

Itch, disease coping strategies and quality of life in psoriasis patients

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Abstract

Introduction: Psoriasis is a psychodermatological condition, so psychological factors can trigger and/or exacerbate skin lesions. Additionally, disease can be a source of stress and can worsen patients' quality of life (QoL).

Aim: To evaluate the relationship between medical (disease severity, itch) and psychological variables (disease coping strategies, QoL) in the psoriasis patients group.

Material and methods: The study comprises 60 in-patients of the dermatological ward (30 females and 30 males) with the diagnosis of psoriasis. Methods used: Psoriasis Area and Severity Index (PASI), Itch Severity Evaluation Questionnaire, Coping with Skin Disease Scale-SRS-DER, SKINDEX-29 questionnaire.

Results: The study demonstrated significant correlations between disease coping strategies, itch and quality of life. Women presented worse QoL (generally and in physical functioning). The older patients with a longer disease duration revealed QoL impairment.

Conclusions: The obtained results could help in identifying patients risk groups which are in the highest danger of decreased QoL. Our data indicate the need for psychological interventions.

Key words: psychodermatology, quality of life, itch, psoriasis.

Introduction

Psoriasis belongs to psychodermatological diseases, so both medical (e.g. disease severity and duration, pruritus) and psychological factors influence its course [1–3]. Psoriasis itself, considering it is a chronic, inflammatory and relapsing condition, can be a source of stress and can worsen patients' quality of life (QoL) [1, 3–10]. As a consequence it can lead to psychological conditions such as anxiety, depression and suicidal ideation [4, 5, 7, 11–13].

The symptom which significantly impairs QoL is itch [14–17]. It occurs in 60% to even 92% of psoriatics [16–19]. Itch impact on well-being can be moderated by disease severity, but also by psychological factors. Scratching can lead to increased focus on the sensation of itch and intensify it. On the other hand, this activity helps in reducing inner tension giving immediate sense of relief, working as a positive reinforcement of that behavior. As a result, a vicious cycle of itch-and-scratch appears which can be connected with feelings of losing control and sense of helplessness in confrontation with

the pruritic disease. Subsequently, QoL is negatively affected [20–22]. But the disease does not have to lead to decreased well-being. Illness is an interaction between disease demands and personal resources (individual, environmental attributes and relation between them), which enhance effective coping strategies and can result in achieving own goals and meet important needs, so their role is worth deeper consideration [6, 7, 23–25].

Aim

The aim of the study was to estimate the relationship between medical (disease severity, itch) and psychological variables (disease coping strategies, QoL) in the psoriasis patients group.

Material and methods

The study comprises 60 psoriasis in-patients of the dermatological ward (30 females and 30 males). The

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Table 1. Sociodemographic characteristics of the study group

Parameter	Result
Age, mean \pm SD (range) [years]	44.91 \pm 14.78 (20–70)
Disease duration, mean \pm SD (range)	18.76 \pm 13.50 (4 months – 54 years)
Educational level, <i>n</i> (%):	
Primary	2 (3)
Vocational	18 (30)
Secondary	23 (38)
University	17 (29)
Civil status, <i>n</i> (%):	
Singles	19 (32)
Married	30 (50)
Widow/widower	4 (7)
Divorced	7 (11)
Residence place, <i>n</i> (%):	
City	45 (75)
Countryside	15 (25)

N – number of patients in the group, *SD* – standard deviation

mean age was 44.91 \pm 14.78 (range: 20–70 years) and the average disease duration 18.76 \pm 13.50 years (range: 4 months – 54 years). Disease severity was assessed by a dermatologist and measured by the Psoriasis Area and Severity Index (PASI) with the mean result of 9.32 \pm 5.97 (range: 0.6–27.4). Patients were recruited from October 2010 to June 2012. The study was approved by the Medical University of Lodz Bioethics Committee. Patients gave their informed consent to take part in the study. The detailed demographic characteristics of the patients are demonstrated in Table 1.

The following methods were employed in the study:

1. Authors' questionnaire consisting of clinical and demographic data.
2. Itch Severity Evaluation Questionnaire (Szepietowski, Reich, 2010) [26] – a method to estimate itch. It allows to measure not only global itch, but also itch characteristic regarding its intensity, range, duration (short episodes (< 10 min), long episodes (> 10 min), constant itch) and sleep disturbances caused by itch.
3. Coping with Skin Disease Scale SRS-DER (by Miniszewska, 2007) [23] – the scale evaluates stress coping strategies with dermatological disease; it consists of 3 subscales regarding strategies: a) helplessness/hopelessness, b) fight spirit, c) distraction/catastrophization. The questionnaire involves 18 items equally for every subscale; each statement is evaluated on

Table 2. Quality of life, disease coping strategies and itch characteristics related to gender

