



ISSN: 2476-8642 (Print)

ISSN: 2536-6149 (Online)

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**PUBLISHED BY THE MEDICAL
AND DENTAL CONSULTANTS ASSOCIATION
OF NIGERIA, OOUTH, SAGAMU, NIGERIA.**

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ORIGINAL RESEARCH

Quality of Life and Adjustment to Psychosocial Morbidity Among Adults Attending a Dermatology Clinic

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Abstract

Background: The skin is the largest organ in the body and has aesthetic significance. The presence of any skin lesion or skin disease might be associated with psychosocial morbidity and negative impact on the quality of life.

Objectives: To determine the level and degree of adjustment to psychosocial morbidity associated with the presence of dermatological conditions and assessing the quality of life of affected adults.

Methods: Data were collected from 189 new patients attending the Dermatology Clinic at the Federal Medical Centre, Abeokuta, Nigeria using systematic random sampling. The validated Adjustment to Chronic Skin (ACS) diseases questionnaire and Finlay's Dermatology Life Quality Index (DLQI) questionnaire were the research instruments.

Results: The respondents consisted of 80 males (42.3%) and 109 females (57.7%) with a mean age of 36.3 ± 15.3 years. The least adjustment to skin-related psychosocial morbidity (49.7%) was observed with the helplessness scale. The mean score on the DQoL was 9.9 ± 6.2 and over half of the respondents (53.9%) reported moderate to an extremely large negative effect on their quality of life.

Conclusion: The presence of dermatological conditions impact negatively on the quality of life and the least adjustment to skin-related psychosocial morbidity was experienced on the helplessness scale. Dermatology practitioners should acquire psychological evaluation and/or counselling skills to provide holistic care.

Keywords: Dermatologic disorders, Psychosocial morbidity, Quality of life, Skin, Stigma.

Introduction

The skin is the largest organ in the body and it has aesthetic significance. Among its functions, its aesthetic role is probably the most well-known as this is readily recognized by everyone as a means of communication and social attraction. ^[1] Skin lesions are associated with psychosocial effects particularly, with chronic skin disorders.

^[2,3] The psychosocial morbidity associated with a dermatological condition is thought to affect the individual, his family, and also the society as a whole. ^[4] Such patients may have limitations in their economic potentials arising from the inability to go to work regularly or lack of psychosocial support. ^[3]

The need to explore concurrent psychosocial morbidity in patients with skin diseases has only recently received the deserved attention. [5] Hitherto, physicians have focused mainly on understanding and providing therapy for physical skin lesions with little or no attention to any accompanying psychological disturbances. [5] Some studies across Africa have recently reported the presence of low self-esteem, feeling of shame, depression, anxiety, and some level of stigma among patients with skin diseases including vitiligo, psoriasis, dermatitis, albinism, acne and onychodermatitis. [6-9] However, insight into the degree of psychosocial sufferings that accompany these conditions remains poor just as not much is known about how much adjustment such patients can make in coping with their skin conditions. Such information is required to provide clinicians with a complete picture of the care these patients require. Holistic care is possible only when the physical, psychological and social dimensions of the illness are understood and addressed by the clinicians. [3,10]

According to Chan and colleagues, psychosocial adjustment (or adaptation) to chronic illness and disability (CID) is a long-term, dynamic process that is influenced by intrinsic and extrinsic variables within a specific context. [11] Although some other authors regard adaptation as the dynamic process a person with CID experiences to achieve the final state of optimal person-environment congruence, known as an adjustment, the two terms may be used interchangeably.

Quality of Life (QoL) is also significantly influenced by skin disorders. [12] The negative impact of dermatological diseases on QoL is expressed through adverse physical, functional, emotional and intellectual well-being, concerning work, family, friends and other related matters. [13] An association between adverse quality of life scores and poor psychosocial adjustment has been reported. [14,15]

Magin, *et al.*, in their study, documented the insensitivity of both dermatologists and general practitioners to the psychological effects of skin diseases on patients. [16]

Though there have been studies on the quality of life of patients with dermatological conditions such as acne, tinea capitis and psoriasis in Nigeria, there is a dearth of studies that determined the level of adjustment to psychosocial morbidity associated with these dermatological conditions. Therefore, there is a need to identify the psychosocial morbidity associated with dermatological conditions to provide complete care for patients. This present study aimed to determine the level and degree of adjustment to psychosocial morbidity associated with the presence of dermatological conditions and assessing the quality of life of affected adults.

