Psychological correlates of quality of life in dermatology patients: the role of mental health and self-acceptance

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Abstract

Objectives: Chronic skin diseases have been recognized as having a detrimental effect on patients' quality of life, also causing considerable mental discomfort. Reduced self-acceptance, low self-esteem, a negative body image, and a low sense of self-worth have been noted in patients with visible skin disorders. Yet in the available literature we could not find any data concerning the relationship between mental health status, self-image, and quality of life. This research, then, analyzes potential relationships between self-acceptance, mental health status, and quality of life in dermatology patients.

Materials and Methods: In total, 112 patients of the Occupational Diseases Outpatient Clinic and the Occupational and Environmental Allergy Centre of the Nofer Institute of Occupational Medicine (NIOM) were examined. The General Health Questionnaire (GHQ) was used to assess the patients' mental health; a Polish version of the Dermatology Life Quality Index (DLQI) was employed to assess life quality; and the Self-Acceptance Scale (SAS) served to obtain the patients' self-image. Results showed that there were statistically significant differences in self-assessment of mental health and quality of life depending on one's level of self-acceptance. People with high self-acceptance are characterized by better mental health than those with low self-acceptance (t = 4.8; p = 0.00). Patients with a negative self-image (compared to those with a positive self-image) also deem their quality of life to be poor (t = 3.1; p = 0.00). Results of regression analysis show that mental health status significantly affects the quality of life in dermatology patients; the standardized coefficient was β = 0.42 (p < 0.0001).

Conclusion: Relationships have been found to exist between the patient's mental health and both their subjective assessment of life quality and self-image. Taking into account the role of mental health as a potential determinant of quality of life among dermatology patients, and considering the strong correlation between self-acceptance and well-being, treatment should also focus on counseling.

KEY WORDS

quality of life, self-image, skin diseases, mental disorders

Introduction

One's self-image constitutes an essential element in the personality structure affecting both one's internal mental life, and also his or her attitude toward the external world. Self-image controls human activities, relationships with the environment, and behaviors – particularly in difficult circumstances (1, 2). Self-image is com-
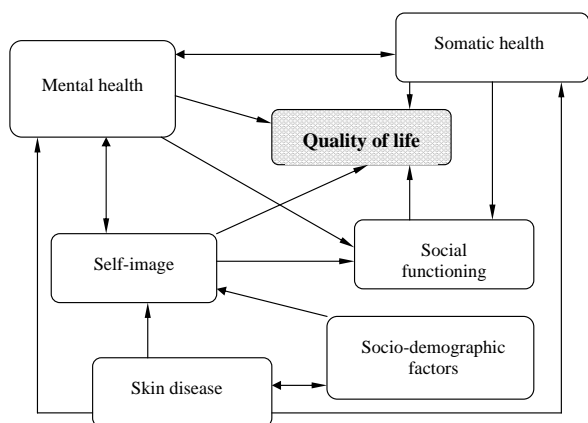
Fig. 1. Conceptual framework of the effects of skin disease on patients' quality of life

Fig. 2. Distribution of results of mental health assessment of the group with higher self-acceptance versus the group with lower self-acceptance

prised of people's assumptions and notions about themselves – about their appearance, abilities and skills, attitudes towards other people, and also the way they perceive their environment (2–4). Self-image is a predictor of general life satisfaction and thus affects self-assessment of the quality of life (5).

Quality of life (QOL) is a multidimensional concept that is difficult to define and measure (6–9). Our approach is based on Gill's and Feinstein's definition of QOL. They defined QOL as the way patients sense and react to their health conditions and to non-medical aspects of their lives (6). According to this viewpoint, one's QOL comprises factors such as physical, functional, emotional, and intellectual well-being, work, family, friends, and other particulars. In spite of numerous concepts and definitions of QOL, a majority of researchers agree that factors affecting QOL should be divided into two groups: objective and subjective (9–11). Subjective factors (personal subjective opinion) include self-assessment of one's physical condition (e.g., general efficiency and fitness, ailments); mental condition (e.g., anxiety, depression, self-esteem, self-image); social situation (e.g., satisfaction with work, earnings, leisure time); and interpersonal relations (e.g., social support, interactions with other people). The term "objective components of QOL" refers to the medical/psychological diagnosis, results of laboratory testing, and indicators of socio-economic status (e.g., net income per capita in the family).

