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Quality of life and well-being of dermatology patients: Influence of associated anxiety and depression in relation to satisfaction of care

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ABSTRACT

Background: Many patients attending dermatology clinics have mental health problems which may affect their well-being. **Aims:** It was intended to study the influence of anxiety and depression on well-being and quality of life (QOL) in relation to satisfaction of dermatological care in an out-patient setting. **Materials and Methods:** In a cross-sectional study, dermatological patients were assessed for well-being (WHO-5 Well-Being scale), overall QOL, anxiety (General Anxiety Disorder, GAD-7), and depression (Patient health questionnaire, PHQ-9). Satisfaction of care in the dermatology clinic (1: not at all satisfied to 10: very satisfied) and the likelihood of recommending it (1: not at all likely to 10: very likely) were assessed on a 1 to 10 scale. Demographic and clinical variables were also collected. **Results:** The sample (n = 150) covered a range of dermatological diagnoses including allergy/eczema (53.3%), inflammatory/infective diseases (19.3%), sexually transmitted diseases (10.0%), psycho-somatic diseases (9.3%), and auto-immune diseases (7.3%). A clinically relevant level (moderate degree or above) of depression (12.7%) and anxiety (8.0%) was present in considerable proportions of patients, suggesting that overall 18.7% of patients had anxiety, depression, or both. The satisfaction and recommendation scores were at an appreciable level; however, they did not influence the anxiety and depression scores. Anxiety and depression were negatively correlated with well-being and overall QOL. **Conclusion:** Anxiety and depression present in a considerable proportion of dermatological patients significantly impaired their well-being and QOL despite high satisfaction and likelihood of recommendation of care in the dermatology clinic. Identifying and supporting psychiatric problems of dermatological patients are needed.

Keywords: Anxiety, depression, dermatology, quality of life, skin, well-being

It is known that a considerable proportion of people attending dermatology clinics have mental health problems. A possibility of almost one-third of dermatology patients having psychiatric disorders has been reported.^[1] In a group of patients with suspected psycho-cutaneous diseases, 36.4% had psychiatric co-morbidity, with 8.1% having primary psychiatric disorders.^[2] Visible skin lesions are associated with stigma^[3] and psychological stress, which can lead to psychiatric problems, especially social isolation, low self-esteem, embarrassment, and depression.^[4]

A common skin symptom of itch has been significantly associated with depression, suicidal ideation, and poorer quality of life (QOL).^[5] Considering specific conditions such as psoriasis, vitiligo, and urticaria, the common mental health problems associated are anxiety, dysthymia, and depression.^[6,7] A study reported that compared to 6% of the control group from accompanying persons, 22% of patients with alopecia areata and 38% of psoriasis patients had psychiatric disorder; depression was present in

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18% and 24%, and anxiety in 4% and 12%, respectively.^[8] Chronic skin conditions such as eczema and psoriasis have additional stress and psychological impact on the patients, influencing their functioning, and are associated with depression and anxiety.^[9–11]

Patients in dermatology clinics or integrated dermatology–psychiatry clinics have a range of psychiatric diagnoses, such as depression, anxiety, body dysmorphic disorder, delusion of infestation/psychotic illness, dermatitis artefacta, compulsive skin picking, neurotic excoriations, trichotillomania, obsessive-compulsive disorder, somatoform disorder, adjustment disorder, mood disorder, schizophrenia, and so on.^[11,12] Similarly, it is common to observe skin conditions in psychiatric patients, who present with a range of dermatological conditions such as eczema, generalized pruritus, bacterial infections, parasitic infestation, and others.^[13]

Common mental health problems like anxiety and depression of most patients in dermatology clinics go unnoticed and may remain untreated unless referred to psychiatry. It is well known that these mental conditions affect functional capabilities, influence the outcome of dermatological conditions, and impair QOL.^[5,14] Even though these associated mental health problems are highly treatable conditions and can be easily identified and managed in primary and secondary care, most patients miss out. There may be other reasons why people do not go to psychiatry, for example, lack of understanding, feasibility issues, and stigma. Psycho-dermatology is a relatively neglected area in India,^[2,7] and there is scant information.

