



## The Role of Emotional Factors in the Course of Psoriasis

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### Introduction

Psoriasis is a common, genetically determined, chronic papulosquamous disease of the skin and joint, characterized by the presence of sharply demarcated, dull-red scaly plaques, particularly on extensor prominence and in the scalp. The disease is enormously variable in duration and extent.

Psoriasis affects 1-2% of general population. Females tend to develop psoriasis earlier than males. Patients with a family history of psoriasis tend to have an earlier age of onset. The sex-ratio is equal.

Aetiology: Psoriasis appears to have a multifactorial aetiology.

Predisposition: Population surveys, twin studies pedigree analysis and HLA studies suggest genetic basis for psoriasis. It is three times commoner in psoriatic sibships, one of whose parents has the disease.<sup>1</sup>

Provocation: Several factors are now accepted as of potential importance. Trauma, infection have been observed to be responsible for psoriatic provocation. There are peaks of incidence at puberty and at menopause suggesting the role of endocrine factors. Metabolic causes e.g. hypocalcaemia following accidental parathyroidectomy has precipitated psoriasis.

Drugs like antimalarials, beta-adrenergic blockers sudden withdrawal of corticosteroid therapy, lithium, alcohol seem to aggravate psoriasis. The role of psychogenic factors has been discussed in more detail in the following pages.

Pathogenesis: Hyperplasia and neutrophilic infiltration of the epidermis as well as papillary vascular dilatation and congestion are seen in classic plaque type psoriasis. Accelerated epidermal turnover and definite keratocyte maturation results in visible exfoliation of the skin. Vascular changes lead to erythema whereas dense neutrophilic infiltrate may lead to sterile intraepidermal pustules in pustular psoriasis.

Other skin diseases may coexist or alternate with psoriasis e.g. seborrhoeic dermatitis, eczema, lichen simplex, lichen planus. Arthritis, gout, diabetes mellitus, hypocalcaemia, intestinal disease and malabsorption are also associated with psoriasis.

Complications are uncommon and may include secondary infection, eczematization, itching, postulation, hepatic or renal failure, arthritis, amyloidosis, tumor formation etc. Psoriasis still remains a chronic and unpredictable disease. The treatment mainly consists of topical bland emollients like white soft paraffin, oral methotrexate, retinoids, cyclosporin, occasionally

systemic steroids, and PUVA therapy. The following review of literature throws light on the need for identifying the psychosocial aspects of the disease and plan appropriate interventions which will go a long way in the overall management and outcome of the disease.

In infancy and early childhood, the sensory function of the skin plays critical role in growth and development. It has been shown that human preterm neonates who received tactile and kinesthetic stimulation gained weight more rapidly, were more alert, and exhibit more mature neurologic reflexes than controls. Even though only 6.5% of patient's of psoriasis develop their disease before the age of five years, it is important for the physician to ensure that these patients receive adequate cutaneous stimulation from their care-givers, whose initial reaction may be to avoid touching the patient<sup>02</sup>.

Over one third of patients with psoriasis first develop their disease before the age of 20 years. During adolescence, an individual's self-esteem and body image are largely contingent upon peer approval. Development of cosmetically disfiguring psoriasis, which may be associated with increased self-consciousness and social disapproval, can culminate in serious psychological and body image problems. In some cases the psychological impact of cosmetic disfigurement may also result in academic underachievement.

When psoriasis occurs in later life, the concurrence of other major life changes may alter the patient's perception of the disease. Such patients may be attempting to regain control over their lives by focusing on aspects of their life that they believe they can control, such as some aspects of their physical appearance. This may lead to overconcern about the cosmetic impact of the disease. Such psychological issues need to be investigated early in treatment, as it is likely that many patients will not be satisfied with treatment outcome if these issues are not addressed.

Many studies over decades attest to the emotional misery and disruption patients experience in their interpersonal relationships, inner lives and daily activities. Embarrassment and depression, interpersonal anxiety, and difficulty functioning at work, as well as limited opportunities, family frictions, and sexual inhibition may be linked to psoriasis<sup>03,04,05</sup>. Compared with men, women have been found to experience greater interference with their social and sex lives, with relations with other women and men, as well as subjective stress and worry in most studies<sup>06</sup>.

