Kirschbaum et al., (2008) aimed to assess personality dimensions in chronic atopic disease, i.e. atopic dermatitis and in acute manifestation of atopy (seasonal allergic rhinitis,). Further, the association of a potentially atopy-specific personality profile with atopy-relevant biological stress responses was evaluated. Subjects suffering from eczema (n = 36), or seasonal allergic rhinitis (n = 20) and non-atopic controls (n = 37) were investigated. To determine different personality domains, Spielberger’s State-Trait Anxiety Inventory (STAI), the Questionnaire for Competence and Control (FKK) and the Questionnaire for Stress Vulnerability (MESA) were administered. To assess the relation between these personality dimensions and biological stress responses, patients with eczema and healthy controls controls were exposed to a standardized laboratory stressor (Trier Social Stress Test, TSST). Endocrine (cortisol, ACTH), immune (total IgE, leukocyte subsets) and physiological (heart rates) measures were recorded before and after the stress test. When compared to healthy controls, AD and SAR patients showed significantly higher trait anxiety (STAI) and stress vulnerability in situations characterized by failure, job overload and social conflicts (MESA). Moreover, eczema subjects scored significantly lower in self-competence and self-efficacy (FKK) as well as in recreation ability (MESA). No differences in trait anxiety and stress vulnerability could be detected between eczema and seasonal allergic rhinitis subjects. Pearson correlational analyses yielded no significant correlation between the different personality domains and the endocrine, physiological and immunological stress responses. However, stress-induced increase in eosinophil number was significantly correlated with the perceived self-competence/self-efficacy in seasonal allergic rhinitis patients.
According to Dalgard et al., (2012) itch is the most common dermatological symptom and worsens with stress in chronic skin disorders such as eczema and psoriases. The general belief of a person in one's own ability to cope in stressful situations, known as self-efficacy, is relevant in the management of chronic diseases other than skin diseases. In a study by Dalgard et al., (2012) adolescents with low self-efficacy under higher stress were twice more likely to report itch than those with high self-efficacy.

3. Anger, Anger Expression Styles and Skin Disorders

Based on the review of literature the following hypotheses were proposed:

3.1 Adolescents with skin disorders were expected to score higher than adolescents without skin disorders State Anger, Trait Anger, Anger In, Anger out and Total Anger Expressed.

3.2 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Anger Control.

A glance at t-ratios (Table 2.1) revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on State Anger \( (t = 8.23, p < .01) \), Trait Anger \( (t = 5.13, p < .01) \) and Total Anger Expressed \( (t = 2.25, p < .05) \). Adolescents with skin disorders scored lower than adolescents without skin disorders on Anger Control \( (t = 6.07, p < .01) \).

A perusal of Analysis of Variance tables (Table 3.1, 3.3-3.5) revealed the following:

The F-ratios for group comparisons on variables of State Anger \( (F = 5.55, p < .01) \), Anger In \( (F = 15.73, p < .01) \), Anger Out \( (F = 5.55, p < .05) \) and Anger Control \( (F = 12.53, p < .01) \) emerged significant. F-ratios for Trait Anger and Total Anger Expressed emerged insignificant. A glance at the table of mean scores revealed that on Anger In, Anger Out and Anger Control adolescents with Psoriases scored the highest followed by adolescents with Eczema and Acne. On State Anger adolescents with Acne scored the highest followed by Eczema and Psoriases. A glance at the table of mean scores also revealed that Healthy controls scored the lowest on Anger In and Anger Out. They scored the highest on Anger Control.
A glance at the Discriminant Functional Analysis (Table 4.1) revealed that variable Trait Anger and Total Anger Expressed emerged to have a significant discriminating power between adolescents with and without skin disorders. A glance at the table of mean scores revealed that adolescents with skin disorders have scored higher than adolescents without skin disorders.

Thus the hypotheses were upheld in majority of the cases.

Review of earlier studies also revealed similar trends.

According to Johnson et al., (1987) psychosomatic research over the past 40 years has strongly emphasized the relationship between negative emotions and health problems. Much attention has been given to research relating anger-hostility to essential hypertension and heart disease. Recently, evidence has also begun to mount which suggests that the anger-hostility component of the Type A behavior pattern is the most important coronary-prone behaviour in skin disorders etc. Investigations of the associations between anger and skin problems such as acne, eczema, urticaria has yielded important findings and researchers reported that anger precipitates and aggravates skin conditions.

Johnson et al., (1987) conducted a study comparing psychological attributes of adolescents suffering with skin problems. The results indicated that these adolescents showed increased levels of anger. Investigations of the association between anger-hostility and other health problems have yielded important findings. Adolescents with skin problems reported higher levels of anger than the healthy controls.

Calikuu et al., (2002) conducted a study on thirty one patients suffering with chronic urticaria and thirty one suffering with psychogenic excoriation. All the subjects were made to fill the Trait Anger scale. The results indicated that there was a positive correlation between anger and chronic urticaria. Psychogenic excoriation, a severe and chronic psychiatric and dermatological problem, may be related to affect-regulation, particularly anger and alexithymia. Due to the fact that it has a different place among
psychodermatoses, individuals with psychogenic excoriation might benefit from learning how to regulate their affects other than by excoriation.

According to Kaymak et al., (2006) the psychiatric problems that are reported to be related to acne are: decreased general wellbeing and self-esteem, a disturbance in body perception, shyness, fear of rejection, social avoidance/withdrawal, anger, restrictions in life style, family problems, and concerned thoughts related to acne, depression, and anxiety. In previous studies Akan et al., (2000) reported that students with acne stated that they did not receive enough invitations to parties, that they did not enjoy being among other people, and they think that people stare at them. It was found out that due to reasons mentioned above there was an increased level of aggression and anger which was found in adolescents suffering with skin problems such as acne and eczema. In patients with body lesions there arises fear of physical contact, avoidance of swimming and sports and sleeping disorders. In addition, other studies reported psychological symptoms below the clinical level.

In view of Diana et al., (2006) acne has been associated with mental health symptoms such as anger, as well as impaired self esteem and social isolation, and may affect risk of suicide via these routes. Anger in particular is a negative emotion which is very troublesome for adolescents suffering with acne and people around them. Anger also becomes very unpredictable in adolescents suffering with acne, at times there is a sudden loud bout or at other times there is suppression of the same. Given the importance of self-image at this stage of development when adolescents are beginning to establish intimate relationship, it is not for fetched that acne could be an adverse factor independent of mood.

Conrad et al., (2008) conducted a study to discover whether there was a relationship between pruritus as major symptoms in acne and psoriasis and the experience of negative emotions. Forty-one acne patients and 44 psoriasis patients treated at Bonn University Hospital and 49 healthy controls were included. Patients and controls were compared on questionnaires measuring alexithymia (TAS-20), emotional distress (SCL-90-R) and anger (State-Trait Anger Inventory). Acne and psoriases patients showed higher
alexithymia, emotional distress, depression, anxiety and state anger compared with controls. State anger was the only significant predictor of pruritus severity in chronic idiopathic urticaria explaining 19% of variance. Depression was the only significant predictor of pruritus severity in psoriasis explaining 12% of variance. Findings suggest a relationship between pruritus severity and anger in acne.

Haidl et al., (2008) reported that results indicated a relationship between pruritus severity and depression in adolescents suffering from psoriasis. Adolescents with psoriasis had increased levels of stress, anxiety and anger in comparison to adolescents without psoriasis.

According to Williams (2011) anger is probably the most poorly handled emotion in our society. From time to time we all experience this very powerful feeling. Some of the common causes of anger include frustration, hurt, annoyance, disappointment, harassment and threats. It is helpful to realize that anger can be our friend or foe, depending on how we express it. Knowing how to recognize and express it appropriately can help us to reach goals, handle emergencies, solve problems and even protect our health. However, failure to recognize and understand our anger may lead to a variety of problems. Some experts believe that suppressed anger is an underlying cause of both anxiety and depression. Anger that is not expressed can disrupt relationships, affect thinking and behavior patterns, and create a variety of physical problems, such as high blood pressure, heart problems, headaches, skin disorders, and digestive problems. What's even worse is the correlation between the dangers of uncontrolled anger and crime, emotional and physical abuse, and other violent behavior opined the authors.

