Pomeranian J Life Sci 2020;66(3):24-30 doi: 10.21164/pomjlifesci.588

The level of acceptance of the illness among patients with psoriasis

Kinga Budzińska[1], Marta Kożybska[2, A], Paulina Zabielska[3, B], Anna Knyszyńska[4, C], Magdalena Kamińska[5, D] ✉, Joanna Pierzak-Sominka[5, E], Beata Karakiewicz[3, F]

[1] Pomeranian Medical University in Szczecin, Subdepartment of Social Medicine and Public Health, Student Science Club, Żołnierska 48, 71-210 Szczecin, Poland
[2] Pomeranian Medical University in Szczecin, Subdepartment of Medical Law, Żołnierska 48, 71-210 Szczecin, Poland
[3] Pomeranian Medical University in Szczecin, Subdepartment of Social Medicine and Public Health, Żołnierska 48, 71-210 Szczecin, Poland
[4] Pomeranian Medical University in Szczecin, Department of Functional Diagnostics and Physical Medicine, Żołnierska 54, 71-210 Szczecin, Poland
[5] Pomeranian Medical University in Szczecin, Subdepartment of Long-Term Care, Żołnierska 48, 71-210 Szczecin, Poland

[A] ORCID: 0000-0002-9261-0548; [B] ORCID: 0000-0001-8377-7218; [C] ORCID: 0000-0003-4030-3527; [D] ORCID: 0000-0003-4795-033X; [E] ORCID: 0000-0001-9053-1929; [F] ORCID: 0000-0001-6527-7287

✉ magdalena.kaminska@pum.edu.pl

ABSTRACT
Introduction: Psoriasis is a chronic inflammatory and non-infectious skin disease. It is one of the most common dermatoses. Increased reproduction of the epidermis and, as a consequence, visible skin lesions negatively affect the patient's psyche, disrupt self-esteem, reducing the chance of accepting the disease and a normal life.
The aim of this study was the assessment of the level of acceptance of the illness and identification of factors affecting its acceptance among patients with psoriasis.
Materials and methods: The study involved 132 individuals, comprising 113 women and 19 men. This survey-based study was conducted via the Internet using the author's questionnaire and the Acceptance of Illness Scale (AIS).
Results: Acceptance of the illness level was rated great and moderate by respectively 43.9% and 39.4% of respondents. Over 66.7% of the patients described their self-esteem as high obtained a great level of acceptance of the illness according to the AIS. In the examined group, 58% of the patients not accepted psoriatic lesions on their body. Over 60% of the respondents experienced negative reactions from society regarding the disease, and almost 50% of them experienced other people's reactions resulting from concerns about contracting the disease; these patients obtained lower AIS scores.
Conclusions: The obtained results indicate a great illness acceptance among the examined group of the patients with psoriasis. The level of acceptance was influenced by the patient's self-esteem in relation to the disease, acceptance of their own body image, altered by the disease, experiencing the negative reactions from the society regarding the disease, and the reactions of the other people resulting from concerns about contracting the disease.
Keywords: psoriasis; stigmatization; quality of life; Acceptance of Illness Scale.

INTRODUCTION

Psoriasis is a chronic, recurrent, non-infectious inflammatory skin disease, in the course of which there are periods of exacerbations and remissions [1]. It is one of the most common dermatoses [2]. It is estimated that 1–3% of the population, or approx. 125 million people, suffer from it all over the world [3, 4]. Most often, this disease occurs in Scandinavian countries and Northern Europe, where it affects 2–3% of inhabitants [5, 6]. It occurs more frequently among Caucasians [7]. It is equally common in men and women [8]. According to research, there are 2 peaks of morbidity incidence: approx. at 10–40 and 55–60 years [9, 10, 11]. Psoriasis is characterized by increased proliferation of epidermal cells that secrete a number of substances that enter and sustain the disease process. It also has inflammatory infiltrates from the existing cells in the epidermis and deeper layers of the skin [12]. The results of these processes are skin lesions, taking the nature of erythematous papules covered with silvery scales, which merge to form larger inflammatory foci known as plaque psoriasis. Typical localization of psoriatic lesions include the elbow and knee joints, extensory limb surfaces, lumbosacral region, and hairy scalp [13, 14]. Characteristic features in psoriasis are follicular eruptions accompanied by exfoliation of the epidermis. In addition, patients may feel pruritus and pain [15]. Visible changes are often perceived as an aesthetic defect and are related with reduced self-esteem [16]. Regardless of the severity of the skin lesions, the quality of life of the patients suffering from psoriasis is reduced.

Psoriasis has a very large impact on the emotional state of the patients and their social relationships, with a diagnosis of psoriasis constituting a big psychological burden. They often feel shame and try to hide the condition. In addition, many people still believe that psoriasis is an infectious disease and avoid contact with those suffering from this disease, resulting in negative attitudes and stigmatization of patients [17]. Finally, those affected by psoriasis tend to avoid certain activities, such as sexual contact and situations that involve exposing their body in public places, including visit to the hairdresser, sunbathing or swimming [18].

