

Psychiatric morbidity in psoriasis patients

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Summary

Psoriasis is one of the established chronic dermatological disorders which exacerbate and triggers in stressful life condition. Sometimes it may causes disfigurement that enhances stress. In long run majority of patients get depressed and also show symptoms of anxiety and depressive disorder. This was a cross sectional study, conducted in the department of psychiatry in collaboration with the department of dermatology and venereology of Sylhet MAG Osmani Medical College Hospital, Sylhet, Bangladesh during the period from January 2013 to December 2013 to evaluate the psychiatric morbidity among the psoriasis patients and healthy controls and compare with them. For this purpose, 50 patients with psoriasis of 18 years to 65 years of age were included and categorized as group A where another 50 age and sex matched healthy individuals were included as group B by consecutive, convenient (non-probability) sampling technique. Patients having any past or family history of psychiatric disorder, substance abuse, history of any chronic medical illness, history of long term corticosteroid therapy and obese patients were excluded from the study. After taking informed consent respondents were interviewed using data collection sheet containing socio-demographic and other information which was structured and fix response type. A General Health Questionnaire (GHQ) 12 Bangla version was supplied to the patients and advised to fill up the questionnaire. Those who scored 15 or above points were further evaluated by mental state examination and Diagnostic and Statistical Manual of Mental Disorders (DSM) IV Text Revision (TR) criteria for the diagnosis of psychiatric disorders. All psychiatric disorders were diagnosed clinically and verified by consultant psychiatrist. Ethical issues were maintained properly and an informed written consent was taken from every patient. After collecting data, editing was done manually and was analyzed with statistical package for social sciences (SPSS) version 21. The results showed that, the mean age of the respondents was 36.5 (SD±13.5) and control 36.0 (SD±14.4) years which was almost identical to control group (p=0.914). Psychiatric morbidity was most frequent in psoriasis group (62.0%) as compared to control group (20.0%) (p<0.001). The most common psychiatric disorder was major depressive disorder (32.0%) followed by generalized anxiety disorder (18.0%), dysthymic disorder (6.0%), somatoform disorder not otherwise specified (NOS) (4.0%) and adjustment disorder (2.0%). The results of this study suggest that a significant number of patients with Psoriasis suffer from psychiatric disorder than healthy control group.

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Introduction

Psoriasis is a lifelong chronic and recurrent disease of the skin with various morphological skin lesions, which requires time and appropriate medical care. The lesions are mainly over the extensor surfaces (more on elbow, knee), scalp, sacrum, umbilical region, palm, soles, fingernails, toenails and soft tissues of genitals and joints.¹ Psoriasis occurs globally but the incidence varies among people throughout the world. It has been seen that, about 1-3 % of population suffering from Psoriasis and more common in men than women.² Existing treatments are not

effective for many people with psoriasis. Medical assistance might not be appropriate or accessible in terms of cost effectiveness and in compliance. As many as 30 % of people with psoriasis will be diagnosed, a specific type of arthritis will occur, which would be painful and debilitating, cause severe joint damage.³

Among many dermatological conditions in which patient suffer from significant psychiatric disorders, the proportion of patients with psychiatric disorders is much more common in psoriasis. Prevalence rate of the psychiatric morbidity among psoriasis

ranged from 23.3% to 53.3 % which is much higher than the general population.⁴⁻⁶ The rates of prevalence vary due to the discrepancy among inclusion and exclusion criteria, research instrument, diagnostic criteria, severity and duration of the diseases. Due to the lesions in exposed areas, patients become neglected and misinterpreted by people with often claimed psoriasis as a contagious disease or a sign of poor hygiene. Such avoidance is intolerable for the patients and they often find it difficult to maintain their self-confidence and healthy body image. Women, young people and minorities experience greater social and emotional impacts due to psoriasis along with psoriatic arthritis, compared to the people who have only psoriasis. Moreover, this stress leads to increase the risk of some emotional issues such as depression, anxiety and suicide thoughts.⁷ Furthermore, psoriasis is responsible for substantial adverse effects of psychosocial function and emotional health. As such, people with psoriasis, need access to comprehensive, better quality and affordable care in order to address the mental health aspects of living with the disease, as well as the physical needs and challenges that the disease poses for patients.⁸