According to Lim (2011) repressed anger exerts pressure on an individual and one suffers from other related effects as well. It easily triggers migraines and ulcers. In the long run, it may lead to strokes or tumours. Prolonged fears and repressed anger increases tension and stress. It has been observed that increase in stress levels have been tied to an increase in the intensity and frequency of one's eczema outbreaks. Anger is considered to aggravate the skin conditions and making it worse.
4. **Family Environment dimensions, Parental Bonding dimensions and skin disorders**

Based on the review of literature the following hypotheses were proposed:

4.1 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Family Environment dimensions of Relationship, Personal Growth and System Maintenance.

4.2 Adolescents with skin disorders were expected to score higher than adolescents without skin disorders on Perceived Parental Overprotection. Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Perceived Parental Care.

A glance at t-ratios (Table 2.1) revealed that adolescents with skin disorders scored lower than adolescents without skin disorders on Family Environment Relationship Dimension ($t = 4.88$, $p < .01$), Family Environment Personal Growth Dimension ($t = 4.29$, $p < .01$) and Family Environment System Maintenance Dimension ($t = 2.84$, $p < .01$).

A glance at t-ratios (Table 2.1) also revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Perceived Parental Overprotection ($t = 2.16$, $p < .05$). Adolescents with skin disorders scored lower than adolescents without skin disorders on Perceived Parental Care ($t = 2.52$, $p < .05$).

A perusal of **Analysis of Variance** tables (Table 3.27 and 3.38) revealed the following:

The F-ratios for group comparisons on variable of Family Environment Personal Growth dimension ($F = 9.88$, $p < .01$) emerged significant. F-ratios for family Environment dimensions of Relationship and System Maintenance emerged insignificant. A glance at the table of mean scores revealed that on Family Environment Personal Growth dimension, adolescents with psoriasis scored the highest followed by adolescents with Acne and Eczema. A glance at the table of mean scores also revealed that Healthy controls scored the highest on Family Environment dimension of Personal Growth.
The F-ratio for group comparisons on variable of Perceived Parental Care ($F = 12.09, p < .01$) also emerged significant. F-ratios for Perceived Parental Overprotection emerged insignificant. A glance at the table of mean scores revealed that on Perceived Parental Care, adolescents with Acne scored the highest followed by adolescents with Psoriasis and Eczema. A glance at the table of mean scores also revealed that Healthy controls scored the highest on Perceived Parental Care.

A glance at the **Discriminant Functional Analysis** (Table 4.1) revealed that variables Perceived Parental Care, Perceived Parental Overprotection, Family Environment Relationship Dimension, Family Environment Personal Growth Dimension and Family Environment System Maintenance Dimension emerged as discriminants when adolescents with and without skin disorders were compared. A glance at the table of mean scores revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Perceived Parental Overprotection. A glance at the table of mean scores also revealed that adolescents with skin disorders scored lower than adolescents without skin disorders on Family Environment dimensions and Perceived Parental Care dimension of Parental Bonding.

Thus the hypotheses were only partially supported by results.

Review of earlier studies revealed the following trends:

**Gil et al., (1987)** found that children with skin disorders from supportive, independence-oriented and well organized families had fewer symptoms used less medication as compared to children from non-supportive and disorganized families. These associations held after controlling for health status variables such as duration of time since symptom onset. More supportive parents may give clearer and more consistent instructions about the consequences of scratching and may encourage their children to be more responsible for health care.

According to **Wade (1997)** there are several ways in which the mother-child relationship may be affected by a child with a skin condition. For conditions that are present at birth but were not necessarily expected (e.g.
birthmarks or epidermolysis bullosa), the physical appearance of the child’s skin can be very distressing. The mother’s immediate reaction may well be of shock and she is likely to need some time and possibly support to adjust to this. There is considerable variation between mothers on how they respond to a skin condition, depending on factors related to the appearance of the baby, and the mother’s own beliefs and attitudes towards physical appearance (Walters, 1997). For some mothers, a skin condition can undoubtedly make it harder for her to bond with her child, for mothers who bond well it can lead to an increased feeling of protectiveness towards the child arising out of the need to protect a more vulnerable child. In the long term it is important for the mother to be able to find an appropriate balance between caring for her child and allowing the child to develop his or her own resources for dealing with difficult situations arising from a skin condition.

According to Kellet and Gawkrodger (1999) parents may focus on children’s skin, experiencing the acne as a narcissistic injury, and putting pressure on adolescents, who, perhaps in identification with an affected parent, feel helpless, believing that they already are condemned. This feeling of helplessness may result in a failure to comply, which in turn may result in a painful power struggle with the parents. Parental pressures invariably are counterproductive, only intensifying adolescent resistance. Alternatively, the fear that by breaking out they are disappointing the parents may make the negative feelings even more intense.

In most families, the child’s mother acts as the main caregiver for the child and this seems to be particularly true for families where a child has a physical illness (Sloper, 2000). Research has therefore focused on the relationship between the child and his or her mother. For this reason, mothers are referred to as the main caregivers. Therefore, stable mothers will enhance good coping skills in the child suffering with chronic illnesses such as skin disorders, asthma etc in comparison to mothers who are unstable and are under constant stress. However, it is likely that the many of the same findings may also apply to fathers if they were in the main caring role in a family.

According to Maccoby (2000) there is clear evidence that parents can and do influence children. There is equally clear evidence that children’s
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genetic makeup affects their own behavioural characteristics, and also influences the way they are treated by their parents. All societies prescribe certain characteristics that their members are expected to possess and certain things people must not do, if they are to function adequately as members of their society. Some of these prescriptions and proscriptions are nearly universal across cultures, such as the requirement for parent, or specified parent surrogates, to provide nurturance and protection for children. In considering the role of parents, however, the authors considered the role of parents in dealing with chronic problems of their children. Organised and stable parents will instil more confidence in children to deal with chronic conditions such as skin problems, allergies etc in comparison to parents who are unstable and not organised in nature.

Fennessy et al., (2000) highlighted the dominant role of family care in the management of atopic eczema during childhood. It also points to the contingent nature of the decisions that care-givers make about management strategies. These decisions are based on the severity of symptoms and the course of the disease, as well as on the ways in which different management options impact on care-givers and children's everyday lives. The extent to which parents are able and/or willing to change daily activities and routines, to revise expectations of what can feasibly be achieved in their lives and the lives of their children, or to call on the support of others varies in complex ways. This will depend on the interaction between various social, material, emotional and psychological factors.

In view of Buske et al., (2002) the feelings experienced by the mothers of infants suffering with skin allergies are complex. Having given birth to babies who are not “perfect,” mothers may feel ashamed lesser than their peers, whose children are perceived as unblemished; and guilty because their baby suffers. They may ask, “What have I done to deserve this?” and, because they cannot soothe their babies, they may begin to question their ability to parent comparing themselves unfavorably with their own mothers, who are idealized and for whom they had never felt good enough. The anxiety generated in these mothers is picked up readily by their infants, who become even more frantic. To abort the possibility of a downward spiral, in which the
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anxiety of each feeds on the other, these mothers will do almost anything to prevent scratching. They and the infants are exhausted from lack of sleep; mothers feel inadequate and ineffective, and their time becomes monopolized by the infants, as they try constantly to soothe. Siblings feel unimportant and neglected, and marital relationships may suffer.

Gill et al., (2002) reported that the relation of stress and family environment to symptom severity in children with skin disorders like atopic dermatitis, acne, psoriasis and urticaria has been examined in the past. Forty-four children with severe atopic dermatitis and their families completed questionnaires measuring life events, chronic everyday problems and family environment. Measures of symptom severity were collected during medical evaluation and included an estimate of body surface affected by atopic dermatitis, course of atopic dermatitis symptoms over time, medication usage, and scratching intensity during the day and night. Regression analyses indicated that the measures of stress and family environment were important predictors of symptom severity even after controlling for demographic and medical status variables such as age and serum IgE level. These results have important implications for health care professionals working with children who have atopic dermatitis.