Variables	Women (<i>n</i> = 30)		Men (<i>n</i> = 30)		Value of <i>t</i>	Value of <i>p</i>
	Mean	SD	Mean	SD		
QoL:						
Symptoms	21.57	4.82	18.07	3.96	-3.07	0.003
Emotions	31.27	10.35	26.97	7.98	-1.80	0.08
Functioning	33.53	9.49	30.53	9.02	-1.26	0.21
Overall	86.37	21.86	75.57	18.17	-2.08	0.04
Disease coping strategies:						
Helplessness/hopelessness	12.47	3.92	11.67	4.00	-0.78	0.43
Fight spirit	19.26	2.92	18.23	2.90	-1.38	0.17
Distraction/catastrophization	16.27	3.46	15.10	3.02	-1.39	0.17
Itch characteristics:						
Itch range	1.50	1.01	1.74	0.94	0.92	0.36
Itch severity	2.60	1.48	2.57	1.61	-0.08	0.93
Short itch episodes	1.07	1.36	1.13	1.38	0.19	0.85
Long itch episodes	0.53	1.17	0.60	1.33	0.21	0.84
Constant itch	0.34	1.27	0.17	0.92	-0.58	0.56
Itch-related sleeping disorders	1.20	1.94	0.64	1.54	-1.25	0.22
Global itch	7.20	4.82	6.83	4.14	-0.32	0.75

SD – standard deviation, *t* – Student *t*-test, *p* – significance level

a four-point scale (definitely no, rather no, rather yes, definitely yes) and the results are summed up separately for three strategies; the higher the score, the more characteristic is the coping with the disease for the patient. The strategy fight spirit is thought to have positive meaning in the coping process, whereas helplessness/hopelessness and distraction/catastrophization are treated as non-adaptive ones.

4. SKINDEX-29 questionnaire (Chren *et al.*, Polish adaptation Steuden, Janowski) [27, 28] – the method specific to the quality of life evaluation in dermatological patients (HRQoL). The scale involves 3 dimensions – disease symptoms, emotions and social functioning. The scores are obtained on a 5-point scale. Lower results are an indicator of a higher QoL level.

Statistical analysis

The SPSS package for Windows (IBM SPSS Statistics 19) was used for statistical analysis. Mean (*M*) and standard deviation (*SD*) are presented. The distribution of the obtained results did not differ significantly from normal distribution. The Student's *t*-test (*t*) and Pearson correlation (*r*) were performed. The statistical significance level was set at $p < 0.05$.

Results

Firstly we investigated the differences between males and females related to disease coping strategies, itch characteristics and QoL (Table 2). Females presented worse QoL considering physical symptoms and overall

Table 3. Correlations between disease coping strategies and QoL

QoL	Disease coping strategies		
	Helplessness/hopelessness	Fight spirit	Distraction/catastrophization
Symptoms	0.34*	0.11	0.37*
Emotions	0.67*	-0.22	0.47*
Functioning	0.53*	-0.27*	0.44*
Overall	0.62*	-0.22	0.50*

* $p < 0.05$

score. There were no differences related to disease coping strategies and itch characteristics.

The correlations between disease coping strategies, itch characteristics and QoL were evaluated by Pearson's *r*-ratio. Disease coping strategies related to the feeling of helplessness/hopelessness and distraction/catastrophization appeared to be significantly and positively associated with all three SKINDEX subscales and the overall score, so they are connected with worse physical, emotional and social functioning. On the contrary, a fight spirit strategy negatively correlates with impairment in the social sphere, so the ones who apply this strategy can encounter less problems in their social life (Table 3).

When looking at any links between itch features and QoL (Table 4), we observed that itch severity, sleep disturbances as its consequences together with general itch were associated with worse physical functioning.

The correlations between disease coping strategies and itch features were revealed, namely the stronger

Table 4. Correlations between itch characteristics and QoL

QoL	Itch characteristics						
	Itch range	Itch severity	Short itch episodes	Long itch episodes	Constant itch	Itch-related sleeping disorders	Global itch
Symptoms	0.24	0.33*	0.18	-0.09	0.21	0.36*	0.39*
Emotions	-0.14	0.18	0.31	-0.13	-0.13	0.18	0.12
Functioning	-0.05	0.25	0.26	-0.02	-0.34	0.10	0.08
Overall	-0.02	0.27	0.29	-0.09	-0.16	0.21	0.19

* $p < 0.05$

Table 5. Correlations between itch characteristics and disease coping strategies

Disease coping strategies	Itch characteristics						
	Itch range	Itch severity	Short itch episodes	Long itch episodes	Constant itch	Itch-related sleeping disorders	Global itch
Helplessness/hopelessness	-0.08	0.15	0.40	-0.08	-0.17	0.10	0.12
Fight spirit	-0.08	-0.28*	-0.37*	0.07	0.32	-0.01	-0.11
Distraction/catastrophization	-0.09	0.01	0.21	0.02	-0.20	0.24	0.08

* $p < 0.05$

fight spirit, the less severe itch and less itch episodes were manifested (Table 5).