Psoriasis is a chronic relapsing disease of the skin. Due to chronic course, conventional treatment sometimes ineffective and costly and may causes disfigurement which causes severe stress to the sufferer. So, varieties of psychological disorders including poor self-esteem, sexual dysfunction, anxiety, depression and suicidal ideation are very much common in psoriasis than any kind of dermatological disorders. This is also correlated with substantial impairment of quality of life (QOL), negatively impacting psychological, vocational, social and physical functioning. In addition, young people with psoriasis have high stress level, physical limitations and depression with employment problems. The exact prevalence of psychiatric morbidity among psoriasis in our country is unknown. Most of the relevant studies have been reported from developed countries but only a limited amount of research on psoriasis is available in the subcontinent. Research on this field is helpful in order to improve the quality of life of those individuals. As far as we know, there are very few studies on psychiatric morbidities among psoriasis in Bangladesh. Moreover, no previous study on psychiatric co-morbidity among patients with psoriasis had done at Sylhet region. Moreover, socio economic background of Sylhet is different from that of Bangladesh. So, exploration of psychiatric disorder among psoriasis and compare between healthy control in the present study is very much indicative of patterned and extent of the psychiatric morbidity. So the study was aimed to evaluate the psychiatric morbidity among the psoriasis patients and healthy controls and compare with them.

Materials and methods

This was a cross sectional study, conducted in the department of psychiatry in collaboration with the department of dermatology

and venereology of Sylhet MAG Osmani Medical College Hospital (SOMCH), Sylhet, Bangladesh during the period from January 2013 to December 2013. For this purpose, 50 patients with psoriasis of 18 years to 65 years of age were included and categorized as group A where another 50 age and sex matched healthy individuals were included as group B by consecutive, convenient (non-probability) sampling technique. Patients having any past or family history of psychiatric disorder, substance abuse, history of any chronic medical illness, history of long term corticosteroid therapy and obese patients were excluded from the study. After taking informed consent respondents were interviewed using data collection sheet containing socio-demographic and other information such as age, occupation, education, socio-economic status, family type etc. which was structured and fix response type. A general health questionnaire (GHQ) 12 Bangla version was supplied to the patients and advised to fill up the questionnaire. Those who scored 15 or above points were evaluated by mental state examination and diagnostic and statistical manual of mental disorders⁹ criteria by the researcher to diagnose psychiatric disorder clinically. All psychiatric disorders clinically were verified by consultant psychiatrist. The interviews were held in a peaceful and non-threatening environment. Ethical issues were maintained properly and an informed written consent was taken from every patient. After collecting data, editing was done manually and was analyzed with statistical package for social sciences (SPSS) version 21. Quantitative data will be summarized as mean and standard deviation; and comparison will be performed between the two groups by Z test. Qualitative data will be summarized as frequency and percentages. Comparison between two groups will be done by Pearson chi-square (χ^2) test. A probability (p) value of <0.05 will be considered statistically significant and >0.05 will be taken as non-significant.

Results

The results showed that, in psoriasis group (Group A) GHQ-12 positive was found in 39 (78.0%) respondents; while in control group (Group B) GHQ-12 positive was found in 14 (28.0%) respondents (Figure 1). GHQ-12 positive respondents of both group again confirmed by doing mental state examination and DSM IV-TR for determine the psychiatric morbidities.

In psoriasis group co-morbid psychiatric disorder was found in 31 (62.0%) respondents; while in healthy group co-morbid psychiatric disorder was found in 10 (20.0%) respondents. The co-morbid psychiatric disorder between the groups was statistically significant ($\chi^2=18.231$; $p < 0.001$) (Figure 2).

Co-morbid specific psychiatric disorders were major depressive disorder in 16 (32.0%), generalized anxiety disorder in 9 (18.0%), dysthymic disorder in 3 (6.0%), somatoform disorder NOS in 2 (4.0%), and adjustment disorder in 1 (2.0%) respondents in

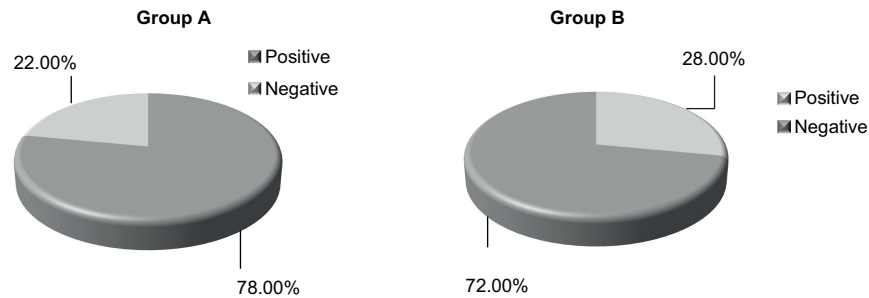


Figure 1: Distribution of patients by GHQ-12 positive and negative (n=100)