Methods

This was a cross-sectional study conducted at the Dermatology Clinic, Federal Medical Centre, Abeokuta, Southwest Nigeria between July 2018 and June 2019. Abeokuta is described as an urban centre with high population density and infrastructure of a built environment and it is the largest city in Ogun State with a growing population of over 700,000. [17] One hundred and eighty-nine (189) participants who fulfilled the inclusion criteria were recruited for the study using systematic random sampling. The first stage of the sampling technique used was simple random sampling where the first subject was chosen by balloting. Subsequently, systematic sampling was done where after the simple random start, every fifth patient was selected from the clinics using the sampling interval formula below until the sample size was reached: $K = N/n = 1000/189 = 5.29$ where n is calculated sample size (189) and N represent the number of adult patients accessing dermatology care at the respective clinics (1000).

Inclusion criteria included adult (both sexes) aged 18 years and above, patients presenting either at the general out-patient clinic or dermatological clinic with dermatological complaints, presence of dermatological complaints for at least three months and willingness to give informed consent for enrolment into the study. Patients who were ill or had co-morbid conditions such as depression were excluded.

Consenting participants completed a written semi-structured questionnaire that included demographic data, validated Adjustment to Chronic Skin diseases (ACS) questionnaire and Finlay's Dermatology Quality-of-Life Index (DQLI). The contents of the questionnaires were explained to the participants in the English language and Yoruba dialect; further assistance was rendered to those who were less literate in completing the questionnaire. The ACS questionnaire assesses problems in adjusting to a wide range of dermatological conditions.

The ACS questionnaire has not been validated in Nigeria though has been validated elsewhere. [18] Therefore, it was first pilot-tested among 30 patients with dermatological conditions who were not part of the participants and its internal reliability was 0.82. The ACS questionnaire is a 52-item tool with a 7-point Likert-type response where 1 is when the participant agrees the least while 7 is when the participant agrees the most. It consists of five subscales, which include social anxiety/avoidance subscale, itch-scratch cycle subscale, helplessness subscale, anxious-depressive mood subscale and impact on the quality-of-life subscale. [18]

Finlay's Dermatology Life Quality Index (DLQI) is a well-validated questionnaire within and outside Nigeria (License ID CUQoL 1337). [19] It assesses the impact of skin conditions on the quality-of-life. DLQI is calculated by summing

the score of each response resulting in a maximum of 30 and a minimum of zero (0). [20] The higher the score, the higher the effect on the patient's quality-of-life. A score of 0-1 means no effect on patient's life, 2-5 means small effect, 6-10 means moderate effect, 11-20 means very large effect and 21-30 means extremely large effect on patient's life. [20]

Data analysis

The analysis of data was done using the Statistical Package for the Social Sciences (SPSS) software, version 21 (SPSS, Chicago, IL, USA). Univariate analysis was used to describe the study population using frequencies and proportions. Continuous variables were expressed as mean and standard deviation, while frequencies of categorical variables were expressed as percentages. The Chi-Square test was used to test the association between categorical variables at a 5% level of significance ($p < 0.05$).

Ethical Consideration

Ethical clearance was obtained from the Research Ethics Committee of the Federal Medical Centre, Abeokuta, Nigeria.

Results

One hundred and eighty-nine (189) respondents participated in the study. The mean age of the respondents was 36.3 ± 15.3 years. Males comprised 42.3% (80/189) while the females comprised 57.7% (109/189). More than half (51.3%) were married and the majority (42.3%) had tertiary education (Table I). The spectrum of dermatoses in the respondents is presented in Table II. Dermatitis was the most frequently seen condition (18.5%). Superficial fungal infections and acne/acneiform eruptions occurred in 13.2% and 11.7% of the respondents respectively.

