

## QUALITY OF LIFE IN PATIENTS WITH SKIN DISEASES IN UYO, A COMMUNITY IN SOUTH-SOUTH NIGERIA

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Abasiubong F, Akpan N, Ukpong DI, Umanah I, Udoh SB. Quality of Life in Patients with Skin Diseases in Uyo, a community in South-South Nigeria. *Adv Trop Med Pub Health Int.* 2011; 1(2): 55 - 65.

### ABSTRACT

There is increasing recognition of skin diseases in our environment. However, no information is currently available on the functional status of patients with these conditions. This study examines the quality of life and pattern of skin diseases among patients in Uyo, a community in South-South Nigeria. Between January and June 2009, 136 patients attending the dermatological clinic of the University of Uyo Teaching Hospital were assessed for various indices of quality of life, using COOP Charts screening instrument. Fifty nine (43.4%) of the participants were males and 77 (46.6%) females. Of the 136 patients with skin diseases, 22 (16.2%) had pruritus, 21 (15.4%) eczema, 16 (11.8%) acne, 16 (11.8%) urticaria, 14 (10.3%) pediculosis capitis, 13 (9.5%) tinea capitis, 9 (6.6%) scabies, 8 (5.9%) pyodermas, 7 (5.1%) infective skin disorders, 5 (3.7%) chronic and debilitating skin diseases, while 5 (3.7%) had moles and lumps. The domains of quality of life, with respect to life satisfaction or lack of it were variables. Most indices of quality of life, except the social support and resources, were significantly poor in females than males ( $p=0.001$ ). Skin diseases are common and are associated with adverse impact on the quality of life. In view of the unprecedented high risk factors for these conditions in our environment, there is need for understanding the complexities of various indices of quality of life. This would help in determining the choice care and increase the use of healthcare services, for purposes of improving the overall well-being and functional capabilities of the people with the disorders.

**Key words:** Quality of life, patient, skin disease

### INTRODUCTION

Skin diseases are among the common public health conditions responsible for considerable disability<sup>1</sup>. The associated limitations to normal daily activities pose serious socioeconomic problems. In tropical areas, where transmissible diseases are endemic, skin diseases are the dominant presentations and among the most common health problems seen in primary care settings<sup>2-5</sup>. Although studies aimed at estimating the extent of the problems have been carried out in advanced societies, the quality of life of people with skin diseases in developing countries has continued to be a major problem, as issues relating to it have not been adequately addressed. Previous studies in the past had only been focused on the prevalence and pattern of occurrences, and various rates ranging from 20 to 80 percent have been reported<sup>6-7</sup>. The increasing prevalence has been attributable to major risk factors such as household overcrowding, hot and humid climate. However, studies have shown that with modification of these risk factors, many of the common skin disorders could be tackled successfully in some local communities<sup>8</sup>. Evidence also suggests that skin diseases related to HIV/AIDS constitutes an important disease burden in developing countries. Again, there is increasing evidence that the use of antiretroviral therapy has significantly improved the quality of life in people living with HIV/AIDS<sup>9</sup>.

Although the mortality rates are generally lower, skin diseases have significant effects on the quality of life<sup>10-11</sup>. Assessing the impact of skin diseases on the quality of life in comparison with that of chronic non-dermatological diseases is difficult. Evidence suggests that the impacts on quality of life are similar to non-HIV-related skin problems<sup>12-13</sup>. The concept of health-related quality of life consists of individual's physical, social and psychological well-being<sup>11</sup>. This is important in medical care, as it helps to define the effectiveness of treatment by focusing on the ability of an individual to lead a productive and enjoyable life. Therefore, there is increasing need for effective remedies as these conditions are so common and affect a large number of people including children. The prevalence of skin diseases alone does not equate with disease burden. The global burden of disease indicates that skin diseases are associated with mortality rates of 20,000 DALYs in Sub-Saharan Africa<sup>14</sup>. When compared with the mortality rates attributed to other medical conditions, and using a comparative assessment of disability-adjusted life years (DALYs), skin diseases is estimated at a total of 896,000 DALYs for the Sub-Saharan Africa<sup>15</sup>. The stigma associated with them often results in emotional and psychological consequences with restricted functional and social fulfillment<sup>10</sup>. The DALYs rate of skin diseases is reported to be similar to that of other medical conditions. Evidence has also shown comparable deficits in objective measurements of quality of life in common skin diseases like acne with chronic disorders such as asthma, diabetes and arthritis<sup>12-13</sup>.