Objectives

On the above background, it was intended to study the influence of anxiety and depression on well-being and QOL in relation to satisfaction of dermatological care in an out-patient setting. We also assessed the prevalence of anxiety and depression to explore the mental health needs of this population. The association of mental health, well-being, and QOL parameters with the demographic and clinical profiles of these patients was also studied. It was hoped that the result of the study would help in the holistic care of dermatology patients to improve their well-being.

MATERIALS AND METHODS

The study was conducted in a dermatology out-patient unit of a district-level general hospital in a city in an eastern state of India. It is a multi-specialty hospital attended by patients from the city and surrounding village areas of the nearby districts. Consecutive consenting patients who were attending the skin out-patient department were eligible for

the study. Patients who could not or refused to participate in the study were excluded. A questionnaire was designed for the data collection and included scales for anxiety, depression, well-being, and QOL along with demographic and clinical variables.

Scales

We checked the current mental well-being of the patients through the WHO-5 Well-Being scale,^[15] which is a short, self-reported, unidimensional scale. It consists of five statements, which are rated (about the past 2 weeks) as follows: 5: all of the time, 4: most of the time, 3: more than half of the time, 2: less than half of the time, 1: some of the time, and 0: at no time. The total raw score ranges from 0 to 25, which is multiplied by 4 to give the final score, with 0 representing the worst imaginable well-being and 100 representing the best imaginable well-being.

Patients were asked to rate their overall QOL in the last 2 weeks using a visual analog scale of 1 to 10, with 1 being the worst and 10 being the best. Satisfaction with the care received in the dermatology out-patient was assessed on a scale from 1 (not at all satisfied) to 10 (very satisfied). Similarly, the likelihood of recommending the clinic to their friends and family was checked using a scale of 1 (not at all likely) to 10 (very likely).

Anxiety was screened by General Anxiety Disorder (GAD-7),^[16] a self-rated questionnaire with seven items, which were scored as 0: not at all, 1: several days, 2: more than half the days, and 3: nearly every day. Its total score provides grades of anxiety as none (0–4), mild (5–9), moderate (10–14), and severe (15–21).

Patient health questionnaire (PHQ-9) was used for depression.^[17] It is a self-rated screening instrument with nine items. It has been a frequently used screening tool for diagnosis and determination of the severity of depression. The items are scored as 0: not at all, 1: several days, 2: more than half the days, and 3: nearly every day. Based on the total score, depression can be categorized as none (0–4), mild (5–9), moderate (10–14), moderately severe (15–19), and severe (20–27). Both PHQ-9 and GAD-7 have been used extensively in the Indian population for epidemiological and clinical studies,^[18,19] and local language versions are available.

Data collection

The questionnaire was available in both English and local Odia language. If some people could not read either the local language or English, the questionnaire was read out and their responses recorded. The patients were given the questionnaire to fill up while waiting to see the doctors. The dermatologist added the clinical diagnoses and the

treatment advised. The clinical psychologist enquired about any mental health concerns and offered support and referral to psychiatry if needed. The responses were checked for any missing data; and these were further enquired from the participating patients.

Ethics

The project was ethically approved by the state ethics board (No 12943/MS-2-IV-04/2020 (PT), dated 21/06/2021). This was a non-interventional study. Patients were given information about the study. It was highlighted that the participation was voluntary, and the responses were collected without any identifying features. They could withdraw their consent at any time during the data collection without assigning any reason. The written informed consent was obtained from the patients who agreed to participate.

Analysis

Prevalence figures of anxiety and depression were presented in percentages. The association of demographic and clinical variables, well-being, and QOL with anxiety and depression was studied. Statistical tests such as Chi-square test, Student *t*-test, and Pearson’s correlation were used. The significance level was considered at the *P* value of 0.05 as a standard. Analysis was done with SPSS (version 28, Armonk, NY: IBM Corp).