In view of Faught et al., (2002) atopic eczema is a common childhood disorder with a prevalence of 10-16% in developing countries. Caring for a child with moderate to severe eczema involves a rigorous skin treatment regime, adjustments to family lifestyle, and financial and social costs, which all can place substantial demands on the caregivers. Mothers are usually the primary caregivers and carry the major burden in caring for a child with a chronic condition. Stress will arise if mothers perceive that they cannot adequately cope with these burdens. There is little literature documenting the stress experienced by mothers who care for a child with eczema. Most studies have examined the impact of atopic dermatitis on the child, family functioning and quality of life, with a few studies examining the parent-child relationship. Studies that have reported on the experiences of mothers indicate that they describe themselves as more depressive, hopeless and anxiously overprotective. They report feeling stressed about their parenting skills, being
less efficient in disciplining their child, and less likely to feel socially supported. Studies on the family impact of atopic dermatitis have found that the chronicity of the disease, recurrent flare-ups, treatments, costs, and influences on social, career and personal parental realms can significantly compromise family functioning. Families of children with moderate or severe eczema report significantly greater negative impact on family functioning as measured by financial, social and personal domains than that reported by families of children with insulin-dependent diabetes (IDDM). The quality of life of families of children with eczema is significantly poorer than that of families with healthy children. A higher family impact and poorer quality of life are associated with increased eczema severity and more specifically with the parent caregiver's perception of severity.

According to Balakrishnan et al., (2003) atopic dermatitis (AD) or Eczema is a chronic skin condition of both children and adults and may affect 5-20% of children up to 11 years of age at one time or another. This disease has significant quality of life and economic consequences, which are not limited to the patient, but extend to the entire family unit. As one of the most common skin conditions of childhood, AD has been associated with lowered quality of life in children as well as family members. AD in children can disrupt family and social relationships, in addition to interfering with recreational activities and school. Parents have reported both high stress related to treating and taking care of the child with eczema and feelings of helplessness regarding the child's symptoms. In a German study comparing infants with eczema to normal infants, mothers of infants with eczema showed more anxious and overprotective attitudes when surveyed. In addition, the burden of caring for the child with eczema can negatively affect spousal relationships and interfere with giving adequate attention to siblings. It has even been proposed that the decreased quantity and quality of maternal touching may affect the child's development, leading to behavioural problems and worsened eczema because of life stress. In a study conducted by Balkrishnan (2003) the results revealed that the parent-caregiver's assessment of severity of the child was the most significant correlate of the family impact of the child's eczema (p = 0.65 at baseline and p = 0.38 at follow up). In multivariate
regression models, the parent-caregiver’s estimate of severity remained the single strongest predictor of family impact before and after receipt of dermatologist care, as well as the difference in impact between pre and post-dermatologist care. There was evidence to support the ability of parent-caregivers of children with eczema to accurately determine severity of their child's eczema; perceived severity is the driver of the family impact of this condition. Treatment of a child by a physician specialist is associated with reductions in both perceived severity, as well as family impact of this condition.

Walker et al., (2003) reported that the anxiety that parents feel about their child’s condition may affect the way that they behave towards them. Parents may become over-protective of their child in order to buffer them against the social and physical consequences of their illness. Similarly they may try to over-compensate for the fact that their child has to live with a chronic skin condition by over-indulging them, causing resentment in other siblings. Focusing on the needs of the sick child and disregarding or downplaying the needs of the other children in the family. Difficulties that often face a family that has a child with a chronic skin disease are the way that the illness affects the family as a whole, and how the individual members are affected. In some cases, a parent’s guilt regarding their child’s illness and need to compensate for it is expressed through an over-involvement with the child. This will inevitably have implications for how the parent will deal with the other children (Papadouplous and Walker, 2003). Another reaction of parents is one where the child is rejected because they do not feel that they can cope with the child’s illness. This may stem from the fear that if they get too close emotionally it will be too distressing for them. It may also be due to a belief that they will be letting down their child if they are unable to help them cope. Parental rejection can also occur when the disfigurement or skin disease is believed to have resulted from sin or wrongdoing (Papadouplous and Walker, 2003).

Chamlin et al., (2004) reported that parents and experts mentioned a total of 181 specific quality-of-life effects. A conceptual framework, developed from the 181 effects, contained the domains of physical health, emotional
health, physical functioning, and social functioning; each domain included effects on both the child and the parents. Atopic dermatitis greatly affects the quality of life of afflicted children and their families. The comprehensive conceptual framework summarized the ways in which atopic dermatitis affects the quality of life in young American children. Childhood atopic dermatitis have a social, emotional, and financial impact on families. Mothers of young children with atopic dermatitis reported a decrease in employment outside the home, poor social support, stress about parenting, and difficulty with discipline. Parents of children with atopic dermatitis have many worries related to disease triggers and medications use, including fear of using topical corticosteroids. Results revealed that parents report significant personal emotional effects. Guilt or self-blame was described in 12 of the 23 parent interviews. Many parents, particularly those with a history of skin problems themselves, felt personally responsible for their children’s disorder. In addition to parents’ blaming themselves, parents blamed their spouses and also felt as though relatives were blaming them and their spouses. Parents also felt responsible for exposing their children to foods or environmental allergens that they believed caused or worsened the dermatitis. The study documented that significant physical, emotional, and functional impact of atopic dermatitis on young American children and their families. Families not only needed to address the physical symptoms that their child is experiencing but also must cope with complex emotional effects and far-reaching life-style limitations imposed by this disease. In addition, the adverse reactions and advice from relatives and strangers became a constant reminder of the disease and a source of guilt and frustration to many parents (Chamlin et al., 2004).

According to Ronna et al., (2005) several studies have reported an association between family size and atopic conditions, but few have found an association between skin disorders and family size.

Dennis et al., (2006) found that children with atopic eczema were more likely to experience psychosocial difficulties than would be expected within the general population. This aim of the study conducted by Dennis et al., (2006) was to explore the relationship between child, parent and family factors in promoting positive adjustment to atopic eczema. Children aged five
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to 11 years with atopic eczema and their parents were identified from a specialist children's dermatology clinic. Seventy-four respondents completed questionnaires assessing child behaviour, parental well-being and family functioning. Parental psychological health, a supportive family environment and low impact of atopic eczema on family functioning were found to predict lower levels of internalizing behaviour (anxiety, depression and social withdrawal). These findings emphasized the importance of family and parental psychological processes rather than biomedical variables in promoting positive adjustment to atopic eczema.

Faught et al., (2007) reported that child characteristics can also contribute to parental stress. For children with eczema, mothers report significantly more behavioural problems, excessive levels of dependency/clinginess and tearfulness, and more sleep difficulties than reported by mothers of children without eczema. Parents describe their child with eczema as often being distressed, less frequently displaying positive behaviours, naughty and irritable. Children with eczema often have difficulty sleeping, scratch and itch, and waken during the night. Parents have to manage these symptoms and consequently can lose up to 1-2 hours of sleep per night, which can lead to decreased coping skills at work and at home. Mothers of children with eczema who experience a greater disruption to sleep have significantly higher levels of maternal anxiety and depression.

According to Basra and Finlay (2007) the impact of skin disease on patients' health-related quality of life (HRQoL) is well known but little work has been carried out to determine the secondary impact of a patient's skin disease on the patient's family or partner. Basra and Finlay (2007) conducted a study on 50 family members of patients attending the outpatient clinic of a hospital, with a wide range of dermatological problems and used qualitative interviews. Subjects were invited to discuss in detail all the ways in which their lives were affected by living with a patient with skin disease. Researchers found that skin diseases could significantly impair the health related quality of life of the patient's family in very diverse ways. Asking family members about this impact was greatly appreciated by them. Basra and Finlay (2007) proposed the
‘Greater Patient’ concept to describe the immediate close social group affected by a person having skin disease.

According to Arndt (2008) skin disorders such as eczema have been linked to a troubled parent-child relationship and with poor mothering, maternal rejection, and neglect. According to the object relations theory of early childhood development, the skin is essential for the infant’s perception of environment, and the infant is dependent on its mother to make sense of early sensory experiences. Early personality development is contingent upon positive outweighing negative sensory experiences. The presence of eczema affects this critical balance; distorted perception at the skin surface may cause even care givers to be experienced as “bad”. This leads to the child experiencing himself or herself as bad and powerless, fostering personality traits of dependence and insecurity.

