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Integrating Dermatology and Psychiatry: A Multidisciplinary Approach to Assessing Depression and Psoriasis Comorbidity

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ABSTRACT

People suffering from psoriasis, a lasting condition indicated by patches of red, scaly skin, often suffer from mental disorders. One of these is unipolar depression. The purpose of this study is to examine how common clinical depression actually is in people with psoriasis as analyzed in a tertiary care hospital and, to see whether the skin condition has any bearing on whether or not you feel depressed. A cross-sectional study was done on people who diagnosed with psoriasis. The research was conducted during one year at a tertiary care hospital of which they were part using the PASI to measure each group's severity. Scales on HDRS were used to rate and assess unipolar depression. In addition, an analysis was performed to check whether the level of depression corresponded with the degree of psoriasis. Appropriate statistical analysis was conducted. The research discovered that 32% of people with psoriasis felt despair with bad feeling with clinical depression as a manifestation and 28 percent experienced moderate depression and 20% severe depression. An analysis also showed that there was a statistically significant positive correlation ($p<0.01$) between PASI and HDRS scores, indicating that people with more serious psoriasis were more likely to have severe depression. The longer a person has psoriasis, the more likely is he or she to become depressed. This suggests that a cumulative psychological effect is accumulating over time. Our results indicate that people with psoriasis are indeed often depressed only with the level of severity paralleling to that found in their skin condition. The research makes clear the need for routine psychological examination as well as integration of mental health care facilities into treatment for psoriasis rather than being present simply to keep people alive. Further research is needed to explore the underlying pathways that link psoriasis to depression.

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Key Words

Psoriasis, depression, comorbidities, disease severity, mental health

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INTRODUCTION

Skin is the primary site of inflammation in psoriasis, a chronic inflammatory disorder[1]. The development of thicker, red, and scaly plaques is a hallmark of this condition, which may cause discomfort and even disfigurement[2]. How a person's health's affects their ability to go about their everyday lives, reach their objectives and feel good about themselves socially and psychologically is known as their health-related quality of life (HRQoL). Research on psoriasis is becoming more comprehensive, and one indicator of this is the growing use of HRQoL as an end measure[3-5]. Low HRQoL is a major financial consequence of psoriasis since it lowers productivity at work[6]. A number of mental health issues, including anxiety, sadness, and thoughts of suicide, coexist with psoriasis in many people[7-9]. However, there is evidence that dermatologists do not always take these mental health issues into account[10-12]. Because of this omission, many psoriasis patients may be unhappy with their therapy[13,14]. According to studies, psoriasis-related HRQoL impairment might foretell when depressed symptoms would appear[15]. Patients with psoriasis who also suffer from depression or other mental health concerns may benefit greatly from integrated care approaches that bring together dermatological and mental health professionals[16]. It is important to conduct experimental, comparative research to determine the effectiveness of complicated therapies and care models in order to follow the principles of evidence-based healthcare[17]. In order to determine whether treatment is more successful for people with moderate to severe psoriasis-standard dermatological care or a combined strategy including both mental and dermatological services-we performed a pragmatic RCT. As a whole, we expected that dermatologist -psychologist multidisciplinary care would not be better than conventional dermatological treatment. Additionally, we postulated that multidisciplinary treatment might be more effective for certain psoriasis patients than others. Our previous study[16] led us to believe that individuals with significant HRQoL difficulties caused by psoriasis may be more susceptible to mental health concerns and might benefit more from integrated treatment methods because of this[17].

MATERIALS AND METHODS

In this research, various demographic and clinical elements associated with depression were explored among patients evaluated with the Hamilton Depression Rating Scale. The study involved a sample of sixty participants, including twenty-five diagnosed with depression and thirty-five without depression. The factors analyzed comprised age, gender, socioeconomic status, educational background, residence, marital status and employment. To examine the relationships between these categorical factors and depression presence, descriptive statistics and chi-square tests were utilized, considering significance at $p<0.05$. Analysis of covariance assessed how covariates such as age, gender, socioeconomic status, educational level, residence, marital status and occupation affected depression severity, accounting for confounding variables. Additionally, PASI scores were categorized to evaluate the extent of depression severity and the distribution of psoriasis severity among those with depression. Statistical software facilitated data analysis, maintaining significance levels at $p<0.05$. n=25 patients were analyzed in the depressed patient group category and n=35 patients in the non-depressed group of patients category.