RESULTS

The sample included a total of 150 patients, with a mean age of 35.0 ± 12.1 years. There were 85 (56.7%) female and 65 (43.3%) male patients with a mean age of 34.1 ± 12.2 and 36.1 ± 12.1 years, respectively (statistically not significant, NS). Demographic details are given in Table 1. There were 6.7% (1.2% female and 13.8% male) patients who had alcohol and drug abuse. Only one female (1.2%) reported having mental illness. There was a family history of any psychiatric treatment in 1.3%. A small proportion (4.0%) of patients reported having physical problems, diabetes in 1.3%, hypertension in 0.7%, and none reported obesity.

Common dermatological diagnoses were eczema (22.0%), urticaria (12.0%), tinea corporis (11.3%), seborrheic dermatitis (10.0%), vaginitis (17.6% of female patients), alopecia (7.3%), allergic contact dermatitis (5.3%), acarophobia (delusional parasitosis) (5.3%), acne (5.3%), sexual neurasthenia (3.3%), and psoriasis (2.7%). The dermatological diagnoses were grouped into allergy/eczema (53.3%), inflammatory/infective diseases (19.3%), psycho-somatic diseases (9.3%), auto-immune diseases (7.3%), sexually transmitted diseases (10.0%), and others which included a patient with hypertrophied

Table 1: Demographic profile of the sample

	Female		Male		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Education*						
No education	3	3.5	4	6.2	7	4.7
Primary	11	12.9	5	7.7	16	10.7
High school	23	27.1	23	35.4	46	30.7
College	34	40.0	9	13.8	43	28.7
University/Professional	14	16.5	24	36.9	38	25.3
Religion						
Hindu	67	78.8	50	76.9	117	78.0
Muslim	18	21.2	11	16.9	29	19.3
Christian	0	0.0	4	6.2	4	2.7
Occupation*						
Student	20	23.5	7	10.8	27	18.0
Housewife	53	62.4	0	0.0	53	35.3
Not Working	5	5.9	3	4.6	8	5.3
Retired	0	0.0	9	13.8	9	6.0
Working	7	8.2	46	70.8	53	35.3
Marriage						
Unmarried	30	35.3	20	30.8	50	33.3
Married	53	62.4	43	66.2	96	64.0
Widowed	2	2.4	2	3.1	4	2.7
Economic status						
Low	35	41.2	35	53.8	70	46.7
Middle	49	57.6	30	46.2	79	52.7
High	1	1.2	0	0.0	1	0.7

**P*<0.01

scar (0.7%). There was no significant difference in the occurrence of skin problems in male and female patients except for allergy and eczema, which were diagnosed in 45.9% of female to 64.6% of male patients (*P* < 0.05). Sexually transmitted illnesses were observed in 14.1% of females and 4.5% of males, which approached statistical significance (*P* = 0.055).

Satisfaction scores for the dermatology clinic visit ranged from 4 to 10 with a mean of 8.79 ± 1.1, and whether they would recommend the clinic to a family or friend ranged from 6 to 10 with a mean of 8.81 ± 1.1. There were no differences between genders for the above two parameters of dermatology clinic.

Anxiety and depression

Based on the PHQ-9 score, 45.3% had none, 42.0% had mild, 8.0% had moderate, and 4.7% had moderately severe levels of depression. Patients with the severity of depression at moderate or higher levels were considered to have the clinically relevant level of depression, and there were 12.7% (*n* = 19) of patients in this category. Based on this, there were 10.3% in the inflammatory/infective group, 17.5% in the allergy/eczema group, 9.1% in the auto-immune group, and 7.1% in the psycho-somatic group who had the clinical level of depression (NS).

Based on the GAD-7 score, 48% had none, 44.0% had mild, 6.7% had moderate, and 1.3% had severe levels of anxiety. Moderate and severe levels of anxiety score were considered as clinically relevant. Based on this, there were a total of 12 patients (8.0%) who had moderate or severe anxiety who would benefit from professional help. Considering the diagnostic groups, the proportions of patients who had the clinical level of anxiety were 3.4% of inflammatory/infective, 8.8% of allergy/eczema, 21.4% of psycho-somatic diseases, and 6.7% of sexually transmitted diseases (NS).