With the depreciating standard of healthcare infrastructural facilities development and rehabilitation services in many African countries including Nigeria, evidence suggests there may be great burden and poor quality of life in people with skin diseases. However, despite the increasing socioeconomic indicators and risk factors for skin diseases in our environment, there is scanty or no data on the quality of life and factors limiting their capacity for social integration. This study, therefore, aimed at assessing the health change quality of life and functional status of patients with skin conditions. It is hoped that the findings would strengthen rehabilitation services necessary for achieving independence,

social integration and a better quality of life in people with skin diseases in our environment.

## MATERIALS AND METHODS

### A. LOCATION OF THE STUDY

The study was carried out at the dermatologic clinic of the University of Uyo Teaching Hospital, situated in an outskirt of Uyo, a community in South-South and capital of Akwa Ibom State, Nigeria. The hospital is a 300-bed hospital established in 2001. At present, it is the only tertiary hospital serving the entire state with a population of 3.9 million people, as well as some areas of adjoining states of Abia, Cross River and Rivers in Nigeria.

### B. METHOD

One hundred and thirty six patients attending Dermatology Clinic University of Uyo Teaching Hospital between January and June 2009 were assessed for functional and emotional health status, using Dartmouth COOP Charts<sup>16</sup>. These Charts were developed primarily for use in clinical practice for monitoring patient outcome. They have been shown to be useful in assessing health status in patients with variety of conditions in several studies<sup>17 - 20</sup>. The Charts measure physical functioning, social functioning/activities, pain, overall health, health change quality of life, and social support and resources. They are capable of detecting the association between disease and functioning, and use a single item to capture an entire dimension of health status. These charts are the shortest available validated instrument for clinical assessment of general health status<sup>16</sup>. The COOP Charts are easily scored because each section has only one question that is evaluated on an ordinal scale from 1-5, with 1 representing no limitations and 5 representing the severest degree of limitations. Although they can be used to monitor patients' progress, their main strengths are in assisting in physician-patient communication by giving the opportunity to reveal functioning limitations that otherwise may not be mentioned. The Charts can be self administered or by a trained staff because they are pictorial. They require little explanation and can be generally understood and completed even when language barrier exists. Since scores for each COOP Chart domain followed a normal distribution, categorization were done around the value of the mean, +1.96 standard deviation (SD) with 'good' representing values greater than the mean plus one standard deviation; 'fair' representing value equals to the mean, plus or minus one SD and 'poor' representing values less than the mean, minus one. The scores for both sexes in each domain were compared. Prior to the collection of the data, the instrument was pretested in a pilot study by interviewing 30 patients in the general outpatient clinic. This was done to acquire experience and determine its applicability in our environment. The results showed findings comparable to those found in other studies<sup>10</sup>. Permission to carry out the study was obtained from the Ethics and Research Committee of the hospital. The study was anonymous and two trained-assistants helped in administering the questionnaires on those with little or no education.

### C. DATA ANALYSIS

The results of the study were analyzed using the Statistical Package for social sciences (SPSS 17.0). The proportion of patients' functional status was found from the study group. Sample means and percentages were calculated with which simple frequency tables were created. Standard deviation from the mean was calculated, and comparisons of categorical data were done by Chi-square test, using Yates-correction factor and Fisher Exact test. The p-value of 0.05 was used to determine the level of statistical significance.

## RESULTS

### A. SOCIODEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

A total of 136 patients, consisting of 59 (43.4%) males and 77 (56.6%) females were assessed for the quality of life. Majority 112 (82.4%) aged between 21 and 50 years; 36 (26.5%) were single, 53 (39.0%) married, while 47 (34.5%) were either separated, divorced or widowed. Fifteen (11.0%) had no formal education; 28 (20.6%) had primary, 52 (38.2%) secondary and 41 (30.1%) had post-secondary level of education. Of the 136 participants, 53 (39.0%) had no source of reasonable income, while 40 (67.8%) of males and 45 (58.4%) females were economically active. Table 1 shows the sociodemographic characteristics of the respondents.