It is therefore decided to do an in-depth study of patients of psoriasis and to divulge into their psychological aspects.

### **Aims and Objectives**

1. To study the role of emotional factors in the course of psoriasis.
2. To study the impact of the disease on various psychosocial aspects in patients of psoriasis.

### **Material and Methods**

A comparative study between patients of psoriasis (study group) and matched control group consisting of people without psoriasis, was planned. A sample of 30 patients diagnosed as having psoriasis, attending the skin outpatient department of a general hospital were randomly selected for the study. The control group consisted of relatives of patients matched for age and sex. An informed consent was obtained.

They were administered a semi-structured proforma which consisted of socio-demographic profile, details about the disease, questions on psychosocial consequences like worry stigmatisation, attempts to hide the disease and impact on various spheres of life. The psychiatric comorbidity was clinically assessed based on Diagnostic and Statistical Manual – IV criteria; the prevalence of anxiety, depression, emotional factor, stressful life events. The scales used were:

**1. Hospital Anxiety and Depression Scale (HADS)<sup>07</sup>**

It is a self assessment scale developed and found to be a reliable instrument for detecting states of depression and anxiety in the setting of a hospital outpatient clinic. There are eight items each for the depression and anxiety subscale. Scores of 8 or more were taken as significant. The reliability of the finding are that, for the depression subscale, there are 1% false positives and 1% false negatives, and for the anxiety subscale, there are 5% false positives and 1% false negatives.

**2. Hindi version of factor C of the sixteen personality factor questionnaire (16 P F)<sup>08</sup>.**

16 PF is an objectively scorable test. There are 16 primary dimensions and 8 secondary dimensions. Factor C provides score on the emotional maturity. The person who scores low on factor C tends to be low in frustration tolerance, easily emotional, having neurotic symptoms. The person who scores high on factor C tends to be emotionally mature, stable, and realistic about life.

**3. Presumptive stressful life events scale (PSLES)<sup>09</sup>:**

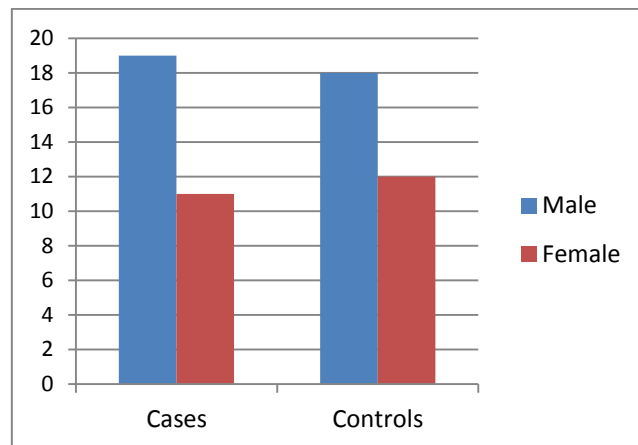
The PSLES was derived from the Holme’s and Rahe’s social readjustment Rating Schedule by Gurmeet Singh et al, for the Indian population. The scale items have a presumption stress score. By adding this score during a year, a life-crisis score can be obtained for that year. As the severity of life crisis increases from mild (150 – 199) to moderate (200 – 299), to major (over 300), susceptibility to illness rises progressively.