Manzeske and Straight (2009) reported that parenting styles and emotional regulation are co-related with one another. An important aspect of development during young adulthood is young adult’s abilities to appropriately regulate positive and negative emotions in social, educational and professional milieus. Models of emotional development proposed that parenting affects the development of children’s emotion regulation (Eisenberg et al, 1988; Morris et al. 2007). Two dimensions of parenting styles ‘warmth’ and ‘control’ are related to children’s development (Grolnick et al., 2002). Warmth is parent’s expression of positive regard and parents who express little warmth are more likely to have adolescents with externalizing and internalizing problems (Garber et al., 1997).

According to Pomerantz and Wang (2009) decades of research in various countries have supported the idea that parental control undermines children’s psychological development. The researchers are of the view that adolescents who have supportive parents are less prone distress and cope better with chronic illness in comparison to children who have overprotective and non supportive parents.
According to Popliger et al., (2009) adolescents with chronic health problems who have supportive parents show lesser emotional and behavioral in comparison to children having non supportive parents.

Thompson (2009) reported that a child’s chronic illness has both direct and indirect effects on family members and their relationships. In a study conducted by Murray et al., (2007) findings indicated that families often develop a set of rules to cope with their child’s chronic illness. Distress levels tend to be higher in families who have poor cohesion, have limited access to resources, and are facing additional crises (Williams et al., 1999). Family relationships can be greatly affected as a result of a child’s chronic illness. A recent study by Murray et al. (2007) demonstrated that parents felt stronger emotional responses toward the challenges their children faced with a chronic illness and did not have the same emotional response to their other abled children.

Beijers et al., (2010) reported that parents with anxiety tend to be overprotective with their children suffering with any kind of chronic illness. Hierarchical multiple regressions show that, even after controlling for many relevant confounders, prenatal anxiety and stress predicted a considerable amount of variance in infant illnesses and antibiotic use: 9.3% for respiratory, 10.7% for general, 8.9% for skin, and 7.6% for antibiotic use. Digestive illnesses were not related to prenatal anxiety and stress. Previous researches showed parental anxiety has adverse developmental outcomes on the offspring. This may also hold true for children suffering with skin disorders.

George (2010) reported that family dynamics significantly impact health in both positive and negative ways. Having a close-knit and supportive family provides emotional support, economic well-being, and increases overall health. However, the opposite is also true. When family life is characterized by stress and conflict, the health of family members tends to be negatively affected. A family’s social support is one of the main ways that family positively impacts health. Social relationships, such as those found in close families, have been demonstrated to decrease the likelihood of the onset of chronic disease, disability, mental illness, and death. Though good familial relations and social support serve as protective factors against mortality risks
and improve overall health, studies have shown that not all familial relations positively impact health. Problematic and non-supportive familial interactions have a negative impact on health. "There is increasing evidence that poor-quality relationships can actually harm physical and mental health. Indeed, persons in unhappy marriages exhibit worse physical and mental health than unmarried persons." This could play a role in skin related disorders.

Skin problems are common among adolescents worldwide. In a cross-sectional study conducted in Saudi Arabia by Amin et al., (2011), results showed that socio-demographic correlates played a significant role in patients suffering with skin disorders. The logistic regression model revealed that large family size was a predictor for infection with both lesions, while rural residence was an additional positive predictor for pediculosis. However, higher maternal educational status was found to be possibly protective against the development of both lesions. Additional determinants revealed for superficial fungal infection included the protective effect of non-sharing of towels (OR=0.69, C.I.=0.43-0.97, p = 0.038). For pediculosis capitis, frequent showering and high family income were both negative predictors for the development of infection. The results revealed univariate and logistic regression analyses of the possible socio-demographic determinants for the three most commonly encountered non-transmissible skin disorders: acne, dandruff and eczema. Logistic regression showed that older age of the child was positively associated with dandruff and acne but negatively associated with atopic dermatitis. Higher paternal education was a negative predictor for dandruff, while it was a positive correlate for the development of acne.

5 Quality of life indices, Perceived Health Status and Skin Disorders* *

Based on the review of literature the following hypotheses were proposed:

5.1 Adolescents with skin disorders were expected to score higher than adolescents without skin disorders on Dermatology Life Index and Family Dermatology Index.

*High scores on Dermatology Life Index means that higher the score, higher is the impaired quality of life
*High scores on Family Dermatology Index means that higher the score, higher is the impaired quality of life
5.2 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Perceived Health Status.

A glance at t-ratios (Table 2.1) revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Dermatology Life Index \((t = 10.76, p < .01)\) and Family Dermatology Index \((t = 12.52, p < .01)\). A glance at t-ratios (Table 2.1) also revealed that t-ratios for Perceived Health Status did not emerge significant.

A perusal of Analysis of Variance tables (table 3.44 - 3.46) revealed the following:

The F-ratios for group comparisons on Dermatology Life Index \((F = 5.53, p < .05)\) and Family Dermatology Index \((F-ratio= 5.06, p< .05)\) emerged significant. The F-ratios for group comparisons on Perceived Health Status \((F = 5.79, p < .05)\) emerged significant. A glance at the table of mean scores revealed that on Dermatology Life Index and Family Dermatology Index, adolescents with Acne scored the highest followed by adolescents with Psoriasis and Eczema. On Perceived Health Status, adolescents with Acne scored the highest followed by adolescents with Eczema and Psoriasis with equal scores. A glance at the table of mean scores also revealed that Healthy controls scored the lowest on Dermatology Life Index and Family Dermatology Index. They scored the highest on Perceived Health Status.

A glance at the Discriminant Functional Analysis (Table 4.1) revealed that variables Dermatology Life Index and Family Dermatology Index emerged to have a significant discriminating power between adolescents with and without skin disorders. A glance at the table of mean scores revealed that adolescents with skin disorders scored higher than adolescents without skin disorders on Dermatology Life Index and Family Dermatology Index.

Thus the hypotheses were upheld in majority of the cases.

Review of earlier studies also revealed similar trends.

According to Koo and Lebwohl (2002) a psychodermatologic disorder is a condition that involves an Interaction between the mind and the skin. Psychodermatologic disorders fall into three categories: psychophysiologic disorders, primary psychiatric disorders and secondary psychiatric disorders.
Psychophysiologic disorders (e.g., psoriases and eczema) are associated with skin problems that are not directly connected to the mind but that react to emotional states, such as stress.

**Roos (2004)** reported that due to exposed localization, skin diseases have characteristic individual and social consequences as compared to other diseases. Since atopic dermatitis is characterized by a chronic inflammatory course and associated with intermittent attacks of intensive pruritus, it is more frequently associated with intra and interpersonal conflicts than other skin diseases.

According to **Shaw (2007)** the sensation of itching, or pruritus, is one of the predominant symptoms of primary dermatological illness as well as a symptom of systemic disease. Pruritus and many such skin disorders may also be associated with, or exacerbated by, a number of common psychological disorders that predispose patients to a process of psychogenic excoriation.

According to **Chiu et al., (2009)** increased numbers of studies support the pathogenic link between chronic stress and exacerbation of disease. Research shows that stress significantly slows wound healing, increases pain intensity, and slows surgery recovery rates. Evidence suggests that psychological stress may influence the course of dermatological diseases. It is well acknowledged that psychological stress plays an important role in the pathophysiology of numerous skin disorders. However, the strength of association between stress responses and the onset, recurrence or exacerbation of various skin diseases varies. It however definitely impairs quality of life of the patient.

**Smidt and colleagues (2010)** developed and tested a new instrument specifically designed to assess issues in adolescents, who were particularly vulnerable to issues of self-esteem and impaired quality of life. Skindex-Teen addresses such age-specific matters as sports participation, peer relationships, and clothing choices. In the 200 patients studied, acne was the most common skin condition. The reliability of the 21-item scale was greater than 0.4, and test-retest reliability was supported by acceptable intra-class
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correlation coefficients for the total score, physical symptoms scale score, and psychosocial functioning scale score. Numerous observations and limited studies have suggested that psoriasis increases stress, depression and has an adverse effect on the quality of life of the patients.

Kurd and colleagues (2010) mined the British General Practice Research Database to assess the association of eczema with depression, anxiety, and suicidality in a large population. Compared with 766,950 patients without eczema, 149,998 eczema patients had significantly more clinically diagnosed psychiatric diseases. Additionally, among the psoriasis patients, those with most severe cutaneous disease were more likely to have depression, anxiety, and suicidality diagnoses.