### 2. PATTERN AND PREVALENCE OF SKIN DISEASES AMONG THE PATIENTS

Of the 136 patients with skin diseases, 22 (16.2%) had pruritus, 21 (15.4%) eczema, 16 (11.8%) acne, 16 (11.8%) urticaria, 14 (10.3%) pediculosis capitis, 13 (9.5%) tinea capitis, 9 (6.6%) scabies, 8 (5.9%) pyodermas, 7 (5.1%) infective skin disorders, 5 (3.7%) chronic and debilitating skin diseases, while 5 (3.7%) had moles and lumps.

### 3. QUALITY OF LIFE IN RESPONDENTS WITH SKIN DISEASES

The degree of limitations in physical functioning, social functioning/activities, pain, overall health, health change quality of life, and social support and resources are demonstrated in Table 2. With regards to physical activities of patients with skin diseases, 34 (57.6%) males against 41 (53.2%) of females experienced poor physical activities as compared to only 14 (23.7%) in males and 16 (20.8%) in females with good physical activities. The emotional domain showed difference in the levels of quality of life in both sexes, and this was significantly poor in females; 11 (18.6%) of males against 37 (48.1%) of females showed poor emotional quality of life ( $p=0.001$ ), while 32 (54.2%) of males and 17 (22.1%) of females showed no change in emotional quality of life ( $p=0.001$ ). Females also exhibited poor quality of life with respect to general health. However, there was no change in 13 (16.9%) of females and 27 (45.8%) of males. This was statistically significant ( $p=0.001$ ). Many males 32 (54.2%) and females 41 (53.2%) had poor bodily pain, while 9 (15.5%) of males and 14 (18.2%) of females had no change in bodily pain. Females exhibited poor social activities than males, as 41 (53.2%) of females against 19 (32.2%) of males were poor in this domain ( $p=0.023$ ), while 14

Table 1. Sociodemographic characteristics of the respondents.

Variables	Subjects		X <sup>2</sup>	P-value
	Males n (%)	Females n (%)		
Age in (yrs)				
≤20	5 (8.5)	9 (9.1)	4.223	0.337
21-30	11(18.6)	15 (19.5)		
31-40	19(32.2)	29 (37.7)		
41-50	21(35.6)	17 (22.1)		
≥ 50	3(5.1)	9 (11.7)		
Marital status				
Single	15(25.4)	21 (27.3)	2.898	0.575
Married	20(33.9)	33 (42.9)		
Separated	8(13.6)	11 (14.3)		
Divorced	9(15.3)	7 (9.1)		
Widowed	7(11.9)	5 (8.5)		
Edu. Level				
NFE	6(10.2)	9 (11.7)	0.424	0.935
Prim. School	11(18.6)	17 (22.1)		
Sec.School	23(39.0)	29 (37.7)		
Post Sec.Sch.	19(32.2)	22 (28.6)		
Occupation				
Unemployed	19(32.2)	34 (44.2)	3.417	0.181
Employed	27(45.8)	36 (46.8)		
Business	13(22.0)	9 (11.7)		

Edu=Education

NFE=No formal education

Prim. School=Primary school

Sec.School=Secondary school

Post Sec. School=Post secondary school

(18.2%) of females and 28 (47.5%) of males noticed no change ( $p=0.001$ ). Functional activities were good only in 25 (42.4%) of males and 16 (20.8%) of females. This was statistically significant ( $0.011$ ); fair in 13 (22.0%) of males as compared to 40 (51.9%) of females ( $p=0.002$ ). However, the overall function was poor in females than males as only 8 (5.9%) of females compared with 31 (52.5%) of males were good in this domain ( $0.001$ ); 18 (30.5%) males compared to 33 (42.9%) of females had poor overall health. Majority of the participants had good social support and resources, as only 11 (35.6%) of males and 18 (46.8%) of females had poor social support and resources.

Table 2. The levels of quality of life of the respondents.