**Results**

**Sociodemographic Profile**

**Table -1: Sex Distribution**

	Cases	Controls
Male	19	18
Female	11	12

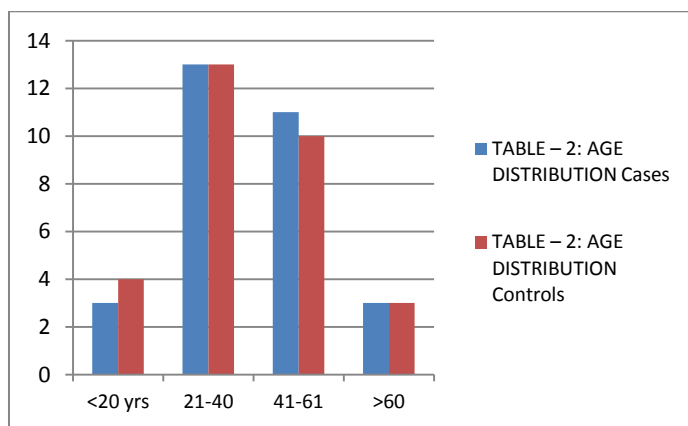


63.3% of patients were males and 36.7% were females. in cases whereas in controls 60% were males and 40% were females

**Table – 2: Age Distribution**

Age (yrs)	Cases	Controls
<20 yrs	3	4
21-40	13	13
41-61	11	10
>60	3	3

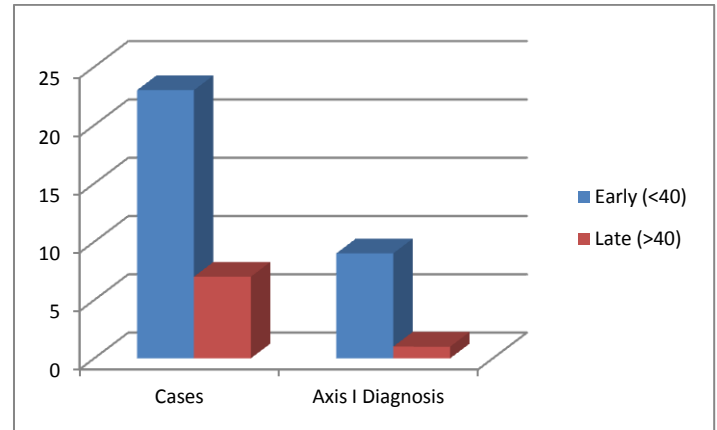
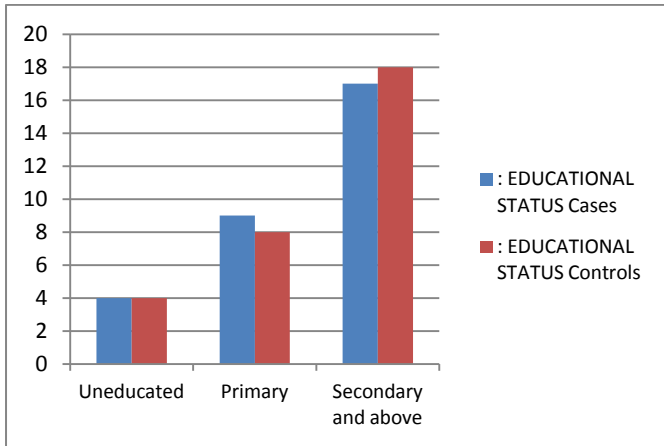
On the 30 patients, 10% were below 2 years of age, 43.3% were between 21-40 years, 36.7% were between 41-60% and 10 years were above 60 years age.



**Table – 3: Educational Status**

	Cases	Controls
Uneducated	4	4
Primary	9	8
Secondary and above	17	18

13.3% patients were uneducated, 30% patients had primary education and 56.7%, patients had minimum secondary education.



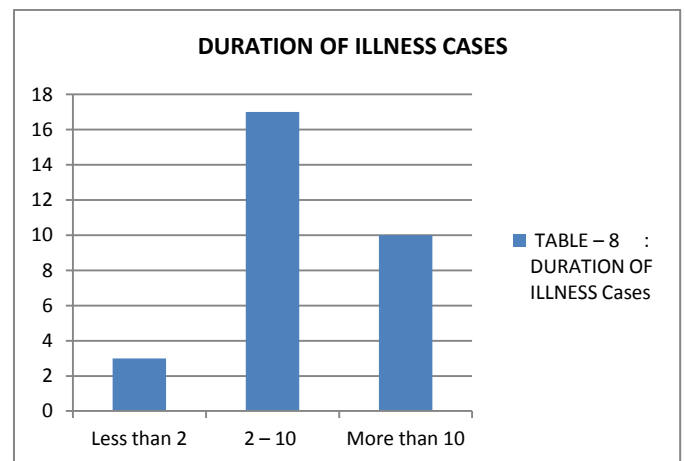
**Table – 4: Occupational Status**

Occupation	Cases	Controls
Unemployed	7	3
Employed	16	18
Retired	1	2
Housewife	6	7