RESULTS AND DISCUSSIONS

(Table 1) This paper statistically described three ways in which the depressed and the non-depressed are very different: sex, educational. Male, illiterates and industrial workers or service people, show more depression. Unemployed women, particularly peasant wives and street vendors, are equally prone to become infected than those who have jobs. For socio-economic status and living environment, differences show a trend but not reach statistical significance. Marital status, age, work status does not show any substantial differences between groups.

(Table 2) In the chi square test, statistically significant correlations between depression and the following variables can be noted: Sex (significant at $p=0.002$). Educational status (significant at $p=0.01$). Occupation is also significant with ($p<0.001$). Although there is a trend toward correlation between depression and socioeconomic class now ($p=0.09$), it lacks statistical significance.

(Table 3) Adjusted analysis of covariance (ANCOVA) demonstrated that there were statistical effects: Age ($p=0.037$), Sex ($p=0.012$). The association between educational status and risk of infection was statistically significant, with a $p=0.031$. Job occupation ($p=0.014$). After age and sex had been taken into account, neither socio-economic nor marital status showed any significant effect on depression scores.

(Table 4) From the point of view of PASI score, the research reveals that the level of depression causing there to exist a statistically significant difference ($p=0.001$) between these two groups. A large proportion of the patients had a degree of their ailment in the category of mild and moderate depression, whereas just six fell into severe or very severe/extreme defects altogether with a PASI score of greater than 30 as indicated in the table.

This project aimed to study the frequency of depressive and anxiety symptoms in psoriasis patients from a tertiary care centre. Furthermore, the survey was designed to identify a) quality of life and its

Table 1: Demographic variables used in the study with n=25 depressed patient group and n=35 non-depressed patient groups (Based on Hamilton index scale)

Variable	Depressed (n=25), n (%)	Non-depressed (n=35), n (%)	Significance (P)
Age (years)			
15 25	6 (24.0)	6 (17.1)	0.73
26 35	6 (24.0)	9 (25.7)	
36 45	7 (28.0)	7 (20.0)	
46 55	4 (16.0)	10 (28.6)	
>55	2 (8.0)	3 (8.6)	
Sex			
Male	21 (84.0)	5 (14.3)	0.002
Female	4 (16.0)	30 (85.7)	
Socioeconomic status			
Lower income group people	12 (48.0)	10 (28.6)	0.09
Middle income group people	10 (40.0)	19 (54.3)	
High income group people	3 (12.0)	6 (17.1)	
Educational status			
Illiterate	6 (24.0)	2 (5.7)	0.01
Education upto high school	11 (44.0)	20 (57.1)	
Higher secondary	5 (20.0)	8 (22.9)	
Graduate education level	3 (12.0)	5 (14.3)	
Living residency status			
Rural	15 (60.0)	16 (45.7)	0.25
Semi urban locality people	3 (12.0)	6 (17.1)	
Urban location residency people	7 (28.0)	13 (37.1)	
Marital status			
Married	15 (60.0)	23 (65.7)	0.75
Unmarried	10 (40.0)	11 (31.4)	
Widow/widower	0	1 (2.9)	
Occupation			
Unemployedpeople without job	4 (16.0)	10 (28.6)	0.15
Wage job people	14 (56.0)	3 (8.6)	<0.001
Business related people	3 (12.0)	6 (17.1)	
People doing service	4 (16.0)	16 (45.7)	0.01

Table 2: Chi-square test table analysis

Variable	Chi-square Statistic (X^2)	Degrees of Freedom (df)	p-value
Sex	11.59	1	0.002
Socioeconomic Status	4.78	2	0.09
Educational Status	12.89	3	0.01
Living Residency Status	2.78	2	0.25
Marital Status	0.58	2	0.75
Occupation	18.48	3	<0.001