There were no statistical differences in mean anxiety and depression scores among the diagnostic groups. There was no association between the clinical level of anxiety or depression and the socio-demographic or clinical factors including the site of the lesion (exposed or covered), except that a significantly more proportion (21.0% v 2.9%; $P < 0.01$) of patients with a college or university level of education compared to lower education levels were depressed. There was no difference between genders related to the duration of illness, anxiety, depression, or well-being.

Well-being and QOL

Well-being scores ranged from 0 to 100 with the mean at 75.9 ± 20.5 . The range of scores for overall QOL has been 3 to 10 with a mean of 7.5 ± 1.7 , suggesting that the mean was above the midpoint 5. Male (7.8 ± 1.7) patients had higher QOL than female (7.2 ± 1.7) patients ($P < 0.05$). The correlation of anxiety and depression with well-being, QOL, age, duration of illness, satisfaction, and recommendation is given in Table 2.

Differences in diagnostic groups

We compared specific dermatological diagnostic groups with other patients for anxiety, depression, well-being, overall QOL, satisfaction, and likelihood of recommendation. Patients with inflammatory/infective diseases compared to other patients had lower anxiety (2.8 ± 3.7 v 4.9 ± 3.7 , $P < 0.01$) and depression (3.7 ± 4.9 v 5.9 ± 4.4 , $P < 0.05$) scores, while there was no difference in other areas. There was no difference in the above

variables for patients with or without allergy/eczema, auto-immune diseases, psycho-somatic diseases, or sexually transmitted diseases. Considering each group, patients with inflammatory/infective diseases had better overall QOL than other patients (8.1 ± 1.9 v 7.3 ± 1.6 , $P < 0.05$); there was no difference in other groups.

Mental health support

A considerable proportion of patients ($n = 14$, 9.3%) were considered to have psycho-somatic illness in the dermatology clinic. Out of these patients, only one patient (7.1%) had clinical depression and three (21.4%) had clinical anxiety. There were 28 (18.7%) individual patients in the sample with anxiety, depression, or both ($n = 3$) at a clinical level. Although referral to psychiatry was discussed in 14 patients, only one patient went for psychiatric assessment and treatment, who was diagnosed to have a depressive disorder and received the anti-depressant drug sertraline. In the dermatology clinic, amitriptyline was prescribed in 10 (6.7%) patients. Although the clinical psychology support was available, there was no uptake for psycho-therapeutic intervention. It was observed that many patients had difficulty in understanding the purpose of attending psychiatry and reported feasibility issues and many were uncomfortable considering prevailing stigma.

DISCUSSION

The study explored the influence of anxiety and depression upon well-being and QOL of patients attending a dermatology clinic in a district general hospital in Eastern India using validated questionnaires. The sample included a range of common dermatological conditions. It is interesting to note that a good proportion of patients were considered to have psycho-somatic disorders in the dermatology clinic, and a proportion of them had clinical levels of anxiety and depression.

Anxiety and depression

It has been reported that up to one-third of patients attending dermatology clinics may have co-morbid

Table 2: Correlations of anxiety and depression with other variables

	Age	Duration	Anxiety	Depression	Well-being	QOL	Satisfaction	Recommend
Age	1							
Duration	0.119	1						
Anxiety	-0.073	0.138	1					
Depression	0.126	0.160	0.570**	1				
Well-being	-0.099	-0.072	-0.299**	-0.378**	1			
QOL	-0.020	-0.012	-0.425**	-0.334**	0.321**	1		
Satisfaction	-0.112	0.048	-0.082	-0.020	0.180*	0.142	1	
Recommend	-0.120	0.043	-0.080	-0.020	0.146	0.137	0.990**	1

Duration: Duration of illness; QOL; Quality of life; Satisfaction: Satisfaction of care at dermatology clinic; Recommend: Likelihood of recommending the dermatology clinic to friends and family

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psychiatric conditions.^[1,2] The result of this study suggested that 18.7% of the patients attending the dermatology clinic had anxiety and depression at a clinical level and would need psychiatric support. These included patients with moderate or higher levels of depression and anxiety. Although a proportion of patients in dermatology clinics were identified to have skin disorders that were psycho-somatic in nature, these were comparatively less than those found to have anxiety and depression, and no one was specifically diagnosed to have psychiatric illness. This suggests that routine use of small, validated screening measures in dermatology clinics may help in identifying patients who would need additional clinical support for their mental health. The use of scales has been suggested by previous studies as well.^[9]