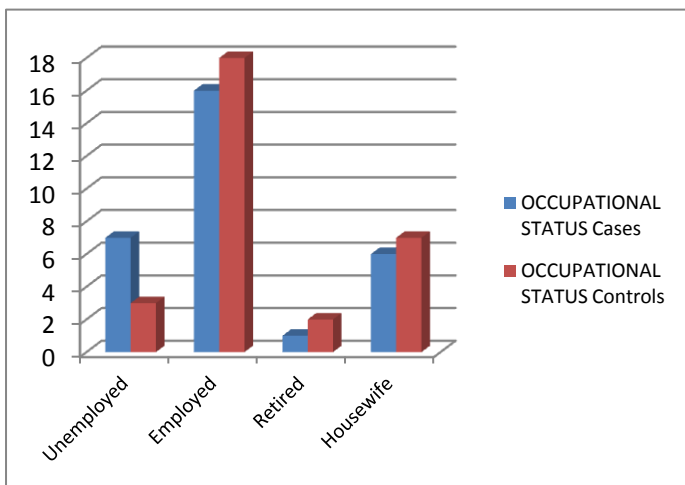
23.3% patients were unemployed 53.4% were employed, 20% were housewives and 3.3% were retired people.

**Table – 06: Duration of Illness**

Duration	Cases
Less than 2	3
2 – 10	17
More than 10	10



10% of the patients had psoriasis for less than 2 years, 56.7% were suffering for 2–10 years and 33.3% for more than 10 years.



**Table – 5 Age At Onset**

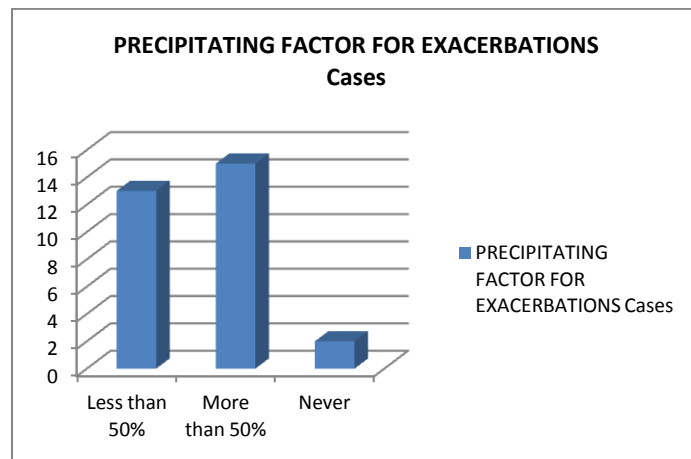
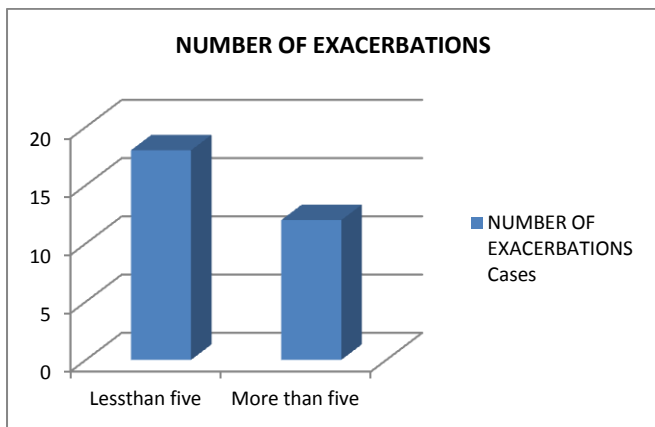
Age at onset (yrs)	Cases	Axis I Diagnosis
Early (<40)	23	9
Late (>40)	7	1

Chi-square test with Yate’s correction: P>0.005.