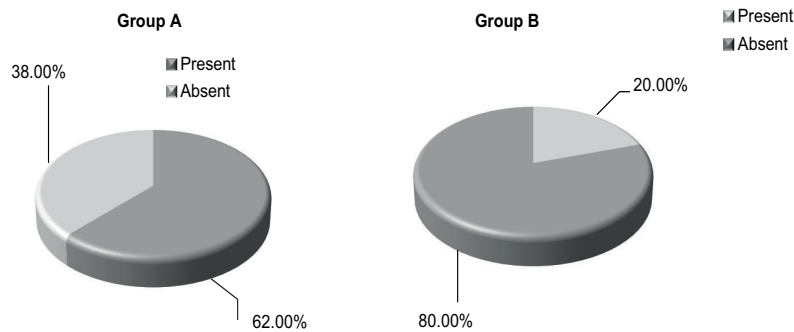


Figure 2: Distribution of patients by co-morbid psychiatric disorder (n=100)

psoriasis group; while specific psychiatric disorders were major depressive disorder in 5 (10.0%), anxiety disorder in 3 (6.0%), dysthymic disorder in 1 (2.0%) and somatoform disorder NOS in 1 (2.0%) respondents in control group. There was a significant difference of specific psychiatric disorder between two groups ($p=0.001$) (Table 1).

The age ranged from 18 to 64 years of the psoriasis patients with the mean age of 36.5 (SD±13.5) years and 36.0 (SD±14.4) years in control group. The mean age of the respondents in both

groups did not vary statistically significant ($Z=0.194$; $p>0.05$). In psoriasis group, 25 (50.0%) respondents were in the age group of 25 to 34 years, 16 (32.0%) were in the age more than 45 years, 6 (12.0%) were less than 25 years age and 3 (6.0%) were in the age group of 35 to 44 years. It was 24 (48.0%), 14 (28.0%), 8 (16.0%) and 4 (8.0%) respectively in the control group. There was no statistically significant difference in age group of the respondents between psoriasis group and control group ($p=0.914$) (Figure 3).

Table-1: Distribution of patients by specific psychiatric disorder (n=100)

| Specific psychiatric disorder | Study group | | *p-value |
|-------------------------------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Major depressive disorder | 16 (32.0) | 5 (10.0) | 0.001 |
| Generalized anxiety disorder | 9 (18.0) | 3 (6.0) | |
| Dysthymic disorder | 3 (6.0) | 1 (2.0) | |
| Somatoform disorder NOS | 2 (4.0) | 1 (2.0) | |
| Adjustment disorder | 1 (2.0) | 0 (0.0) | |
| No psychiatric disorder | 19 (38.0) | 40 (80.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

*Fisher’s Exact test was employed to analyze the data

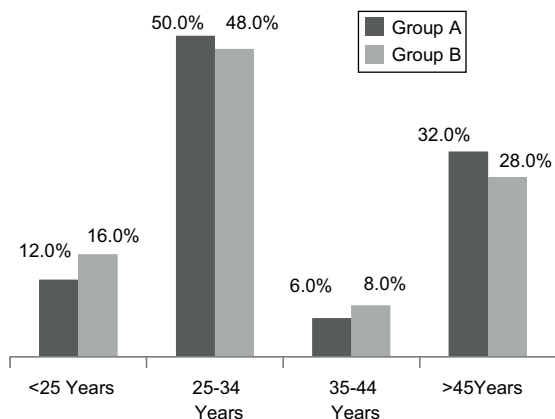


Figure 3: Distribution of the respondents on the basis of age (n=100)

There were 42 (84.0%) male and 8 (16.0%) female in the psoriasis group; whereas 41 (82.0%) male and 9 (18.0%) female in the control group. The sex different between the respondents of psoriasis group and control group did not show any statistically significant difference ($\chi^2=0.071$; $p=0.790$) (Figure 4).

In psoriasis group 47 (94.0%) respondents were in Islam by religion and 3 (6.0%) were in the Hinduism. It was 45 (90.0%) by Islam and 5 (10.0%) by Hinduism in the control group. There was no statistically significant difference between the psoriasis group and control group in relation to the religion of the respondents ($\chi^2=0.292$; $p=0.589$) (Table 2).