Evers et al., (2010) analyzed the effects of psychological stressors on skin disease in patients with acne. This longitudinal, prospective study assessed how stressors affect serum levels of cortisol, a key component of the hypothalamic-pituitary-adrenal (HPA) axis, in psoriasis patients. They found that peak levels of daily stressors were significantly associated with lower cortisol levels and that patients with persistent high stress had lower mean cortisol levels than patients with lower stress. The stress response involves activation of both the HPA axis and the autonomic nervous system, both of which interact with the immune system. Therefore, stressful events could exacerbate and prolong chronic inflammatory diseases such as psoriasis. Other investigators have reported a blunting of the HPA axis in some subjects with acne, which could account for inadequate secretion of cortisol and a resulting exacerbation of clinical disease.

6. Mental Health, Satisfaction with Life, Perceived Happiness Status and Skin Disorders

Based on the review of literature the following hypothesis was proposed:

6.1 Adolescents with skin disorders were expected to score lower than adolescents without skin disorders on Total Mental Health and its dimensions viz. Being Comfortable with Self, Being Comfortable with
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Others and Ability to Meet Life’s Demands; Satisfaction with Life and Perceived Happiness Status.

A glance at t-ratios (Table 2.1) revealed that adolescents with skin disorders scored lower than adolescents without skin disorders on Being Comfortable with Self (t = 7.08, p < .01); Being Comfortable with Others (t = 7.66, p < .01), Ability to Meet Life’s Demands (t = 7.11, p < .01), Total Mental Health (t = 7.95, p < .01), Satisfaction with Life (t = 6.19, p < .01) and Perceived Happiness Status (t = 3.82, p < .01).

A perusal of Analysis of Variance tables (Table 3.14 and 3.21) revealed the following:

The F-ratios for group comparisons on variables of Total Mental Health (F = 13.83, p < .01) and Satisfaction with Life (F = 6.06, p < .05) emerged to be significant. F-ratios for the variables Being Comfortable with Self, Being Comfortable with Others, Ability to meet Life’s demands and Perceived Happiness Status emerged insignificant. A glance at the table of mean scores revealed that on Total Mental Health and Satisfaction with Life, adolescents with Psoriasises scored the highest followed by adolescents with Eczema and Acne. A glance at the table of mean scores also revealed that Healthy controls scored the highest on Total Mental Health and Satisfaction with Life.

A glance at the Discriminant Functional Analysis (Table 4.1) revealed that variable Perceived Happiness Status emerged to have a significant discriminating power between adolescents with and without skin disorders. A glance at the table of mean scores revealed that adolescents with skin disorders scored lower than adolescents without skin disorders on Perceived Happiness Status.

Thus the hypothesis was upheld in majority of the cases.

Review of earlier studies also revealed similar trends.

The emotional impact felt by people who live with skin disease can lead to a ‘social death’ (McGregor, 1951) or a withdrawal from social roles. This ‘social death’ can affect the activities or behaviours in which a person engages, diminish the amount of social support that the person receives, and in turn affect the coping resources that they have to help them deal with their
condition. This pressure has the capacity to affect not only personal and social activities, such as relationships and hobbies, but also quality of life related goals and expectations. Earlier study by Graham et al., (1950) found similar results. It was found that individuals with a skin disease have low career aspirations and more negative expectations about finding life partner than those who are not affected by a skin problem.

Cash (1986) opined that body image is closely related to self-concept, the development of which may be influenced by how positively or negatively we think others appraise us, 'the looking glass self. It may be further influenced by the demands placed on the individual by their social and cultural environment. Subjective evaluations of how well a person's appearance conforms to these demands can significantly affect self-esteem and body image. Skin disease may not have to be severe for the individual to negatively evaluate their ability to conform to social standards. These social demands can be physical such as being able to play water sports in the sun without fear of exposing eczema patches or prevailing cultural beliefs and attitudes such as the belief that a tan in the summer looks attractive and healthy, and that pale or imperfect skin is unattractive.

Although acne is sometimes considered to be unimportant in comparison with other medical conditions, the associated morbidity is significant. Finlay et al., (1994) measured quality of life in 111 acne patients using the dermatology life index, Rosenberg's measure of self-esteem and a version of the General Health Questionnaire, and the SF-36. The acne patients described levels of social psychological and emotional problems that were as great as those reported by patients with asthma, epilepsy, diabetes, back pain. Researchers reported that adults with acne experienced functional and emotional effects comparable with those of patients who have psoriasis. Finlay (1994) used the Children's Life Quality Index and the Children's Dermatology Life Index to evaluate patients aged 5-16 years with various skin diseases and compared them with children suffering from other chronic medical conditions. Health-related QOL impairment in children with skin disease was at least equal to that experienced by children with other chronic medical conditions.
illnesses, but atopic dermatitis and psoriasis caused greater disability than did acne.

Finlay (1998) reported that every dermatologist is aware that many patients are profoundly affected by their skin disease. A number of surveys have confirmed this impact. In psoriasis for example, there are major psychological effects and stress associated with the sufferer. Severe psoriasis affects the ability of some to work or study. It affects sporting activities, especially where the skin is visible, as well as personal and sexual relationship. The effects on employment can have a major economic impact on the patients, and as expected, are greater for patients with severe disease. Atopic dermatitis has negative impact on affected adults. A survey of members of a national self-help group showed that in 54% of 1972 adults, work was adversely affected. Children’s lives, however, are also severely disrupted by this condition with sleep disruption in 60% and over 25% having problems with sports holidays, and school. It is clear that skin disease not only affects the patient’s life, but also has a secondary effect on the quality of life of the patient’s family or partner. In atopic dermatitis other family members have experienced sleep disturbances, altered social and holiday plans and experienced adverse effects on personal relationships.

In view of Koblenzer (1999) acne may persist or have its onset in adult life. The inter-and intra-personal issues are similar to those in other chronic dermatoses and, in adults, a problem that is believed adolescent may raise disquieting fantasies of immaturity or belief that something is seriously wrong. Patients between ages 30 and 39 were those affected most negatively and, in the majority of cases, effective treatment improved self-esteem, body image, and social assertiveness.

According to Koo and Lebwohl (2001) most authors agree that a dermal disease, which changes the appearance of patient's skin, causes the patient to react by showing abashment, anger, anxiety, depression.

Kanwar et al., (2002) reported that many skin diseases can have a profound effect on quality of life, so it is vital that dermatologists and allied health care professionals recognize their psychological impact and provide
appropriate help. Improving the physician's interpersonal skills can increase patient satisfaction, which is likely to have a positive effect on treatment adherence and health outcomes. Even minor skin conditions can have a major impact on some patients' quality of life, while others with extensive disease adopt well and have a good quality of life. Quality of life measures are therefore partly independent of the physical impairment a disease produces. Dermatologists succeeded better in establishing a good relationship with clinically more severely affected patients than with patients who were clinically mildly affected despite their quality of life being impaired. Inclusion of a patient-rated quality of life can be a more useful measure in dermatology, as it enables clinicians to perceive the patients' perception of their health status.

According to Dogra et al., (2002) disease should not be seen only in terms of its physical impact. The concept of quality of life, which includes aspects of psychological and social impairment as well as those of general physical health, is recognized as central to each person's well being. According to Dogra et al., (2002) questionnaires related to quality of health, such as sickness impact profile questionnaire, can be used to screen for general health but can also be aimed at a specific speciality or disease. The dermatology life quality index for adults and children's dermatology life quality index are among the questionnaires developed. For this purpose some tools are available for specific skin diseases, such as psoriasis disability index and the APSEAC assessment of the psychological and social effects of acne questionnaire. These and other tools for the measurement of quality of life have helped to emphasize the enormous impact that skin diseases can have on patients and their families and indicate need for interventions to enhance mental health.