Table I: Demographic characteristics of 189 respondents

<i>Variables</i>	<i>Frequency</i>	<i>Percentage</i>
Age (Years)		
18-39	122	64.6
40-61	53	28.0
62-83	14	7.4
Sex		
Male	80	42.3
Female	109	57.7
Marital Status		
Single	83	43.9
Married	98	51.9
Others	8	4.2
Education		
Primary	13	6.9
Secondary	55	29.1
Tertiary	80	42.3
Postgraduate	41	21.7

The degree of adjustment to skin-related psychosocial morbidity is presented in Table III. At least three-fifths of patients were well or fairly-adjusted to the social anxiety and avoidance scale (68.3%), impact on the quality-of-life scale (68.3%), anxious/depressive mood scale (61.4%) and itch-scratch cycle scale (60.8%) while a third was ill-adjusted to these scales (31.7%, 31.7%, 38.6% and 39.2% respectively). For the helplessness scale, 49.7% were well or fairly adjusted and 50.3% were ill-adjusted.

Table IV described the effect of skin conditions on the quality of life using the DLQI. At least seven out of ten respondents (78.8%) reported some form of a negative effect (small- extremely large) on their lives with a little over 50% reporting moderate to the very large (negative) effect of the skin conditions on their quality-of-life.

Table V shows the relationship between the effects of dermatological conditions on the quality-of-life of the respondents and their demographic characteristics. There was an association between age and the effects of the skin condition on the quality-of-life as a higher proportion of those in the age group 18-39 years

(62.3% of them) had moderate-extreme adverse effects of their skin conditions. Similarly, with regards to marital status, a higher proportion of those who were not currently married (62.6%) had moderate- extreme adverse effects compared to 41.8% of those who were currently married with statistical significance ($p = 0.004$ respectively). However, there was no significant association between the effects of the skin condition on the quality-of-life and characteristics such as gender, religion, and level of education.

Discussion

Psychodermatology is an area of dermatology that has not been well explored in the Nigerian setting. However, compelling reasons for its continued exploration include the increasing prevalence of psychological problems accompanying skin diseases [3, 21] and accumulating evidence of the effectiveness of psychological interventions in relieving the problems of such patients. [15,22]

Table II: Clinical diagnoses among the respondents

<i>Clinical diagnoses</i>	<i>Frequency</i>	<i>Percentage</i>
Dermatitis (atopic, seborrheic)	35	18.5
Superficial fungal infections	25	13.2
Acne/ Acneiform disorders	22	11.7
Parasitic infestations (Onchodermatitis, Scabies)	12	6.3
Papulosquamous disorders (Lichen planus, Psoriasis)	11	5.8
Connective Tissue Diseases (SLE, DLE)	11	5.8
Bacterial infections (Folliculitis, Impetigo)	9	4.8
Viral infections (Chickenpox, Herpes zoster, Warts, Molluscum contagiosum)	8	4.2
Keloids/Hypertrophic scar	8	4.2
Post-inflammatory hyperpigmentation	8	4.2
Urticaria	7	3.7
Vitiligo	6	3.2
Lichen simplex chronicus	5	2.6
Pruritus	4	2.2
Neurofibromatosis	4	2.2
Imunobullous dermatosis	2	1.1
Alopecia areata	1	0.5
Others (palmoplantar keratoderma, idiopathic guttate hypomelanosis, steroid-induced purpura and milia, epidermal nevus)	11	5.8
Total	189	100.0

Table III: Skin-related psychosocial morbidity among respondents

<i>Stigma Scale Domains</i>		<i>Frequency</i>	<i>Percentage</i>
Social anxiety and avoidance	Well or fairly adjusted	129	68.3
	Ill-adjusted	60	31.7
Itch scratch cycle	Well or fairly adjusted	115	60.8
	Ill-adjusted	74	39.2
Helplessness	Well or fairly adjusted	94	49.7
	Ill-adjusted	95	50.3
Anxious depressive mood	Well or fairly adjusted	116	61.4
	Ill-adjusted	73	38.6
Impact on quality of life	Well or fairly adjusted	129	68.3
	Ill-adjusted	60	31.7