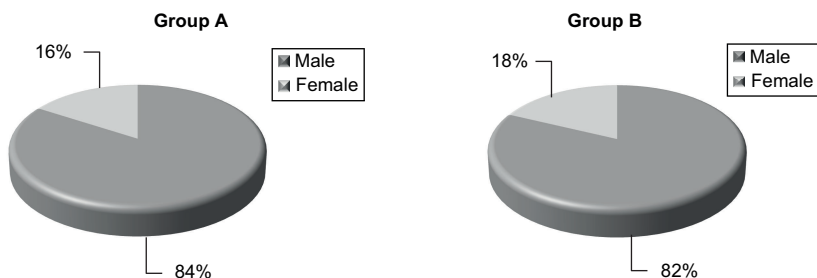


Figure 4: Distribution of the respondents according to sex (n=100)

Table 2: Distribution of the respondents on the basis of religion (n=100)

| Religion | Study group | | *p-value |
|----------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Islam | 47 (94.0) | 45 (90.0) | 0.519 |
| Hinduism | 3 (6.0) | 5 (10.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

*Fisher’s Exact test was employed to analyze the data

In psoriasis group, 35 (70.0%) patients were married, 12 (24.0) respondents were unmarried and 3 (6.0%) was widow/er; whereas in control group, 40 (80.0%) patients were married, 9 (18.0%) respondents were unmarried and 1 (2.0%) was widow/er. The difference between the two groups in relation to marital status was not statistically significant ($p=0.402$) (Table 3).

In psoriasis group, 11 (22.0%) respondents were business man, 10 (20.0%) were service holder, 9 (22.0%) respondents were student, 8 (16.0%) respondents were house wife, 5 (10.0%) were farmer, 4 (8.0%) were day labour and 3 (6.0%) others by occupation. Whereas in control group, 14 (28.0%) respondents were business man, 10 (20.0%) respondents were student, 8 (16.0%) respondents were service holder, 6 (12.0%) respondents were farmer, 3 (6.0%) were day labour and 2 (4.0%) others by occupation. The difference between the two groups in relation to occupation was not statistically significant ($p=0.983$) (Table 4).

In psoriasis group, educational status was illiterate in 13 (26.0%), primary in 12 (24.0%), higher secondary certificate (HSC) in 11 (22.0%), secondary school certificate (SSC) in 10 (20.0%) and graduate or above in 4 (8.0%) respondents; whereas educational status was SSC in 15 (30.0%), HSC in 13 (26.0%), illiterate in 12 (24.0%), primary in 6 (12.0%) and graduate or above in 4 (8.0%) respondents in the control group. The difference between the two groups in relation to educational status was not statistically significant ($p=0.528$) (Table 5).

Table 3: Distribution of respondents according to marital status (n=100)

| Marital status | Study group | | *p-value |
|----------------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Married | 35 (70.0) | 40 (80.0) | 0.402 |
| Unmarried | 12 (24.0) | 9 (18.0) | |
| Widow/widower | 3 (6.0) | 1 (2.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

*Fisher's Exact test was employed to analyze the data

Table 4: Distribution of respondents according to occupation (n=100)

| Occupation | Study group | | *p-value |
|------------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Business | 11 (22.0) | 14 (26.0) | |
| Housewife | 8 (16.0) | 7 (14.0) | |
| Service | 10 (20.0) | 8 (18.0) | |
| Student | 9 (18.0) | 10 (20.0) | 0.983 |
| Farmer | 5 (10.0) | 6 (12.0) | |
| Day labour | 4 (8.0) | 3 (10.0) | |
| Others | 3 (6.0) | 2 (4.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

*Fisher's Exact test was employed to analyze the data

Table 5: Distribution of respondents according to educational status (n=100)

| Educational status | Study group | | *p-value |
|--------------------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Illiterate | 13 (26.0) | 12 (24.0) | |
| Primary | 12 (24.0) | 6 (12.0) | 0.528 |
| SSC | 10 (20.0) | 15 (30.0) | |
| HSC | 11 (22.0) | 13 (26.0) | |
| Graduate or above | 4 (8.0) | 4 (8.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

*Fisher's Exact test was employed to analyze the data

In this study 20 (40.0%) respondents were in the middle class and 30 (60.0%) respondents were in the lower class of socioeconomic status in psoriasis group; while 28 (56.0%) respondents were in the middle class and 22 (44.0%) respondents were in the lower class of socioeconomic status. The socioeconomic status of the both groups was almost identical ($\chi^2=2.564$; $p=0.109$) (Table 6).