Domain	Degree of Quality of life		X <sup>2</sup>	P-value
	Males n (%)	Females n (%)		
Physical activities				
Good	14(23.7)	16 (20.8)	0.65	0.515
Fair	17(18.8)	20 (26.0)	1.30	0.194
Poor	34(57.6)	41 (53.2)	0.34	0.736
Emotional status				
Good	32(54.2)	17 (22.1)	3.68	0.001*
Fair	16(27.1)	23 (29.9)	0.17	0.868
poor	11(18.6)	37 (48.1)	3.39	0.001*
General health				
Good	27(45.8)	13 (16.9)	3.48	0.001*
Fair	13(22.0)	25 (32.5)	1.16	0.246
Poor	19(32.2)	39 (50.6)	1.98	0.048*
Bodily pain				
Good	9(15.5)	14 (18.2)	0.00	1.000
Fair	18(30.5)	23 (29.9)	0.22	0.829
Poor	32(54.2)	41 (53.2)	0.00	1.000
Social activities				
Good	28(47.5)	14 (18.2)	3.48	0.001*
Fair	9(15.3)	21 (27.3)	1.46	0.143
Poor	19(32.2)	41 (53.2)	2.27	0.023*
Funct. Activities				
Good	14(27.7)	9 (11.7)	1.62	0.105
Fair	7(11.9)	13 (16.9)	0.49	0.622
Poor	38(64.4)	55 (71.4)	0.94	0.346
Overall health				
Good	18(30.2)	8 (10.4)	2.73	0.006
Fair	10(16.9)	16 (20.8)	0.35	0.724
Poor	31(52.5)	53 (68.8)	1.78	0.075
Social support				
Good	27(45.8)	36 (46.8)	1.73	0.084
Fair	21(35.6)	23 (29.9)	0.47	0.641
Poor	11(18.6)	18 (23.4)	1.14	0.256

\*Statistically significant.

Funct. activities=Functional activities

## DISCUSSION

The findings in this study suggest that skin diseases are common in our environment. The prevalence seems to be higher in females and 57% of them compared to 43% of males suffered from one form of skin diseases or the other. These findings are in consonance with reports in previous studies, although these were among school children<sup>21-24</sup>. One major reason for increasing prevalence in females in this study may be due to the fact that women by nature are often emotional, highly sensitive and conscious of their appearance in public, therefore would raise alarm on any slightest manifestation on their bodies. This may have accounted for the reasonable number of women in this study. Compared to men, the possibility that many women with skin problems would seek medical attention is higher.

This study also demonstrates the basic sociodemographic characteristics of patients with skin diseases. More than 80% of patients with skin diseases aged between 21 and 50 years. Although this is in contrast with the findings in previous studies that had reported higher prevalence among children<sup>25-26</sup>. However, it is possible the risk factors responsible for the development of skin diseases among this age group in this have not been given serious attention and control. Furthermore, the level of education of the subjects may have also contributed to the significant number of patients in this age bracket. Sixty eight percent of the subjects in this study had at least secondary school level of education. It may be reasonable to argue that education increases knowledge and awareness among the patients, hence increased access to health care. However, only 32% of men and 22% of men had post-secondary education, suggesting that many of the patients were engaged in low-class jobs. This, with a significant percentage of unemployed participants seems to suggest that majority were in low socioeconomic status and therefore could impact negatively on the quality of life. Previous studies have reported high rates of skin diseases in lower socioeconomic classes<sup>24</sup>.

One other significant finding in this study is the pattern of presentation of skin diseases. The most common skin diseases are pruritus, eczema, acne, urticaria, pediculosis capitis, tinea capitis and scabies in that order. This is similar to the findings in previous studies<sup>6-7, 22-23</sup>. Although there is a significant variation in the rates of these conditions in this study, the findings have shown that the general medical clinics are predominantly overwhelmed with more serious health problems. The variation in the rates in comparison with other studies may be attributable to a number of factors, including study environment, the characteristics of the population and different methodologies used, as well as the knowledge of the disease burden. This may have wider implications in our environment. Therefore, inspite of the differences in rates of these conditions, it is important to focus more attention on the primary care clinics, in order to reduce the numerous health issues. This is so because our study has shown that 4% of our study population had chronic debilitating skin disorders and 5% infective skin diseases. Projecting and judging from our estimated National population of about more than 150 million people, the findings are significant<sup>27</sup>. One major concern would be the state of our healthcare facility development and services, as well as manpower to cope with the increasing number of people with the problems.

This study also shows different domain of quality of life in persons with skin disease in our environment. This study measured the levels of physical functioning, social