Table IV: Dermatology Life Quality Index Overall Score of subjects

<i>Dermatology Life Quality Index</i>	<i>Males (n = 80)</i>	<i>Females (n = 109)</i>	<i>Total (%)</i>
No effect on patient's life	17	23	40 (21.2)
Small effect on patient's life	18	33	51 (27.0)
Moderate effect on patient's life	18	25	43 (22.8)
Very large effect on patient's life	23	23	46 (24.2)
Extremely large effect on patient's life	4	5	9 (4.8)

Mean score-9.9±6.2

Table V: Relationship between the effects of dermatologic conditions on the quality of life of subjects and their demographic characteristics

<i>Variables</i>	<i>Effects on Quality of Life</i>		<i>Statistics</i>
	<i>No Effect/Small Effect n = 91</i>	<i>Moderate/Very /Extreme Effect n = 98</i>	
Age			
18-39	46 (37.7)	76 (62.3)	$\chi^2 = 12.560$; p = 0.001
40-61	35 (66.0)	18 (34.0)	
62-83	10 (71.4)	4 (28.6)	
Gender			
Male	35 (43.8)	45 (56.2)	$\chi^2 = 1.075$; p = 0.300
Female	56 (51.4)	53 (48.6)	
Marital status			
Currently married	57 (58.2)	41 (41.8)	$\chi^2 = 8.177$; p = 0.004
Not currently married	34 (37.4)	57 (62.6)	
Religion			
Christianity	66 (46.5)	76 (53.5)	$\chi^2 = 0.637$; p = 0.425
Islam	25 (53.2)	22 (46.8)	
Level of education			
Low level	37 (55.2)	30 (44.8)	$\chi^2 = 2.311$; p = 0.128
High level	51 (43.6)	66 (56.4)	

Low level - Primary and Secondary education; High level - Post-secondary and Tertiary education

The close relationship between the brain and the skin has been linked to the fact that the two organs have the same ectodermal origin and are affected by the same hormones and neurotransmitters. [23,24] Therefore, just as psychological problems can affect the skin, so also can primary skin problems affect the mind hence, modern dermatological care is considered inadequate if the clinician is unable to recognize and treat the psychosocial components of dermatological presentations. [10,15,21]

The present study showed that the presence of skin conditions was associated with psychosocial morbidity and also had a negative impact on the quality of life of the respondents. This conforms with the findings in earlier studies which reported that many skin diseases, such as psoriasis, acne, vitiligo and dermatitis were associated with significant psychosocial morbidities. [7,25] There were diverse skin conditions present among the respondents in this study but dermatitis was the commonest. Many forms of dermatitis, such as atopic dermatitis and

seborrheic dermatitis are chronic conditions that require some level of adjustment by the affected individuals. [7,25]

The majority (70%) of respondents in the present study with chronic skin diseases had small to an extremely large negative effect of the skin disease on their quality of life. This is comparable to other studies that have shown that the presence of skin conditions affects the quality-of-life of an individual significantly. [26,27] Skin disorders have been shown to lead to low self-esteem, feelings of shame, guilt, and at times, social isolation. [26, 27] Dermatological lesions are often not hidden in many instances, and the affected individuals usually have to realistically live with the constant reality that they have a problem or challenge which others readily know and/or talk about. Aside from the perception of others, patients on their own find it difficult to get used to "a new normal", that is the current condition of their skin, and some are adversely affected by the constant thoughts or worries over the noticeable changes in their skin to the extent that they feel 'trapped in their skins'. This is usually a huge psychological burden for such individuals and in some cases, dermatological conditions may provide the nidus for the onset of permanent psychological disorders. Such patients need to be quickly identified and be offered psychological treatment. This requires that dermatology practitioners be able to apply appropriate psychosocial screening tools and interventions and promptly refer those with difficult or complex conditions for better care. [10]

In the present study, almost eight out of ten respondents admitted that their skin lesions had an adverse effect on them, with at least half stating that the effect ranged from moderate to extremely large effects. The implications of this are far-reaching; it is evident that psychosocial morbidities secondarily occur in most patients after the primary dermatological lesion. This brings to the fore the need for attending

physicians to be concerned about and take care of the psychological state of their patients along with the primary dermatological conditions. [10] The subscales assessed for psychosocial morbidity included social anxiety and avoidance, itch-scratch cycle, helplessness, anxious depressive mood and impact on the quality of life. These scales are inter-related in their contributions to overall psychosocial adjustment to skin conditions. The study showed that the helplessness subscale was the least adjusted to (50.3%) while the social anxiety and avoidance scale and the impact on the quality-of-life subscales were the most adjusted to by over two-thirds of the respondents.