In a study on dermatological patients, Abeni et al., (2002) observed a strong association between psychiatric morbidity and poorer quality of life, both measured using standard self-administered questionnaires of established validity and reliability. This association was consistent in a wide variety of skin conditions, representing a broad range of quality-of-life involvement, and different clinical severity levels. The association between psychiatric morbidity and poorer quality of life did not depend on the severity
of the skin condition. These results are of particular interest as they represent typical problems encountered by dermatologists in their daily ambulatory practices. The magnitude of the differences in quality of life between patients with and those without psychiatric disorders was often striking, and was observed in all three domains of quality of life. Differences in the Symptoms subscale are particularly interesting. A previous study by Gupta et al., (1994) patients with psoriasis, atopic dermatitis, and chronic urticaria reported that more depressed patients experienced more pruritus. The researchers observed an association between psychiatric morbidity and perceived impact of symptoms considered in the Skindex-29 Symptoms scale (eg, pruritus, burning, bleeding, pain, stinging, irritation). It is interesting to note that these differences were not observed in patients with some generally asymptomatic conditions such as nevi, vitiligo, and alopecia. This lends additional confidence in our findings and suggests that patients with psychiatric morbidity might be more burdened by symptoms, but they do not perceive “inappropriate,” nonexistent symptoms.

According to Kiebert et al., (2002) atopic dermatitis is a chronic skin disease that can have a major impact on a patient’s life, the burden of illness associated with this condition has not been well characterized. The main objective the study conducted by Kiebert et al., (2002) was to determine the health-related quality of life of patients with atopic dermatitis by disease severity and to compare it with that of the general public and of patients suffering from other chronic illnesses or skin disorders. For this purpose two hundred and thirty-nine atopic dermatitis patients aged 4–70 years completed the Medical Outcomes Study Short Form-36 Health Survey (SF-36) and the Dermatology Life Quality Index or the Children’s Dermatology Life Quality Index. These health related quality of life scores were compared by self-reported patient disease severity ratings. Results indicated that patients with atopic dermatitis had inferior scores on the SF-36 vitality, social functioning, and mental health subscales compared with individuals in the general population. Authors concluded that atopic dermatitis has an impact on health related quality of life, particularly in social functioning and psychological wellbeing.
In view of Kadyk et al., (2003) dermal diseases considerably affect patient’s mental condition, self-acceptance, social function and adaptation. Reduced self-acceptance, low self-esteem, negative body image and low sense of self-efficacy were noted in patients with visible dermal disorders. Unpleasant physical ailments (e.g. burning, itching or painful skin), and the necessary application of various agents (e.g. ointments) result in numerous changes in patient’s everyday life (impede or completely prevent normal functions), which results in a considerable mental discomfort. Thus, in most cases, assessment of the quality of life among the dermatology patients is low. A person affected by dermal problems must, in the first place, cope with his/her own emotional reactions and, in the second place, with restraints in the person’s everyday (professional, family, social) life. Progression of each disease detrimentally affecting the quality of life takes place not only on the biological, but also on the mental level. Borzecki et al., (2002) reported that patients at low mental condition or with low self-acceptance lose during the treatment the advantage of the full mobilisation of their defensive power. Patient’s mental condition and his/her self image constitute major determinants of the quality of life that are worth to be monitored not only in dermatology patients but also in other patients.

Gupta and Gupta (2003) reported that in acne and other skin disease, it was reported that psychiatric morbidity is due to the effect of the skin disease on patient’s quality of life, rather than the severity evaluation by the clinician. For this reason, it is advised to determine the psychopathology that accompanies the illness and to provide treatment by taking into consideration the psychological and social factors along with the primary dermatological factors.

In view of Sampogna et al., (2004) regardless of psychiatric morbidity, skin diseases can greatly affect patients’ quality of life. For example, eczema and psoriasis have been found to have an impact on quality of life comparable to that of cardiovascular diseases. Until now, studies on the association between psychiatric morbidity and quality of life have been focused on a specific disease, or on a small group of diseases (Sprangers et al., 2000), and no single study has described and compared the effect of psychological
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distress on the burden of a wide variety of skin conditions with different severity levels. Patients with psoriasises, eczema and chronic urticaria reported that more depressed patients experienced more pruritus. Researchers in their study observed an association between psychiatric morbidity and perceived impact of symptoms eg. pruritus, burning, bleeding and irritation.

According to Fortune et al., (2005) the consequences of psoriasis on patients’ quality of life have been well documented, and there is general consensus among research studies that objective clinical severity is insufficient as an assessment of the burden of disease. The study by Fortune et al., (2005) suggested that simply being diagnosed with the condition can carry significant emotional consequences for patients whereas another found psoriasis patients to have better health status than a comparison group of patients with atopic dermatitis. Generally the impact of psoriasis appears comparable with other major diseases, however, and patients with psoriasis have been shown to experience decrements in their quality of life comparable to that found in patients with chronic diseases such as cancer and heart disease to score significantly lower on quality of life measures and disability than healthy controls and to be willing to incur significant costs for a cure.

According to Jones (2006) the misery of living with atopic eczema (dermatitis, AD) cannot be overstated for it may have a profoundly negative effect on the health-related quality of life (HRQL) of children and their family unit in many cases. As it is one of the commonest chronic relapsing childhood dermatosis with increasing worldwide prevalence, this has major social and financial implications for individuals, healthcare providers and society as a whole. Jones (2006) explored the impact of AD on the lives of children and their family units and the use of some of the recently developed HRQL measures, which enabled investigation and categorisation of the physical, psychological and psycho-social effects of childhood eczema across all aspects of life. These effects include symptoms of itching and soreness, which cause sleeplessness in over 60%. Sleep deprivation leads to tiredness, mood changes and impaired psychosocial functioning of the child and family, particularly at school and work. Embarrassment, comments, teasing and bullying frequently cause social isolation and may lead to depression or
school avoidance. The child's lifestyle is often limited, particularly in respect to
clothing, holidays, staying with friends, owning pets, swimming or the ability to
play or do sports. Restriction of normal family life, difficulties with complicated
treatment regimes and increased work in caring for a child with eczema lead
to parental exhaustion and feelings of hopelessness, guilt, anger and
depression. The hidden costs involved in eczema management can be
significant and have particular impact on lower income families. The
impairment of quality of life caused by childhood eczema is greater than or
equal to other common childhood diseases such as asthma and diabetes,
emphasising the importance of eczema as a major chronic childhood disease

Brook et al., (2006) conducted a study on 50 female adolescents; 25
girls were diagnosed with acne and the other 25 were the control group. The
clinical implications of the study conducted by Brook (2006) were that acne is
not a trivial disease; it may seriously affect patients' life. Dermatologists as
well as other physicians treating adolescent acne should be familiar with
psychological and social consequence of acne (like embarrassment, lack of
enjoyment and avoidance of social activities), in order to assist these patients.

According to Lewis et al., (2006) chronic disease in childhood can
affect physical appearance and growth, resulting in reduced activity, pain, the
need for regular therapy and sometimes unpleasant procedures, and possible
loss of schooling. This frequently results in impairment of a child's
psychosocial development. Recognizing the critical link between physical and
psychological health allows us to develop a more holistic approach to patient
care. By attempting to measure quality of life (QoL), one can ascertain the
effects of disease upon individuals from the child's/parent's perspective and
thereafter, to some extent, be able to judge the benefit of therapeutic
interventions. Health-related quality of life (HRQL) is defined as the subjective
perception of the impact of health status, including disease and treatment, on
physical, psychological and social functioning and wellbeing. In children, a
simple way of considering quality of life is as a measure of how a child views
his/her life in relation to how he/she could reasonably expect or desire it to be.
Perception may depend not only on disease severity, but also on age, gender,
social class, ethnicity, education, anxiety level and ability to exaggerate or minimize symptoms. Family functioning, current lifestyle and past experiences are additional important factors.

In view of Brigitte (2006) there is not always a direct correlation between the severity of acne and its impact on quality of life; it can be helpful for the dermatologist to use a quality of life scale to determine the psychological impact of acne on patients. The Acne Quality of Life scale is particularly useful for evaluating anxiety and depression among adolescents with skin disorders.