**Table – 7 Number of Exacerbations**

Exacerbations	Cases
Less than five	18
More than five	12

60% patients had history of 5 or less exacerbations while 40% patients had more than 5 exacerbations.



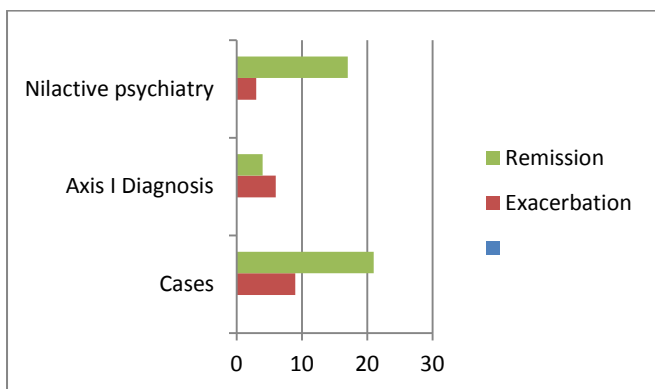
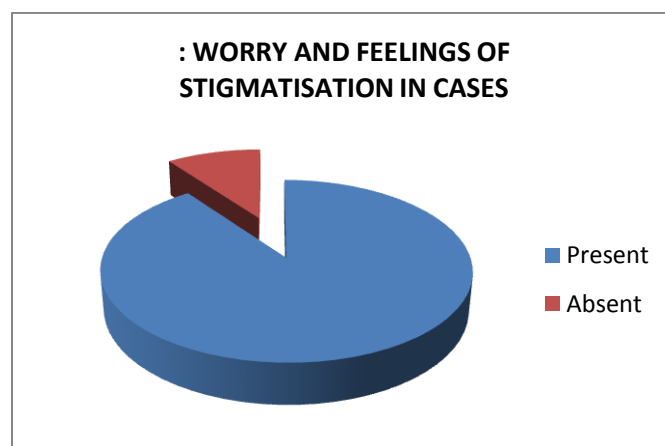
**Table – 08** Course of Psoriasis

Course of disease	Cases	Axis I Diagnosis	Nilactive psychiatry
Exacerbation	9	6	3
Remission	21	4	17

**Table 10** Worry and feelings of stigmatisation

Worry and Stigma	Cases
Present	27
Absent	3

Chi-square (Yate’s correction) = 4.45, df = 1 P <0.05 = statistically significant



**Table – 09** Precipitating factor for first Episode

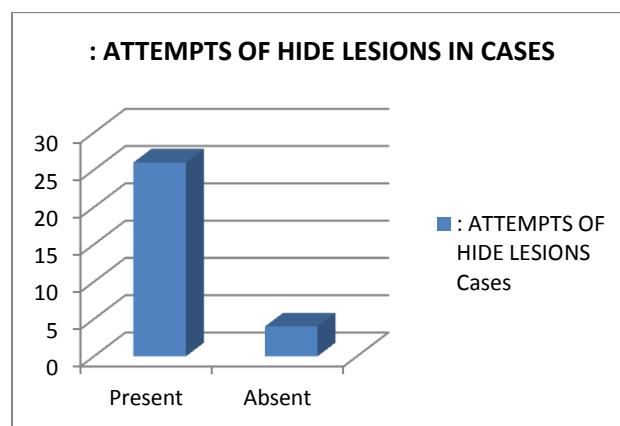
Precipitating factor	Cases	Percentage
Present (a) Physical	7 (36.8%)	63.3%
(b) Emotional	12 (63.2%)	
Absent	11	36.7