The helplessness subscale assessed mostly the physical adjustment to the skin condition by inspecting the skin, observing how others respond to the skin disease and their feeling of desperation and fear that the skin disease might get worse. Rumsey [28] in her study, noted that visible skin disorders lead to social burden especially now that much emphasis lies on attractive appearance and the social media and other outlets promote the cosmetic industry. Individuals with chronic skin conditions are likely to feel more helpless than ever before. The itch-scratch cycle scale was the next subscale ill-adjusted to (39.2%). This scale assessed the effect of itching and scratching of the skin and how uncomfortable and exhausting it can be. The fear of becoming dependent on anti-inflammatory agents such as cortisone also affected their level of adjustment. Conditions such as atopic dermatitis, pruritus and contact dermatitis that leads to continuous scratching can be debilitating. It has an attendant impact on feelings of helplessness, quality of life and response to treatment modalities. [29] Verhoeven, *et al.* discussed the biopsychosocial model of itch in patients with chronic skin diseases and noted that there was a significant relationship between internal factors (such as stable personality traits), external stressors and cognitive, behavioural and

social factors, as mediators of itch. [29] It becomes imperative to attend to patients with itch-related skin conditions, bearing these factors in mind.

In the present study, 38.6% of the respondents were ill-adjusted to the anxious depressive mood subscale. The respondents reported feeling tired, nervous, upset and lacking concentration at times because of their chronic skin condition. Studies have shown that the presence of skin conditions such as albinism, vitiligo, psoriasis, acne, onychodermatitis leads to anxiety and depression. [6,9,28] With regards to the social anxiety and avoidance and the impact on the quality-of-life subscales, 31.7% of the respondents were ill-adjusted to both of them. Social anxiety and avoidance assessed the emotional, cognitive and behavioural reactions individuals with visible skin conditions had, looking at how stigmatized they felt. Though 68.3% of the respondents in the present study were well or fairly adjusted, about a third of the respondents (31.7%) were ill-adjusted and this is substantial. This can also explain the findings on the impact on the quality-of-life scales. A further assessment of the quality of life using the DLQI elucidated that a majority of the respondents (78.8%), reported a negative effect of the skin conditions on their quality-of-life with effects ranging from small to extremely large.

The findings in the present study showed that chronic skin conditions are associated with psychosocial morbidity using the adjustment to chronic skin diseases (ACS) and the Dermatology Life Quality Index survey tools. About a third of the respondents were ill-adjusted to their conditions and over two-thirds of the respondents reported a negative impact on the quality of life with variation in the level of impact.

Some limitations were noted in the present study. First, a mixed-method approach to the study (qualitative and quantitative) would have made

the study findings more robust. However, that requires more expertise and it is cost-intensive. A case-control study design might have made findings from the study more comparable just as there are limited well-validated tools to assess adjustment to chronic skin conditions and not many studies have used the Adjustment to Chronic Skin Diseases (ACS) questionnaire.

Conclusion

Chronic skin conditions are associated with substantial psychosocial morbidity with moderate to extremely large negative effects on quality of life. A significant number of patients with chronic skin conditions demonstrated ill-adjustment to psychosocial morbidity in terms of social anxiety and avoidance, itch-scratch cycle, helplessness, anxious depressive mood and impact on quality-of-life subscales. There is the need for attending physicians to acquire more skills in managing patients with chronic skin conditions with emphasis on attendant psychosocial factors and learn how to make patients adjust better to their skin conditions. Basic psychological evaluation and/or counselling tools in dermatological clinics become imperative, especially in patients with chronic skin conditions.

Authors' Contributions: OOO and AAJ conceived and designed the study. OAG participated in the design of the study. All the authors participated in data analysis and interpretation while OOO and AAJ drafted the manuscript. All the authors participated in the critical revision of the manuscript and approved the final version of the manuscript.

Conflicts of interest: None

Funding: Self-funded.

Publication History: Submitted 16 November 2020; Accepted 25 January 2021.

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