According to Potocka et al., (2008) dermal diseases are often associated with remarkable changes of patient’s appearance, they may cause that the patients to develop a negative image of his/her body. The negative image of one’s own body and the accompanying powerful stress magnifies the sense of anxiety and helplessness, which may lead even to suicidal attempts. Earlier Gupta and Gupta (2005) reported that suicidal tendencies were detected in 7.2% hospitalised patients with psoriasis and in 5.6% patients with acne. In another study the same authors showed that dermal changes which were extensive or located in places critical for patient’s self-image (face, hands) might significantly contribute to the development of depressive symptoms. Chronic dermal diseases remarkably change patient’s daily routines. The limitations in patient’s private life result not only from the hard-to-treat dermal changes but also from the applied therapy. Kadyk et al., (2003) reported that It is often the case that executing normal tasks, such as shopping, cleaning or baby care are practically impossible, e.g. for patients with dermal problems located on their hands. It is quite reasonable to expect that a patient encumbered with such limitations may perceive himself/herself as useless and worthless. A perception like that may result in a negative self-image. Patient’s mental condition and his/her self image constitute major detriments on his/her quality of life.

In view of Buhlmann et al., (2008) body image is an important part of self-perception, and is closely linked with both self-esteem and quality of life. Young people frequently mention ideals involving body as commodity such as desires to barter physical might or appearance for money as a
professional athlete, entertainer, or fashion model. In nightmare self-descriptions, the body is depicted as a siren among the young; fears of falling victim to bodily addictions and carnal cravings crest around young adulthood and if during this phase in adolescence there is an occurrence of a skin problem it can have adverse effects on the mental health and quality of life of the adolescents. Other body themes such as fears of physical and mental incapacitation become more prevalent with age.

*Potocka et al., (2009)* reported that chronic skin diseases have been recognized as having a detrimental effect on patients’ quality of life, also causing considerable mental discomfort. Reduced self-acceptance, low self-esteem, a negative body image, and a low sense of self-worth have been noted in patients with visible skin disorders. In a study by *Potocka et al., (2009)* 112 patients of the Occupational Diseases Outpatient Clinic and the Occupational and Environmental Allergy Centre of the Nofer Institute of Occupational Medicine (NIOM) were examined. The General Health Questionnaire (GHQ) was used to assess the patients’ mental health; a Polish version of the Dermatology Life Quality Index (DLQI) was employed to assess life quality; and the Self-Acceptance Scale (SAS) served to obtain the patients’ self-image. Results showed that there were statistically significant differences in self-assessment of mental health and quality of life depending on one’s level of self-acceptance. People with high self-acceptance are characterized by better mental health than those with low self-acceptance ($t = 4.8; p = 0.00$). Patients with a negative self-image (compared to those with a positive self-image) also deem their quality of life to be poor ($t = 3.1; p = 0.00$). Results of regression analysis show that mental health status significantly affects the quality of life in dermatology patients; the standardized coefficient was $\beta = 0.42$ ($p < 0.0001$). Relationships have been found to exist between the patient’s mental health and both their subjective assessment of life quality and self-image. Taking into account the role of mental health as a potential determinant of quality of life among dermatology patients, and considering the strong correlation between self-acceptance and well-being, treatment should also focus on counselling.
In view of Walker et al., (2010) people with a negative body image may develop perceptions about themselves which may dictate the behaviours or activities that they engage in and the beliefs that they have about other people's reactions towards them.

**GENDER DIFFERENCES**

Based on review of literature the following hypothesis was proposed regarding gender differences:

Gender differences on psychosocial variables playing a role in skin disorders were explored.

A glance at t-ratios (Table 2.2) revealed that males with skin disorders scored higher than females with skin disorders on Anger Out (t=2.44, p< .05), Anger Control (t = 4.13, p < .01), Psychoticism (t = 3.69, p < .01), Being Comfortable with Others (t=2.79, p<.01), Total Mental Health (t = 3.56, p< .01), Stress Symptoms (t=3.75, p< .01), Internal Locus of Control (t = 2.04,p < .05), Self Efficacy (t = 2.93, p < .01) and Dermatology Life Index (t = 2.08, p < .05).

A glance at t-ratios (Table 2.2) also revealed that females with skin disorders scored higher than males with skin disorders on State Anger (t=3.31, p< .01), Anger In (t=3.68, p< .01), Social Desirability (t=4.63, p< .01), Being Comfortable with Self (t = 3.77, p < .01), Task Focused Coping (t = 4.11, p < .01), Emotion Focused Coping (t = 4.31, p < .01), Daily Hassles (t = 2.72, p < .01), Uplifts (t = 3.48, p < .01), Perceived Parental Care (t = 3.97, p < .01), Cohesion (t = 4.04, p < .01), Achievement Orientation (t = 3.99, p < .01), Intellectual Cultural Orientation (t = 2.17, p < .05), Family Environment Personal Growth dimension (t = 2.00, p < .05), Organization (t = 2.62, p < .01), Perceived Stress (t = 2.12, p < .05), Family Dermatology Index (t = 2.13, p < .05) and Perceived Health Status (t = 2.35, p < .05).

A perusal of **Analysis of Variance** tables (Table3.1-3.5, 3.7-3.26, 3.29-3.36 and 3.38-3.47) revealed the following:

The F-ratios for gender differences on variables of State Anger (F-ratio= 26.37, p< .01), Trait Anger (F-ratio= 15.34, p< .01), Anger In (F-ratio= 12.53, p< .01), Anger Out (F-ratio= 7.34, p< .01), Anger Control
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(F-ratio= 15.73, p< .01), Extraversion (F-ratio= 24.77, p< .01), Psychoticism
(F-ratio= 31.14, p< .01), Neuroticism (F-ratio= 13.14, p< .01), Social
Desirability (F-ratio=11.43, p< .01), Being Comfortable with Self
(F-ratio=17.51, p< .01), Being Comfortable with Others (F-ratio=24.05, p< .01),
Ability to meet Life Demands (F-ratio= 21.32, p< .01), Total Mental Health
(F-ratio= 25.47, p< .01), Stress Symptoms (F-ratio= 69.80, p< .01), Internal
Locus of Control (F-ratio= 3.63, p< .05), External Locus of Control
(F-ratio= 9.32, p< .01), Task Focused Coping (F-ratio= 29.36, p< .01),
Emotion Focused Coping (F-ratio= 19.79, p< .01), Avoidant Focused Coping
(F-ratio= 11.64, p< .01), Satisfaction with Life (F-ratio= 27.32, p< .01), State
Anxiety (F-ratio= 6.21, p< .01), Trait Anxiety (F-ratio= 2.73, p< .05), Self
Efficacy (F-ratio= 13.64, p< .01), Daily Hassles (F-ratio= 50.28, p< .01), Uplifts
(F-ratio= 40.84, p< .01), Cohesion (F-ratio= 5.38, p< .01), Expressiveness
(F-ratio= 5.86, p< .01), Conflict (F-ratio= 6.79, p< .01), Family Environment
Relationship dimension (F-ratio= 13.53, p< .01), Independence
(F-ratio= 8.46, p< .01), Achievement Orientation (F-ratio= 10.69, p< .01),
Intellectual Cultural Orientation (F-ratio= 7.30, p< .01), Active Recreational
Orientation (F-ratio= 4.26, p< .01), Family Environment Personal Growth
dimension (F-ratio= 9.42, p< .01), Organization (F-ratio= 5.18, p< .01), Control
(F-ratio= 4.72, p< .01), Family Environment System Maintenance dimension
(F-ratio= 3.08, p< .05), Perceived Stress (F-ratio= 37.56, p< .01), Self Esteem
(F-ratio= 87.98, p< .01), Family Dermatology Index (F-ratio= 49.41,p< .01),
Dermatology Life Index (F-ratio= 86.97, p< .01), Perceived Health Status
(F-ratio= 6.28, p< .01) and Perceived Happiness Status (F-ratio= 5.97, p< .01)
emerged significant. A glance at the table of mean scores revealed that
females with Acne, Eczema and Psoriasis scored higher than males with
Acne, Eczema and Psoriasis on Total Mental Health, Perceived Health Status,
Perceived Parental Care, Task and Emotion Focused Coping. Females with Acne
and Eczema scored higher than males with Acne and Eczema on Psychoticism,
State Anger, Anger In and Family Dermatology Index. Females with Eczema
and Psoriasis scored higher than males with Eczema and Psoriasis on Family
Environment Personal Growth dimension and Uplifts. Females with Acne scored
higher than males with Acne on
Internal Locus of Control and Anger Out. Females with Psoriasis scored higher than males with Psoriasis on Psychoticism.