As stated above, patients' health, both physical and mental, is an essential predictor in their assessment of QOL. Self-image is also one of the factors that may affect well-being. One's self-image may be favorable and give rise to favorable emotions, or it may be unfavorable, leading to unfavorable emotions that give rise to anxiety, fear, and various symptoms of maladjustment. Thus, self-image, by affecting mental health, also indirectly influences one's quality of life. Self-assurance, a
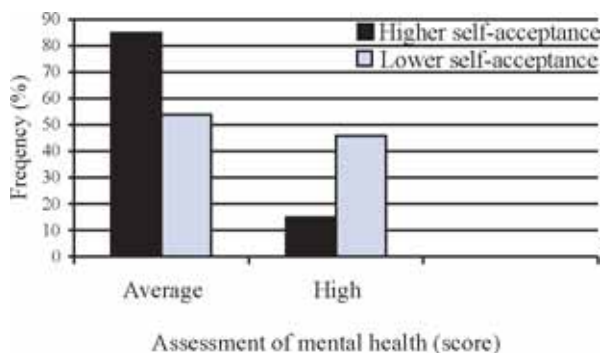
sense of one's own worth, and self-acceptance constitute a source of personal confidence in one's vitality and of convictions about personal self-reliance (12). If a person starts to think that he/she has become worthless and less valuable than other people due to illness, he will develop a negative self-image. Moreover, a sense of inferiority releases adverse emotions (such as anger and depression), which is significant because, as already stated, a person's mental condition is a major factor in their assessment of the QOL. It is worth emphasizing here that self-image may be of paramount importance in diseases that obviously change a patient's looks. Cutaneous diseases certainly fall into that category. Most authors agree that skin diseases that change the appearance of patients' skin cause psychological reactions in these patients, such as shame, anger, anxiety, and depression (13–15). Thus, cutaneous diseases consid-
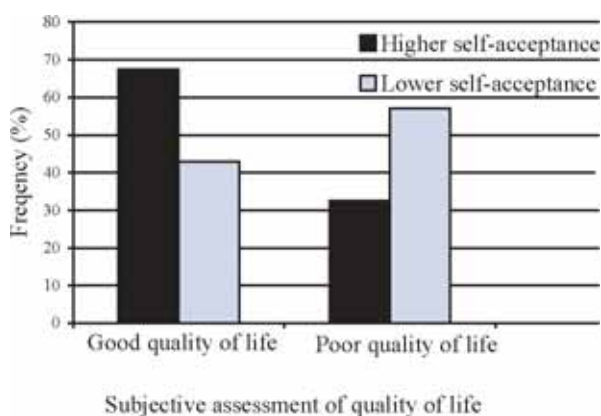

Fig. 3. Distribution of the results of subjective assessment of the quality of life in both the higher self-acceptance group and the lower self-acceptance group

Table 1. Study group characteristics

Characteristics	Total $N = 112$	Urticaria $n = 37$	Allergic contact dermatitis $n = 50$	Atopic dermatitis $n = 25$
Sex (n)				
Women	75	29	28	7
Men	37	8	22	18
Age (years)				
Mean	38.32	40.89	39.92	31.32
SD	13.15	13.45	12.12	12.54
Education (%)				
Primary	10	11	8	12
Vocational	26	19	30	28
Secondary	44	46	48	32
Bachelor's	5	5	4	8
Master's	15	19	10	20

erably affect a patient's mental condition, self-acceptance, ability to function socially, and adaptability (16–23). Reduced self-acceptance, low self-esteem, a negative body image, and a low sense of self-worth were noted in patients with visible skin disorders (13, 15, 24, 25). Distasteful physical ailments (e.g., burning, itching, or painful skin), and the necessity of applying various agents (such as ointments) result in numerous changes in the patient's everyday life (they impede or completely prevent normal functions), all of which results in considerable mental discomfort (14, 26). Thus, in most cases, self-assessment of the QOL among dermatology patients is low (16, 17, 19–22, 26). People affected by skin problems must, in the first place, cope with their own emotional reactions and, in the second place, cope with constraints on their everyday (i.e., professional, family, and social) lives. The progression of each disease that detrimentally affects QOL takes place not only on the biological, but on the mental level as well. Patients undergoing treatment in a depressed state of mind or with low self-acceptance lose the advantage of the full mobilization of their defenses (12). Thus, in our opinion, both patients' mental conditions and their self-images constitute major determinants of their QOL, and are worth monitoring not only in dermatology patients, but in other patients as well.