In psoriasis group 30 (60.0%) respondents were in the joint family and 20 (40.0%) respondents were in the nuclear family. Whereas in control group, 27 (54.0%) respondents were in the

joint family and 23 (46.0%) respondents were in the nuclear family by their type of family. There was no statistically significant difference between two groups in relation to the type of family ($\chi^2=0.367$; $p=0.545$) (Table 7).

In psoriasis group, 27 (54.0%) respondents were urban and 23 (46.0%) respondents were rural by social background. Whereas 24 (48.0%) respondents were urban and 26 (52.0%) respondents were rural by social background among the control group. The difference between the two groups in relation to social background was not statistically significant ($\chi^2=0.360$; $p=0.548$) (Table 8).

Table 6: Distribution of socioeconomic status of the respondents (n=100)

| Socioeconomic status | Study group | | *p-value |
|----------------------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Middle | 20 (40.0) | 28 (56.0) | 0.109 |
| Lower | 30 (60.0) | 22 (44.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

* χ^2 (Chi- square) Test was employed to analyze the data.

Table 7: Distribution of the respondents according to type of family (n=100)

| Type of family | Study group | | *p-value |
|----------------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Joint | 30 (60.0) | 27 (54.0) | 0.545 |
| Nuclear | 20 (40.0) | 23 (46.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

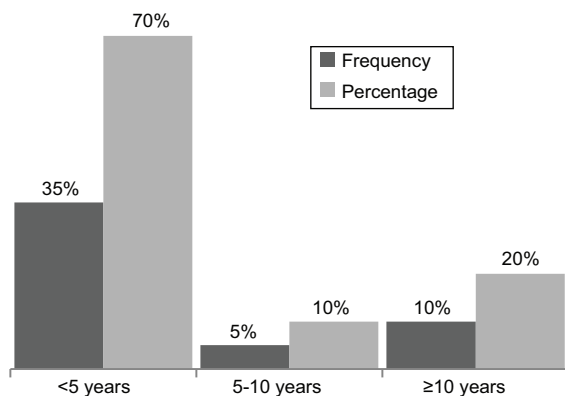
* χ^2 (Chi- square) test was employed to analyze the data.

Table 8: Distribution of respondents according to their social background (n=100)

| Social background | Study group | | *p-value |
|-------------------|---------------------------------|---------------------------------|----------|
| | Group A (n=50) Frequency (%) | Group B (n=50) Frequency (%) | |
| Urban | 27 (54.0) | 24 (48.0) | 0.548 |
| Rural | 23 (46.0) | 26 (52.0) | |
| Total | 50 (100.0) | 50 (100.0) | |

* χ^2 (Chi- square) test was employed to analyze the data.

Duration of psoriasis was less than 5 years in 35 (70.0%) patients, 5 (10.0%) patients and 10 (20.0%) patients (figure 5).

**Figure 5: Distribution of patients according to duration of psoriasis (n=50)**

Discussion

In this study, among psoriasis group (group A) GHQ-12 positive was found in 39 (78.0%) and in healthy group (group B) 14 (28.0%) respondents. But a study done by Mattoo et al. reported psychiatric morbidity among psoriasis about 33.63 % which was also assessed by GHQ-12.⁵ The age was ranged from 18-65 years for both psoriasis and healthy group. The mean age was 36.5 (SD±13.5) years in psoriasis group whereas mean age was 36.0 (SD±14.4) years in healthy control group ($p>0.05$). This result correlated with Rashid et al. where mean age of psoriasis was 35.32(SD±10.05).¹⁰ In 2006, Paul reported mean age of psoriasis patients were 31.32 (SD±4.91) with the age range of 25-40 years.¹¹ The present study also showed that, in psoriasis group majority 25 (50.0%) respondents were in the age group of 24 to 35 years followed by 16 (32.0%) were in age group of more than 45 years and 6 (12.0%) were in the age group of less than 25 years; while it were 24 (48.0%), 14