**Table – 11** Attempts of hide lesions

Attempts to hide lesions	Cases
Present	26
Absent	4

**Table 09A** Precipitating Factor For Exacerbations

Precipitating factor	Cases
Less than 50%	13
More than 50%	15
Never	2



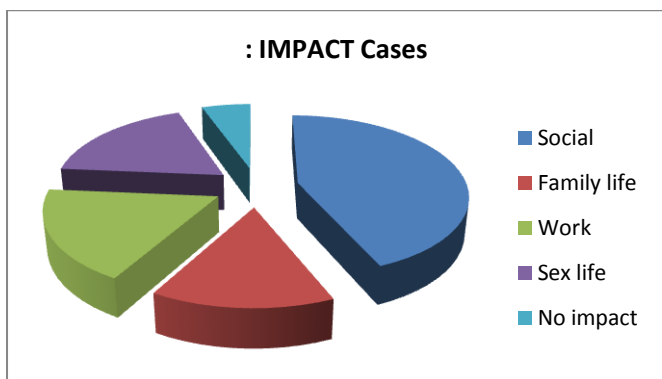
63.3% of patients had a precipitating factor prior to appearance of disease, out of which 63.2% were emotional factors and 36.8% were physical factors.

90% of the patients expressed worry and feelings of stigmatisation due to psoriasis. 86.7% of patients made attempts to hide their lesions

usually by special clothing or by avoiding people. This shows that patients attempt to hide lesions due to feelings of stigmatisation.

**Table – 12 Impact**

Impact	Cases
Social	24
Family life	8
Work	10
Sex life	10
No impact	3



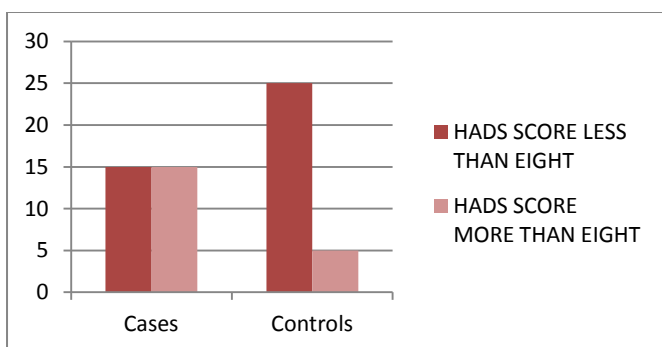
90% of the patients reported impact of psoriasis on various spheres of their life. 80% patients reported impact of the disease on their social life, which is in keeping with the study done by Ramsay et al 1988<sup>48</sup> which reports the same in 70% patients. 33.3% of the patients reported impact on their sex lives and work performance.

**Table – 13 HADs Score For Anxiety**

HADs scores for anxiety	Cases	Controls
<8	18 (60%)	27 (90%)
≥8	12 (40%)	3 (10%)

(Yates correction) Chi-square value = 5.67; df = 1; P < 0.05

HADs scores for depression	Cases	Controls
<8	15 (50%)	25 (83.4%)
≥8	15 (50%)	5 (16.6%)



Chi-square value = 7.5 df = 1 P < 0.05 = significant

There was a statistically significant difference in HADS score between cases and controls, suggesting higher prevalence of anxiety and depression in psoriasis patients than controls