Based on a literature review, we developed a conceptual framework for the effects of skin disease on patient QOL (Fig. 1).

The model illustrates the complexity of the relationship between skin disease and QOL. Discussing all the assumptions that could be drawn from the model is not in the scope of this paper. What we wish to emphasize here is that, apart from traditional factors affecting QOL, this model also includes the patient's self-image as a factor. The assumption was made that self-image, as shown in Fig. 1, may affect QOL directly or indirectly,

via mental health status and social functioning. As stated earlier, people in our study with visible skin changes quite often perceived these changes as unsightly and causing aversion in others. Such beliefs (to some extent justified) may strongly affect their self-perception, self-acceptance, and ability to function on an everyday level. Clinical observations quite often show that a withdrawal from social interaction and a depressed mood are concurrent with skin diseases. This configuration of problems faced by dermatology patients seems to be significant in terms of their QOL; however, as far we know, it has never been the subject of systematic studies. From a psychological perspective, the highlighted issue is worthy of study because it may produce results that can be helpful in the treatment of dermatology patients. For this reason, our research aims to analyze potential relations between self-image, mental health, and QOL.

Materials and methods

The group under study comprised patients of the Occupational Disease Outpatient Clinic, the Occupational and Environmental Allergy Centre, and the Nofer Institute of Occupational Medicine (NIOM) in Lódz, Poland. The study was conducted from January 2005 to December 2006. The following criteria were applied in the enlistment of participants: a) women and men not younger than 18; and b) people with one of the following allergic skin diseases: urticaria, atopic dermatitis, and allergic contact dermatitis.

In total, 112 patients were examined, including 37 diagnosed with urticaria, 50 with allergic contact dermatitis, and 25 with atopic dermatitis. The subjects included 75 women and 37 men, ranging from 18 to 72 years of age. The mean age of the study group was 38, and was dominated by individuals with secondary and

Table 2. Pearson's correlation coefficients (r) between the condition of mental health and assessment of the quality of the life and the level of self-acceptance

Variable	Mental health (GHQ)					Quality of life (DLQ)
	Somatic symptoms	**Anxiety and insomnia**	**Social dysfunction**	**Severe depression**	**Total score**	
Self-acceptance (SAS)	- 0.29	- 0.50	- 0.40	- 0.56	- 0.52	- 0.33

p < 0.05; GHQ = General Health Questionnaire; SAS = Self-Acceptance Scale; DLQ = Dermatology Life Quality Index.

vocational-type training. Table 1 provides these and other basic characteristics of the group.

A 28-item scaled version of the General Health Questionnaire (GHQ) was used to diagnose the subjects' mental health. This self-administered screening instrument is designed to detect current diagnosable changes in the subject's mental health status and to identify cases of potential mental disorders. A detailed diagnosis was subsequently conducted by a psychiatric interview. The validation studies of the Polish version of GHQ-28 showed that the internal consistency coefficients (Cronbach alpha) reached a value of 0.934. The test-retest reliability (r_u = approximately 0.7) seems to be adequate. The response options were scored 0, 1, 2,

or 3. The total possible score on the GHQ-28 ranges from 0 to 84 and allows for means and distributions to be calculated, both for the total, as well as for the four sub-scales (somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression). A higher score indicates poorer psychological health (27).

Quality of life was assessed by calculating an index showing how skin symptoms affect the patient's everyday functions by means of the Dermatology Life Quality Index (DLQI). Reliability for the Polish version is satisfactory (correlation coefficient = 0.56), and internal consistency is good (Cronbach alpha = 0.90). All items may be added together to form a total score indicating the overall degree of QOL, with higher scores indicating greater impairment in life quality. Items may be aggregated into the following 6 categories: symptoms and feelings, daily activities, leisure, work and school, personal relationships, and treatment (28).