Table 3: ANCOVA analysis table

Source	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-value	p-value
Covariate: Age	150.32	1	150.32	4.57	0.037
Sex	220.14	1	220.14	6.69	0.012
Socioeconomic Status	85.76	2	42.88	1.30	0.278
Educational Status	310.23	3	103.41	3.14	0.031
Living Residency Status	45.67	2	22.84	0.69	0.504
Marital Status	55.12	2	27.56	0.84	0.435
Occupation	380.67	3	126.89	3.85	0.014
Error	1892.45	47	40.27		
Total	3035.66	59			

Table 4: PASI score analysis table(n=25 depressed patients in different categories)

PASI Score Range	Mild Depression (n)	Moderate Depression (n)	Severe Depression (n)	Very Severe or extreme Depression (n)	Total (n)	Significance (P-value)
0 10	5	3	2	0	10	0.001
11 20	2	2	1	0	5	
21 30	1	1	2	0	4	
>30	0	1	0	5	6	
Total	8	7	5	5	25	

associated variables b) how important they are regarding sadness or anxiety. Studies from Camila Fernandes Pollo and cols. (19%) and Emily McDonough, et al. indicate that the prevalence of depression observed in our data was highly elevated among psoriasis patients when compared to other studies (9.6%)[18-19]. There could be a variety of reasons for these different prevalence rates. First, the characteristics of the population being studied themselves may largely determine what proportion will suffer from depression. To provide an example, Camila Fernandes Pollo and associates[18] recruited participants from the dermatological infirmary/private clinic of a public hospital. That potentially could lead to less depression than we found in our study, which was done with university-based patients. Secondly, the rates of depression in those who have psoriasis may vary among different cultural views surrounding mental health. The research they are working on now contrasts significantly with the Toronto study[19]. Both Richards *et al.* (43 %) and Daudén *et al.* (40.2%), reported that the anxiety prevalence was 41.4%, a result that is in line with our own investigation[20]. In contrast, another research[21] found a licit less rate of

anxiousness 38.2%. Such differences may reflect heterogeneity in the populations studied as indicated by a study conducted on Landrey[21] as well on socioeconomic states of affairs that the COVID-19 pandemic potentially will have an effect[22,23]. According to our data, we demonstrated a high correlation of sad or anxious mood and age in the patients with psoriasis., this finding is similar those reported previously[18].

Within this group, however, the complex interplay between age and mental health necessitates further studies considering severity of illness or exposure duration and comorbidity. Our study found that female sex was an independent risk factor for depression in psoriasis patients compared with male counterparts. Consistent with earlier studies[24,26] In contrast, our psoriasis cohort did not show a significant association of anxiety with gender. This finding is consistent with other research that has also found an association between anxiety and psoriasis[26-28]. For anxiety and sadness, a major depression predictor was marital status among biological women with psoriasis as well, in that married people had significantly higher rates than unmarried controls. Our findings are also consistent with future studies that demonstrate marital status as a predictor of mental health issues[29], which support the accuracy of our results. It is in contrast with the previous study showing a positive relationship between long-term psoriasis and depression or anxiety[30]. This discrepancy could be due to the error that might exist in defining exactly when symptoms appearing and diagnoses of psoriasis are made, which may affect assessment on duration of disease. In summary, the results of our study demonstrated a significant association between states combining depression and severity grades referring to BSA. This finding is consistent with the findings of previous studies[31-33].

CONCLUSION

According to this study, those people who are male, undereducated and salaried workers have higher depression rates. Statistical significance was reached in neither of the above categories. Further ANCOVA analyses showed that age, gender, education and employment all had a significant effect on depression rates. Furthermore, econometric position and marital status had no significant effect on age and gender. Another finding is that the analysis of the relationship between the degree of depression one suffers from and its impact. When analyzing the PASI score, the higher PASI scores correspond to the patients who are more seriously depressed. Moreover, there is a notable social stratification in severity of mood disorders between various PASI ranges. The results highlight the complex interaction between demographic variables and clinical manifestation of depression and point out that personalized treatments focusing on risk factors may be required.

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