(28.0%), 8 (16.0%) and 4 (8.0%) respectively in the control group. This result correlated with the study conducted by Paul where the majority (52.60%) of the patients were between 26-35 years.¹¹ Rashid et al. reported majority (36%) between 35-44 years.¹⁰ In this study 42 (84.0%) male and 8 (16.0%) female in the psoriasis group; whereas 41 (82.0%) male and 9 (18.0%) female in the control group that was insignificant ($p=0.790$). This result correlated with Rashid et al. where in psoriasis patients male were 36 (72.0%) and female 28 %.¹⁰ Paul reported on his study male 10 (52.6%) and female 9 (47.4%) in psoriasis patients.¹¹ Regarding the marital status, current study showed that 35 (70.0%) respondents were married and 12 (24.0%) respondents were unmarried in psoriasis group. In control group married 40 (80%) and unmarried was 9 (18%). In this regards, Rashid et al. and Paul reported that, majority of the respondents (88%) and (80%) were married which was quite similar with this study.^{10,11}

The present study showed that, 11 (22.0%) respondents were businessmen following 10 (20.0%) were service holders, students 9 (18%), housewives 8 (16%), farmers 5(10%) and day labors 4 (8.0%). This result was quite similar to the study of Paul. He found majority of the respondents were farmers 18.0% followed by businessmen 16.0 %, service holders (16.0%), housewives 14.0 % and unemployed (10.0%).¹¹ The present study, majority of the respondents were illiterate 13 (26.%) followed by primary in 12 (24.%), secondary in 10 (20.0%), higher secondary in 11 (22.0 %) and graduate in 04 (8.0%). In this regards Paul found 16% respondents were illiterate followed by 40% were completed primary, 5% completed secondary and 1% were graduate. On the other hand, Rashid et al. showed that, the educational level of the respondents was illiterate in 28% followed by literate in 72%.

In this study among psoriasis majority of sex was male in both groups which was similar to the study of Paul.¹¹ In this study majority of psoriasis patients came from urban 27(54%) and 23 (46%) from rural which was similar to the study conducted by Paul where majority 28 (56%) psoriasis from urban and 22 (44%) from rural.¹¹ In this study 30 (60.0%) respondents were from lower socio-economic class followed by 20 (40.4%) respondents were from middle socio-economical class. This result was supported by Rashid et al. where majority 36% of psoriasis came from lower, 32% were from middle and 32% respondents were from higher socio-economical class.¹⁰

In the current study co-morbid psychiatric disorder was found in 31 (62.0%) psoriasis patients while in control group the psychiatric disorder were found in 10 (20.0%) respondents. The co-morbid psychiatric disorder between the groups was statistically significant ($p<0.001$). Earlier studies by Mattoo et al., Rashid et al., and Paul reported psychiatric morbidity in 24.27%,

25% and 38% of the subjects, respectively, which was quite low as compared to the results of this study.^{5,10,11} In this study the most common specific psychiatric disorder in psoriasis patients were major depressive disorder 16 (32.0%) followed by generalized anxiety disorder 9 (18%), dysthymic disorder 3 (6.0%) and somatoform disorder NOS 2 (4.0%) ; while specific psychiatric disorders were major depressive disorder in 5 (10.0%), generalized anxiety disorder in 3 (6.0%), dysthymic disorder in 1 (2.0%) and somatoform disorder NOS in 1 (2.0%) respondents in control group. In this regards Rashid et al. founds that, the current psychiatric disorder in their sample were 25% of which major depressive disorder was 30%, anxiety disorder was 8% adjustment disorder was 4% and somatoform disorder NOS was 2%.¹⁰ A study by Roy conducted over 366 healthy control females age between 35-50 years [mean age(41.49±3.80)] found psychiatric morbidities about 28.1% among which major depressive disorder (11.2%) followed by generalized anxiety disorder (9.8%), obsessive compulsive disorder (2.7%), panic disorder (1.6%), somatization disorder (1.6%) and conversion disorder (1.1%).¹² Another study conducted in same place by Khan over 110 healthy controls age between 18-60 years (majority 45.5% of age 18-30) and found psychiatric morbidities about 16.4 % among which major depressive disorder 8.2 %, anxiety disorder 4.5 5 and somatization disorder 3.6 %.¹³

Conclusion

This study showed that, there was a highly significant difference in psychiatric morbidity in the present study with psoriasis patients as compared to control group ($p<0.0001$) who were similar to the experimental group in respect of age, parity, occupational status, educational level and socio-economic status. There was also a significant difference of specific psychiatric disorder between psoriasis patients and control group ($p=0.001$).

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