**Emotional Factor**

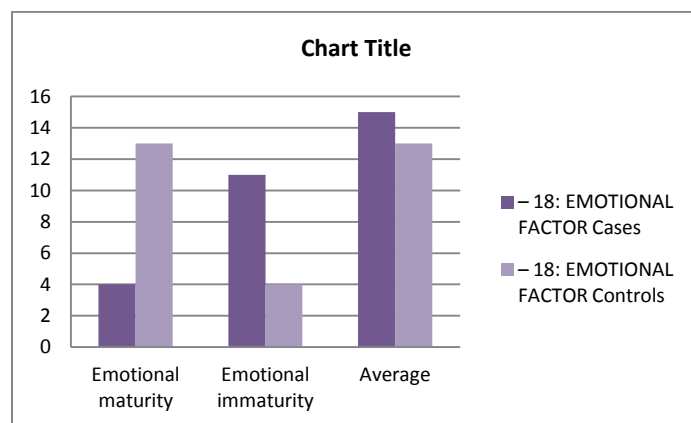
**Table – 14 Emotional Factors**

16 PF C-factor	Axis I diagnosis	Cases	Controls
Emotional maturity	0	4	13
Emotional immaturity	10	11	4
Average	0	15	13

Chi-square value = 8.16

df = 2

P < 0.05 statistical significant



Emotional immaturity was found in 36.7% of patients of psoriasis. Out of which 91% patients had Axis-I psychiatric diagnosis, suggesting adverse effect of emotional factor on the course of psoriasis.

**Discussion**

Psoriasis is a common, genetically determined, chronic papulosquamous disease of the skin and joint, characterized by the the presence of sharply demarcated, dull-red scaly plaques, particularly on extensor prominence and in the scalp. The disease is enormously variable in duration and extent. Psoriasis affects 1-2% of general population. Females tend to develop psoriasis earlier than males. Patients with a family history of psoriasis tend to have an earlier age of onset. The sex-ratio is equal. Psoriasis appears to have a multifactorial aetiology. A comparative study



between patients of psoriasis (study group) and matched control group consisting of people without psoriasis, was planned. A sample of 30 patients diagnosed as having psoriasis, attending the skin outpatient department of a general hospital were randomly selected for the study. The control group consisted of relatives of patients matched for age and sex. An informed consent was obtained. 63.3% of patients were males and 36.7% were females. in cases whereas in controls 60% were males and 40 were females. Of the 30 patients, 10% were below 2 years of age, 43.3% were between 21-40 years, 36.7% were between 41-60% and 10 years were above 60 years age. 13.3% patients were uneducated, 30% patients had primary education and 56.7%, patients had minimum secondary education.

23.3% patients were unemployed 53.4% were employed, 20% were housewives and 3.3% were retired people. Early onset of psoriasis was not found to have a statically significant correlation with psychopathology. This is in contrast to the study done by Gupta et al (1996)<sup>10</sup>, which reported that early onset psoriasis has more psychopathology than late onset psoriasis. 10% of the patients had psoriasis for less than 2 years, 56.7% were suffering for 2–10 years and 33.3% for more than 10 years. 60% patients had history of 5 or less exacerbations while 40% patients had more than 5 exacerbations. Chi-square (Yate's correction) = 4.45, df = 1 P <0.05 = statistically significant .30% of the patients were in exacerbation while 70% were in remission. 60% of patients who had an Axis-I psychiatric diagnosis were in exacerbation indicating that psychopathology is high when the patient is having an exacerbation of psoriasis. This is in agreement with the study done by Gaston et al(1994)<sup>11</sup>. 63.3% of patients had a precipitating factor prior to appearance of disease, out of which 63.2% were emotional factors and 36.8% were physical factors. Study by Polenghi M.M. et al (1994)<sup>12</sup> showed similar observations reporting 72% and Alabadie<sup>13</sup> reporting 56% of patients of psoriasis having precipitating stressor before the

onset of the disease. .43.4% of the patients reported a precipitating factor for more than 50% of their exacerbations, which is in agreement with the study done by Farber et al who reported the same in 33% of patients of psoriasis<sup>9,10</sup>. .90% of the patients expressed worry and feelings of stigmatisation due to psoriasis. 86.7% of patients made attempts to hide their lesions usually by special clothing or by avoiding people. This shows that patients attempt to hide lesions due to feelings of stigmatisation. 90% of the patients reported impact of psoriasis on various spheres of their life. 80% patients reported impact of the disease on their social life, which is in keeping with the study done by Ramsay et al 1988<sup>05</sup> which reports the same in 70% patients. 33.3% of the patients reported impact on their sexlives and work performance. Similar results were found in study done by Gupta et al 1990<sup>14</sup>, which reports the same in 42% of patients. Thus, psoriasis has substantial impact on the quality of life. Women are more likely than men to report impairment. The impact decreased with increasing age, which may be due to better understanding of the disease process and a healthier acceptance and coping with the disease. Chi-square value = 7.5 df = 1 P < 0.05 = significant. There was a statistically significant difference in HADS score between cases and controls, suggesting higher prevalence of anxiety and depression in psoriasis patients than controls. Emotional immaturity was found in 36.7% of patients of psoriasis. Out of which 91% patients had Axis-I psychiatric diagnosis, suggesting adverse effect of emotional factor on the course of psoriasis.