Well-being and QOL

Many studies report poorer QOL in patients with skin disorders with co-morbid psychiatric illnesses.^[4] In our study, well-being and overall QOL were significantly negatively correlated with anxiety and depression in the sample. Similar negative correlation of depression and QOL has been reported in patients with skin conditions.^[8] It is well known that poor mental state impacts well-being and QOL. In our sample, compared to the inflammatory/infective skin conditions, all other conditions were associated with worse QOL. Although the mean duration of illness in these groups was not significantly different, it is possible that in this group, the skin disorder did not have much impact on their life and there was a possibility of positive outcome following treatment; however, this needs further specific investigation.

It needs to be highlighted that the patients had considerably high satisfaction regarding the dermatological care. Similarly, the score for the likelihood of recommendation of the clinic to family and friends was high. This suggested that despite appreciable dermatological input, the well-being and QOL may not improve considerably unless the negative contributing factors of anxiety and depression are addressed. Although there may be changes following the improvement of dermatological conditions, the overall outcome may still be dependent on mental health issues.

Mental health support

A considerable proportion was identified to have psycho-somatic illness, and many were rated to have clinical levels of anxiety and depression. All these patients understandably need mental health support. It has been reported that psychiatric intervention results in an improvement in clinical outcomes of many dermatological conditions, most commonly chronic skin diseases.^[14] It has also been reported that following the intervention, the QOL of patients with skin diseases has improved.^[2]

In our study, the psychiatric referral was considered in a lower proportion. There could be possibly various issues. It was not possible to identify patients with anxiety and depression in a routine dermatology clinic. The use of a small validated scale might mitigate the problem. Although many patients were identified as having psycho-somatic issues, the availability of focused psycho-therapeutic intervention and their accessibility could be a concern for many patients. Psycho-dermatology liaison clinics are ideal for dealing with these concerns; however, they are almost non-existent in India.^[2]

Often, it is simply not feasible for many patients to attend psycho-therapeutic sessions. Another major concern is the stigma. In our study, many dermatology patients hesitated a referral to psychiatry, when suggested by the clinical psychologist based on their screening. It has been reported that general anxiety is one of the central and most influential variables for the stigma in dermatology patients.^[20] A considerable proportion of our patients had anxiety and depression, which could have added to the stigma and the hesitancy in attending psychiatric consultation. Stigma in dermatology patients needs to be addressed as it is common and affects help-seeking.^[21] There is a need for public education, psycho-education for individual patients, and supportive services. In addition, equipping dermatologists to identify and manage common mental illnesses would probably help.

Limitations

The study was conducted in a district-level general hospital, so the findings may not be generalizable to all clinical settings. The sample size was relatively small, considering numbers in individual dermatological diagnostic groups. There were no clinical or diagnostic assessments of the patients, so the results do not present the whole range of psychiatric disorders in the sample. Symptom level analysis was not done, considering the wide range of presenting complaints of skin disorders. There was no control group in the study; it would be helpful to have a comparison with people with no skin diseases.

CONCLUSION

A considerable proportion of patients attending the dermatology clinic had mental health problems. Besides the proportion with anxiety and depression, almost 1 in 10 patients were found to have psycho-somatic disorder based on their symptomatic presentation. Anxiety and depression significantly affected the well-being and QOL of the dermatology patients, despite high satisfaction and likelihood of recommendation of care in the dermatology clinic. All these suggested the need for psychiatric

assessment and treatment for a proportion of cases; however, available mental health services were almost not utilized. Training dermatologists to identify, manage, or refer patients with mental health problems appropriately may help. In addition, considering the huge proportions of patients in dermatology clinics with psychiatric problems, establishing psycho-dermatology liaison clinics, or facilitating joint assessments might be considered, especially in multi-specialty centers. Future studies should look into the influence of mental health problems and interventions on the outcome of dermatological conditions.

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Conflicts of interest

There are no conflicts of interest.

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