Because we could not find any method for assessing self-image in the Polish literature suitable for use in this study, we developed the Self-Acceptance Scale (SAS). The SAS questionnaire comprises 12 items referring to the patient's level of self-acceptance, the feeling of self-confidence, and self-knowledge. Theoretical foundations underlying its construction are Reykowski's regulatory theory of personality and Arygle's viewpoint (1, 2). According to these, self-image consists of a person's assumptions and notions about appearance, abilities and skills, attitudes towards other people, and also about the means of perception; self-image controls human activities, relationships with the environment, and behaviors (1–4). There were two sources of questionnaire items: a) existing tools designed for assessment of different aspects of personality (e.g., the *Minnesota Multiphasic Personality Inventory (29);* the Gough Adjective Check List (30); b) experts. The *preliminary version of the SAS consisted of 25 items. After statistical analysis 12 items were included in the final SAS version. Each item includes a response scale in* the Likert format (from 1 = I definitely do not agree to 5 = I definitely agree). A higher score indicates a more positive self-image. The psychometric characteristics of the questionnaire are considered to be satisfactory. A preliminary 14-day test-retest comparison of

Table 3. Differences in mental health and subjective quality of life in relation to self-image

Variable		Self-image		*t*-test	*p*
		High n = 40	**Low** n = 72		
Mental health condition	M	29.3	18.7	4.8	0.00
	SD	12.3	8.3		
Subjective quality of life	M	8.8	12.9	3.1	0.00
	SD	6.7	6.5		

Table 4. Results of regression analysis on quality of life in dermatology patients.

Independent variables	Quality of life			
	Beta	*B*	*SE*	*p*
Gender	0.02	0.40	1.28	0.75
Age	0.03	0.02	0.04	0.68
Education	- 0.01	- 0.07	0.51	0.88
Mental health status	**0.43**	**0.24**	**0.06**	**0.00**
Self acceptance level	- 0.08	- 0.09	0.11	0.42
constant				

Total R^2 = 0.24, F = 0.83, p < 0.00

total scores conducted with a sample of 100 volunteers showed satisfactory reliability (correlation coefficient = 0.72). The scale's internal consistency is good (Cronbach alpha = 0.85).

Results

The data obtained were analyzed using STATISTICA software. Distributions of analyzed variables were approximated to the norm. During the first stage of the analysis, Pearson's correlation coefficients (r) were calculated for the relationship between the mental health condition and the subjective assessment of the QOL and level of self-acceptance. Table 2 displays the results.

The correlation coefficients presented above point to a connection between the patients' mental health status and both their subjective assessment of QOL and self-acceptance. The lower a person's self-acceptance, the poorer is his or her mental health status. The weakest association was found to occur between the level of self-acceptance and somatic symptoms. This means that self-acceptance is not associated with somatic symptoms in a person. The correlation coefficients given above point to a relationship between self-acceptance and the subjective assessment of the QOL. The QOL is assessed higher among individuals whose self-acceptance is higher.

The next step of our analysis was to find out whether self-image affects either mental health or the subjective QOL as assessed by the patients themselves. The patients were divided into 2 groups, one comprising those with more positive self-images, and the other comprising those with more negative self-images. The patients with the more positive self-images are those that obtained high SAS scores, while patients with poorer self-images are those with low SAS scores. Low SAS scores are those that are lower than or equal to the median value, while high SAS scores are those above the median value for the test group (Table 3).

Analysis of the results shows that there were statistically significant differences in the assessment of mental health and QOL depending on the patient's level of self-acceptance. Individuals with high self-acceptance are characterized by better mental health than those with low self-acceptance. People's self-images also affect their assessment of QOL. Patients with poorer self-acceptance (compared to those with positive self-acceptance) also deem their QOL to be poor.

While doing our analysis, we decided to check the GHQ and DLQI results in 2 groups of patients – those with higher self-acceptance, and those with lower. One of our aims was to find out what proportion of non-self-accepting patients experienced mental health distur-

bances, and how many of them report an unsatisfactory QOL. Graphs 2 and 3 show the distribution of the results.

From the graph above one may conclude that as many as 46% of patients with lower levels of self-acceptance suffer some mental health problems. At the same time, mental health problems were detected in only 15% of subjects with higher levels of self-acceptance.

When analyzing the distribution of the results of the QOL assessment by patients with either a higher or a lower level of self-acceptance, one may conclude that as many as 67.5% of the high self-acceptance individuals assess the quality of their lives as high; in contrast, only 43% of low self-acceptance patients provide a high QOL assessment.

The next stage of the analysis was to determine whether the basic effects recorded in the second step were sufficiently robust to survive controls for three potentially complicating factors, namely background variables (e.g., gender, age, education). We decided to include both mental health status and self-acceptance level in the model.

The summary results of multiple regression analysis for the QOL are presented in Table 4. The beta coefficients presented in the table provide information on the strength and direction of relationships between independent and dependent variables. Because the beta is based on the standard deviation, it is regarded as a useful tool for comparison of predictors in terms of their size effect on the dependent variable. It is evident that the only variable that significantly affects the QOL is mental health status. Neither demographic characteristics nor self-acceptance have a significant effect on dermatology patients' QOL. The whole model explains 24% of variance in the DLQ indexes.