functioning/activities, pain, overall health, health change quality of life, and social support and resources. The differentiation of quality of life into good, fair and poor shows the degree of overall life satisfaction or lack of it, in persons with skin disorders. This could help in determining those with serious health needs, for purposes of urgent attention and intervention. In this study, the findings show variation in different indices of quality of life among both males and females. The reaction to health change among people is clearly demonstrated in all the domains of quality of life in this study, while some people exhibited good quality, others showed poor quality of life. This seems to suggest that people react differently to stressful experiences. The impact of skin diseases on the quality of life has been reported to be equivalent to that due to medical conditions like diabetes, hypertension, and asthma<sup>12-13</sup>. In this study, about 58% of males compared to 53% of females experienced poor quality of life, with respect to physical activities. The emotional domain was significantly affected in females as 48% had poor and 22% good emotional quality of life. This when compared to 18% of men with poor and 54% with good emotional quality of life, seems to suggest that women with skin problems have more psychological consequences. The findings are in contrast with previous studies that had used Coop charts to assess subjects in other medical conditions<sup>17-20</sup>. The difference may be due to the highly visible nature of skin diseases which constantly act as a source of stress. However, the wide gap in emotional index between males and females in this study may be explained in terms of personality disposition of women, who tend to be curious with concern about their appearance and comments from members of the public<sup>10</sup>. The implication may be fear of social isolation and stigmatization, with feelings of self consciousness and embarrassment. Studies have shown that patients with skin disorders especially chronic ones experience rejection with social reclusiveness associated with anxiety and depression symptoms or even alcoholism and other addictive consequences<sup>10,28</sup>. Evidence also suggests that strangers or even friends may show disgust or fear of infection. There is a widespread belief that skin disorders are contagious and are related to impurities in the blood. This perception apart from encouraging negative health behaviour, also expose women to poor interpersonal relationships because of its affects on normal appearance in the public and hinders both physical activities and social life. The resultant psychological and emotional distress will impact negatively on the overall functioning and performance. This may also explain why the social activities in females were significantly poor in this study. The implication is that women were not socially active. This seems to be supported by the level of general health of the women, as only about 17% of them had good general health. This when compared to 46% of men with good general health is significant. Although this has not been determined in this study, however, the findings seem to suggest that there is a direct relationship between emotional quality of life and general health. Therefore, it may be reasonable to imply that both physical and social activities could be influenced by the level of general health of the participants, as health is a function of physical, mental and social wellbeing.

Our study also shows that 54% of males and 53% of females had poor bodily pain. This has demonstrated that the limitation of functions could be related to pain and discomfort. Many skin diseases are often associated with both physical and psychological pains, which could lead to significant distress and disability<sup>10</sup>. The implication is that the economic productivity of the participants could be seriously undermined, as only few



males and females in this study did not notice any influence with respect to bodily pains. Studies have shown that skin diseases such as chronic hand and foot eczema make patients unable to work and perform daily activities<sup>14,28-29</sup>. In this study, men and women demonstrated poor functional activities, as well as overall health function. Evidence abounds that skin problems are responsible for significant morbidity and could reduce greatly the quality of life in people<sup>10-11,14</sup>. Our study shows significant impact and poor quality of life in the participants. Although the degree of functional activities and overall health vary, skin conditions have widely been reported to have less mortality rate but high morbidity in terms of social and functional activities<sup>12,28,30</sup>. This may also explain why only about 12% of females and 28% of males in this study enjoyed good functional activities. Nonetheless, our study seems to support the premise that skin diseases are responsible for severe disabilities, and this has been demonstrated in 69% of females and 52% of males with poor overall health functions. However, the social support and resources were significantly good in both males and females. One major reason for this may be due to the relatively high educational level of the participants. This might have led to increased knowledge of the disease burden and the willingness, especially among married ones to assist each other. This is in consonance with reports in previous studies that had associated improved quality of life with good social supports in patients with various chronic skin disorders<sup>31-33</sup>. Also it is possible the communal way of living, which is the cultural pattern of life in a typical African society like ours may have contributed immensely to the good social supports seen this study.

The limitations of this study include the fact that it was a hospital-based and the sample size apart from being small, was not randomly selected. Therefore the results cannot be generalized. Secondly, this is a self-reported and subjective assessment of overall satisfaction of quality of life or lack of it. There is the possibility of biased and unreliable information.

Regardless of low mortality, skin diseases continue to be a major problem in our environment. The quality of life in people with the conditions needs serious attention in view of its consequences, which often manifest in low productivity, functional and social disabilities. Our primary healthcare services and programmes need to be strengthened to incorporate health education necessary for modifying some of the risk factors responsible for the development of many debilitating skin conditions. Furthermore, the information can lead to increase awareness among those afflicted and confidence in healthcare providers on realizing their involvement in the whole disease process. There is also need for community-based massive campaigns to enhance awareness and encourage routine examination of people, for purposes of early detection and treatment of skin diseases.

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