The relations between age, skin condition severity, disease duration and itch, coping strategies, QoL were also analyzed. It was manifested that older people are characterized by worse social functioning ($r = 0.32, p = 0.017$). Age was related to a longer disease duration ($r = 0.45, p < 0.0001$) and longer period of suffering from psoriasis results in more impairment in QoL generally ($r = 0.30, p = 0.024$) and in social functioning ($r = 0.34, p = 0.010$).

Discussion

Regarding the aim of our research, relations between skin status, itch, disease coping strategies and QoL were expected and finally they were observed.

The conducted study revealed differences in QoL regarding gender. It is worth underlining that both groups did not differ in terms of disease severity but women reported more troublesome physical symptoms and generally worse QoL. Similar results were obtained by other research groups [29–31]. However, some data are opposite [6, 7, 32–34].

Our results demonstrated changes in QoL considering age. Older patients with a longer disease duration reported more difficulties in social functioning. There is no consistency of data regarding relationships between age, disease duration and QoL. Some authors reported results similar to ours [3, 6, 7, 33] whereas others noted opposite observations [30, 34].

The negative relation between itch and QoL was confirmed in our study. It regards itch severity, sleeping disorders caused by itch, global itch and physical component of QoL. Our results could suggest that disease severity enhances pruritus and in turn it impairs QoL, but the correlation between skin status and itch was not observed. It is probable that attentional focus on bodily sensations takes part in this process. It was confirmed that psoriasis patients in comparison to rheumatoid arthritis ones reacted to the histamine stimuli with a more intense itch response [35]. Higher sensitivity was associated with an increased focus on bodily sensations [36] which could maintain and exacerbate itch [36–38].

Our study also demonstrated sleep disturbances related to itch, which impairs QoL. Both sleep quantity and quality are affected. What is emphasized, sleep disturbances are frequently connected with depressive symptoms in psoriatics, so it is essential to be alert as a clinician when sleep problems occur [39, 40].

The link between itch and disease coping strategies was shown, so it is quite strong evidence for psychological factors contribution to itch mechanism. Fight spirit turned out to play a positive role in handling pruritus and it is associated with less intense itching and less frequent occurrence of short itch episodes. Self-control over pruritic sensations could have a significant meaning in that

case [14, 16]. When patients know how to cope, they do not feel helpless in confrontation with pruritus and can break an itch-and-scratch vicious cycle. Patients who participated in itch coping program presented an improvement in terms of better skin condition, less itching and scratching. These outcomes were maintained and even increased during follow-up periods (3 and 12 months later) [41]. It was marked that patients' self-efficacy in itch coping was enhanced. The QoL was improved, so such training can be strongly recommended for the patients.

Our study manifested many relationships between disease coping strategies and QoL. Feeling of being hopeless/helpless correlates with all domains of QoL. This strategy is associated with lack of control over the disease, so negative illness aspects, such as its chronic course and unpredictability are emphasized. Correlations revealed the strongest association with the emotional subscale of QoL. The employment of this strategy can lead to depression. Being helpless and hopeless could also result in stronger feelings of stigmatization [6, 14, 24, 42, 43].

Distraction/catastrophization was also connected with overall QoL and all its dimensions. Extensive worrying about the disease-specific aspects can negatively affect the illness course [14, 22]. The avoidance of confrontation with health condition and limitations related to it, could increase disease-related stress [25]. So the non-adaptiveness of distraction/ catastrophization was confirmed.

Contrary to the above mentioned strategies, fight spirit turned out to be an effective disease coping strategy. It is strongly connected with the sense of control and the ability to live and handle the disease and treat it as a challenge worth investing the efforts. The involvement in treatment is stronger when this strategy is applied by the patient. The employment of fight spirit can lead to illness acceptance related to better well-being [6, 14, 32, 42, 44–47]. The doctor could enhance adaptive coping by involving his/her own patients in the treatment process and through proper educational activities. The supportive doctor-patient relation seems to be of key importance in the therapeutic plan and it can enhance compliance [11, 25, 45].

Conclusions

The obtained results could help in identifying risk groups which are in the highest danger of QoL impairment development. On the basis of our investigations, psychological interventions should be addressed especially to female patients, to older ones with a long disease duration and psoriatics applying non-adaptive stress coping strategies – helplessness/hopelessness and distraction/catastrophization. Furthermore, availability of psychological programs such as itch/stress-coping trainings could lead to better pruritus/stress management and increased self-efficacy resulting in QoL improvement.

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