Males with Acne, Eczema and Psoriasis scored higher than females with Acne, Eczema and Psoriasis on Stress Symptoms and Perceived Stress. Males with Acne and Eczema scored higher than females with Acne and Eczema on Daily Hassles and Avoidant Focused Coping. Males with Psoriasis scored higher than females with Psoriasis on Psychoticism, State Anger, Anger In, Anger Out, Family Dermatology Index and Dermatology Life Index.

A glance at the Discriminant Functional Analysis (Table 4.2) revealed that variables Internal Locus of Control, Family Environment Personal Growth dimension, Perceived Stress, Family Dermatology Index, Dermatology Index, Anger Out, Being Comfortable with Others, State Anxiety, Daily Hassles, Total Mental Health, Perceived Health Status, Uplifts, State Anger, Satisfaction with Life, Stress Symptoms and Anger In emerged to have a significant discriminating power between males and females with skin disorders. A glance at the table of mean scores revealed that males with skin disorders scored higher than females with skin disorders on Neuroticism, Social Desirability, State Anger, State Anxiety, Trait Anxiety, Perceived Happiness Status, Dermatology Life Index, Stress Symptoms, Daily Hassles, Perceived Stress and Avoidant Focused Coping. Females with skin disorders scored higher than males with skin disorders on Extraversion, Psychoticism, Trait Anger, Anger In, Anger Out, Anger Control, Total Anger Expressed, Internal Locus of Control, External Locus of Control, Self Esteem, Total Mental Health, Satisfaction with Life, Family Environment Relationship dimension, Family Environment Personal Growth dimension, Family Environment System Maintenance dimension, Perceived Parental Care, Perceived Parental Overprotection, Family Dermatology Index, Perceived Health Status, Task Focused Coping, Emotion Focused Coping and Uplifts.

Results reveal significant gender differences on psychosocial variables playing a role in skin disorders.

Review of earlier studies showed similar trends.
Schmid et al., (1996) reported that with Psoriasis, men may be more afraid than women of losing their jobs when talking time off from work for medical appointments. However, women with psoriasis experience more stigmatization than do men.

In view of Wizk et al., (1999) one of the striking findings in health research is that women consistently report poorer health status than men. A closer look at the literature reveals that this health difference typically consists of higher self-reports of physical symptoms and illness behavior by women. In her comprehensive work on gender and health, Verbrugge (1989) has gathered ample evidence for gender differences in physical symptoms and the health actions they trigger. Even without an explicit focus on gender differences, a female excess of physical symptoms typically emerges, more or less independent from symptom measure, study design and the population under study.

Williams et al., (2002) reported that the well-documented gender difference in depression among adults is thought to first emerge in adolescence. By the age of 15, girls and women are about twice as likely to be depressed as boys and men. A recent 10-year study of depression in adolescents reported that gender differences first emerged between the ages of 13 and 15 and peaked between the ages of 15 and 18. Women rate their health more poorly as compared to men. Earlier review studies have reported that in health problems such as asthma, heart diseases, skin conditions, women have reported higher levels of stress and anxiety in comparison to men.

Many previous studies have described the important role of sebum production in acne pathogenesis and treatment (Zouboulis et al., 2004). The high prevalence of acne is 95% in males and 92% in females. There is significant positive correlation between increased self-reported stress and increased severity of acne papulopustulosa.

A study of patients aged fifteen years or more with atopic dermatitis found no significant gender differences in age, duration of disease, or disease severity; however women more frequently reported their atopic
Dermatitis in all locations of their body except for the feet (Holm et al., 2004). Similarly, another study in healthy volunteers noted that women tended to have more subjective complaints of dry skin than did men, despite their being no clinical or objective differences in any measurements taken during the study (Jemec et al., 1997). The largest gender difference was in reported location of atopic dermatitis in visible areas such as head, neck and hands: 78% of women vs 55.7% of men reported disease activity in these areas, and lesions in visible areas diminished quality of life more in women than in men (Holm et al., 2004). Although a heightened sensitivity for disease may decrease quality of life more in women than in men with skin disorder in visible areas, it partly helps to explain that compared with men, women tend to be treated earlier and have better prognosis for skin cancers.

A study conducted by Schmid et al (2005), compared the Psoriasis Area and Severity Index (PASI), the ‘self-administered PASI’ (SPASI) and the ‘Questionnaire on Experience with Skin Complaints’ of 166 psoriasis patients (64 women, 102 men) in a 1-year follow-up to assess the relation between these factors over time. The results suggested a more pronounced feeling of discrimination in women with no significant somatic differences between genders at the first measurement. In a prospective evaluation the researchers found a clear proportion of ‘discordant’ courses of these parameters, mainly in women, indicating a contradictory relation of somatic improvement or deterioration vs subjective experience with skin complaints. All in all, the results indicated a moderate but significant relevance of skin state for feeling of stigmatization over time only in men, thus suggesting a considerable influence of other psychic variables, probably coping skills, especially in women.

In a study conducted by Schmid et al., (2005), results revealed a significantly greater PASI (Psoriasis Area and Severity Index) in men in their sample; in contrast to this, women scored higher with regard to disability (Psoriasis Disability Index, PDI), stigmatization (Feelings of Stigmatization-Questionnaire.), anxiety and depression (Hospital Anxiety and Depression Scale; HADS).
Comparing men and women Bahmer et al., (2005) found differences with regard to listlessness, sadness, calmness, excitement and with regard to emotions such as anger and joy. Independent of their disease, males show less calmness, less anger and less sadness than females. One explanation could be that females are likely to explain their feelings more expressively and more explicitly than males or that their thresholds for answering such personal questions is lower (Bahmer, 2005).

Bybee et al., (2006) reported that among adolescents, desires for physical beauty and physical metamorphosis are at their zenith. Young people also frequently mention ideals involving body as commodity such as desires to barter physical might or appearance for money as a professional athlete, entertainer, or fashion model. In nightmare self-descriptions, the body is depicted as a siren among the young; fears of falling victim to bodily addictions and carnal cravings crest around young adulthood. In contrast other body themes such as fears of physical and mental incapacitation become more prevalent with age. Studies have revealed that women are more conscious about their body than men.

Harry et al., (2007) reported that gender differences are partly influenced by cultural expectations as well as by the surrounding environment and these differences help determine patients’ responses to their dermatologic conditions as well as the degree to which they may become functionally impaired in society.

Honman and Boyatzis (2009) found that physical appearance concerns are of more significance to females than males. According to studies, men report higher body satisfaction and lower anxiety about an aging appearance than women. Acne is a skin condition which adversely affects women in comparison to men. Halvorsen et al., (2009) reported the prevalence of acne among males with mental distress was significantly higher than females with mental distress.

According to Barreto et al., (2009) the magnitude of association between self-perceived health status and chronic diseases such as asthma, diabetes, eczema, psoriasis, limited daily activities due to health conditions
and health behaviours seems to vary according to gender. Barreto et al., (2009) found out that the association between self-perceived health status and chronic diseases showed that social and psychosocial determinants have a stronger impact on women's health while behavioral determinants play a major role on men's health. While men are less likely to report health conditions than women, they more often perceive their health as poor.

Chen et al., (2010) reported that males with skin disorders are generally more commonly afflicted with infectious diseases while women are more susceptible to psychosomatic problems, pigmentary disorders, certain hair diseases, and particularly autoimmune as well as allergic diseases. Significantly, more female sex-associated dermatoses can be identified than the male sex-associated dermatoses. Dermatoses in the genital area differ between men and women. Gender differences also exist in the occurrence and prognosis of certain skin malignancies. The mechanisms underlying gender differences in skin diseases remain largely unknown. Differences in the skin structure and physiology, effect of sex hormones, ethnic background, socio-cultural behaviour and environmental factors may interact to exert the influences.

Haskell et al., (2011) reported that women were more likely to have musculoskeletal and skin disorders, mild depression, major depression, and adjustment disorders, than men. The researcher reported that in case of acne; a skin condition women seem to have higher levels of stress and anxiety in comparison to men but in case of skin conditions like eczema, urticaria and psoriasis men scored higher in stress and anxiety in comparison to women.

This study has brought to the fore the detailed profiles of the adolescents, in terms of, their skin problems. The analysis indicates a large number of differences between the healthy and those with skin problems. The problem specific as well as gender specific differences have highlighted the psychological characteristics or consequences or both. With this study the frontiers of health psychology are extended to psycho-dermatology.