Discussion

The lack of data on the role of self-image in the treatment of dermatology patients – as well as reports on the mental health and QOL of such patients – inspired us to initiate the research that resulted in the findings presented in this paper. Professionals working on a daily basis with dermatology patients are able to note, during observation, that a considerable number of these patients are characterized by low self-acceptance, low self-esteem, a negative body image, or a low sense of self-worth. The conclusions from these observations are not surprising; visible skin changes are known to adversely affect the human mental condition and result in depression, anxiety, and pessimistic attitudes (31–33). It is worth noting here that the frequency of mental disorders among dermatology patients is higher than in the general population; it is as high as 30% (32, 34–37).

This is confirmed by numerous studies; for example, Fritzsche's examination of 86 dermatology patients concludes that in 46% of cases mental (affective and anxiety-related) and behavioral disorders can be diagnosed (38). Another study demonstrated that 30% of outpatient clinic patients and 60% of hospital patients with skin problems are affected by mental disorders (Hughes, et al., 35). Wesseley and Lewis confirm the prevalence of mental disorders in 40% of subjects (37), and Aktan et al. came up with a total of 33.4% of all examined patients experiencing mental disorders (including 12% suffering from anxiety and 10% suffering from depression). Because skin diseases are often associated with notable changes in a patient's appearance, they may cause patients to develop a negative body image (15, 21, 25). A negative body image and the subsequent severe stress magnify the sense of anxiety and helplessness; this may even lead to suicide attempts (21, 37). Indeed, Gupta and Gupta (36) report that suicidal tendencies were detected in 7.2% of hospitalized patients with psoriasis and in 5.6% of patients with acne. In another study, the same authors showed that skin changes that were extensive or located in places critical to a patient's self image (i.e., the face, hands, etc.) might significantly contribute to the development of depressive symptoms.

Although the method used in this study does not allow for a diagnosis of mental health in terms of DSM-IV or ICD-10, the results obtained point to a significant correlation between mental health status and QOL in dermatology patients. Moreover, it was found that the patients that appraise themselves in a more negative manner generally obtained higher GHQ scores, indicating at least some sub-clinical mental health problems. When one takes into account that a comparison of Pearson's correlation coefficients between the GHQ score, the QOL indexes, and self-acceptance demonstrates that self-acceptance correlates more strongly with the GHQ than with QOL scores, one may conclude that self-acceptance may indirectly affect the QOL in dermatology patients. The results obtained in the study are consistent with other research reports.

After taking into account the dearth of reports on the relationship between the patient's self-image, on the one hand, and the patient's mental health and QOL on the other, and after considering the above examples, we are convinced that the problem should be analyzed more extensively.

Conclusion

This paper reports the results of a cross-sectional study of self-image and QOL in a relatively small sample ($N = 112$), so it has an exploratory character. The aim of this study is to assess mental health and QOL in dermatology patients with regard to their level of self-acceptance. The results demonstrate a distinct relationship between mental health, subjective assessment of the QOL, and self-acceptance. The mental health status of individuals with a higher level of self-acceptance is better than that of those whose self-acceptance is lower. Self-image also correlates with the assessment of QOL. Patients whose self-acceptance is lower tend to assess the quality of their lives as worse when compared to those that value themselves more highly. However, this relationship loses its significance when the direct effect of mental health on QOL is controlled. Such a distribution of results supports the hypothesis that one's level of self-acceptance has an indirect impact on QOL. Taking into account the role of mental health as a potential determinant of QOL among dermatology patients, and considering the strong correlation between self-acceptance and well-being, treatment should also focus on counseling. Psychological support should be available, especially for patients with a low level of self-acceptance. Intervention should be focused on the development of an appropriate, realistic self-image. Any intervention should also concentrate on reducing self-defeating beliefs if they are thought to be factors negatively affecting mental health, self-worth, and QOL.

Taking into consideration the cross-sectional character of the study and size of the sample, the results presented cannot be generalized and discussed in cause-effect terms. However, we believe that preliminary conclusions drawn from this study will focus the attention of both researchers and practitioners on the role of self-acceptance as a potential determinant of mental health and QOL among dermatology patients. Our hope is to stimulate a deeper exploration of the problem.

Acknowledgment

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