### Conclusions

Psoriasis is a chronic, recurring and cosmetically disfiguring disease, which has been shown to have significant impact on the patient's day to day life, self esteem, self-image and even their identity and sense of self. The presence of a coexisting psychiatric disorder greatly affects the quality of life, treatment, and outcome of the disease. Emotional factors and poor coping strategies are

associated with poorer prognosis. The major methods for dealing with psoriasis should include a healthy doctor – patient relationship, education of the patient and community about the actual nature of the disease, identification of influential factors and inclusion of more structured therapeutic strategies like pharmacological treatment of coexisting disorders, psychotherapeutic measures like individual and group therapies, behavioural therapies stress management and use of self – help groups.

### References

1. Rook A., Wilkinson D.S. (1979): Psychocutaneous disorders : Textbook of Dermatology. Oxford., Blackwell scientific publications.
2. Gupta M.A., Gupta A.K., Charles N., Ellis, John V. Voorhees; some psychosomatic aspects of psoriasis. *Adv. Dermatol (US)*, 1990, (5) p. 21 - 30.
3. Jowett S. Ryan T. Skin disease and handicap, an analysis of impact of skin conditions. *Soc. Sci. Med. (UK)* 1985, 20, P. 425 – 9.
4. Mazzetti M., Mozzetha A., Soavi G.C., Andreoli E.: psoriasis, stress and Psychiatry : Psychodynamic characteristics of stressors. *Acta Derm. Venerol Suppl.* 1994, 186 : p. 62 – 4.
5. Ramsay B. and Myra O'Reagan: A study of the social and psychological effects of psoriasis. *Br. J. dermatol* (1988), 118, 195 – 201.
6. Ginsburg I.H., Link B.G.: Psychological consequences of rejection and stigma feelings in psoriasis patients. *Int. J. Dermatol (U.S.)* 1993, 32 (8) p. 587 - 91.
7. Zigmond A.S. & R.P. Snaith : The hospital Anxiety and Depression scale. *Acta psychiatr. Scand.* 1983 : 67 : 361.
8. Kapoor S.D: 16 Personality factor questionnaire, Form E., VSJ 1980 Hindi edition.
9. Gurmeet Singh, Dalbir Kaur, Harsharan Kaur : Presumptive stressful life events scale (PSLES) – A new stressful life events scale for use in India. *Ind. J. psychiatry* (1984), 26 (2),107 – 114.
10. Gupta M.A., Gupta A.K., Wateel G.N.: Early onset (<40yrs) psoriasis is comorbid with greater psychopathology than late onset psoriasis : A study of 137 patients. *Acta Derm Venerol;* 1996, 76 (6) : 464-6.
11. Gaston L., Lassunde M., Crombez et al: Psoriasis & stress. *J. M. Acad. Dermatol*, 1987, 17 (1) p. 82-6.
12. Polenghi M.M., Molinari E., Gala C., Guzzi R., Finzi A.F.: Experience with psoriasis in a psychosomatic dermatology clinic. *Acta Derm. Venerol. Suppl.* 1994, 186, p. 65 – 6.
13. Al Abadie M.D., Kent G.G., Gawkrödger D.J.: The relationship between stress and the onset and exacerbation of psoriasis and other skin conditions. *Br. J. Dermatol (England)* Feb. 1994, 130 (2), p. 199-203.
14. Gupta M.A., Gupta A.K., Charles N., Ellis, John V. Voorhees; some psychosomatic aspects of psoriasis. *Adv. Dermatol (US)*, 1990, (5) p. 21 - 30.