A very large impact on the quality of life of patients comes from 2 main phenomena: acceptance of the illness and social stigma [19]. The level of acceptance of the illness is the determinant of emotional functioning in the disease. Accepting the disease means to know and understand the limitations and

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losses associated with it [20]. The greater the acceptance of the illness, the better the adaptation to life with the disease. Patients also experience reduced levels of mental discomfort. However, acceptance of the illness is a complex and long-lasting process [21]. It is influenced by external conditions, such as life situation or social support, and also the characteristics of the individual, which include, among others, beliefs about their own illness [22]. Patients who accept their illness and understand its essence, willingly participate in the treatment process and bring changes in the existing lifestyle. Furthermore, they have a greater confidence in both the medical staff and the treatment methods and are characterized by an optimistic approach to life [23]. Patients who reconciled with the occurrence of their disease, despite the chronic symptoms, feel self-sufficient, independent, efficient and important. Acceptance of the illness results from the strength of the persons, and this attitude facilitates their functioning in everyday life [24]. However, for many patients, accepting a disease is a huge problem that they struggle with throughout their lifetime. A lack of or low acceptance of the illness can cause non-compliance with the recommendations of medical staff, leading to attempts at self-treatment. Such persons usually deny the sense of treatment and feel greater psychological discomfort [25].

Dermatological diseases such as psoriasis are easily noticeable, and can therefore lead to discrimination and social exclusion. In these diseases, stigmatization is closely related with the visibility of the skin lesions [26, 27]. Stigma in psoriasis can also be influenced by the historical outline, because for hundreds of years psoriasis was identified with leprosy, the patients were isolated and even burned at the stake. It was not until 1841, 30 years after the 1st clinical description of the disease, that professor von Hebra made a distinction between these 2 diseases. However, many people today believe that they can become infected with psoriasis [28]. According to research carried out in 2012, only 9.8% of the studied group of psoriasis patients did not feel any symptoms of stigmatization, 18.3% felt it in a minimal way, and the rest of them had a constant sense of rejection and social isolation [29]. Thus, stigmatization turns out to be one of the most important obstacles to acceptance of the illness and active participation in the treatment [30]. Patients experiencing social rejection are excluded from social groups, often report problems related to their functioning in society and weakening physical condition. They are characterized by a greater level of frustration, anger and anxiety [31]. Ultimately, they try to avoid contact with other people, feeling shame especially in situations that involve exposure of the body. A handshake, playing sports, wearing clothes with short sleeves becomes a problem for them [32, 33]. A sense of stigma often leads people to continuous severe stress, employment problems, absence from work, unemployment, and finally, withdrawal from work and social life, the inability to accept themselves and their disease [34, 35, 36]. In 2014, members of the WHO recognized psoriasis as a serious civilization disease and adopted a resolution that called for multidirectional activities to raise awareness of psoriasis and fight against stigma [37].

The aforementioned data indicate the need for comprehensive care for patients with psoriasis. Therapy should not just focus on the treatment of visible skin lesions, but should also include the education of patients with both psoriasis-related symptoms and comorbidities. It should also include prevention of the diseases described above, psychotherapy, and above all, provide physical, psychological, emotional and social support [38, 39].

The aim of this study was to assess the level of acceptance of the illness among patients with psoriasis, and to identify factors affecting its acceptance.

MATERIALS AND METHODS

The survey was conducted from 13 December 2018 to 2 January 2019, using the Internet.

The survey was published in 2 support groups namely for patients with psoriasis, "Łuszczyca/Psoriasis-support group" and "Psoriasis from a different perspective", in a social network. The study involved 132 patients suffering from psoriasis. Participation was voluntary and anonymous. The characteristics of the studied group are shown in Table 1.

To collect data, a diagnostic survey was used. The research tool was a questionnaire consisting of 2 parts:

1. An original questionnaire. The questionnaire consisted of questions regarding the patients' self-assessment in relation to the disease and the negative reactions from society regarding the disease. These were questions about (1) the patients' self-esteem in relation to the psoriasis; (2) the patients' acceptance of the psoriasis and their own body image, altered by the disease; (3) experiencing negative reactions from society regarding the disease; (4) experiencing reactions from other people concerned about contracting the disease.
2. The Acceptance of Illness Scale (AIS) as adapted by Zygfryd Juczyński. The questionnaires were obtained from the Psychological Test Lab of the Polish Psychology Association. The AIS consists of 8 statements that refer to the negative consequences of poor health status and boil down to a lack of self-sufficiency, recognition of limitations resulting from the disease, a sense of dependence on other people and a reduced self-esteem. Answers in every statement are scored on a 5-point scale from 1 – strongly agree, up to 5 – strongly disagree. The level of acceptance of the illness is measured by adding up all points. The possible point range is between 8–40. The results are divided into 3 groups. A score between 8–18 indicates a lack of illness acceptance, 19–29 indicates moderate illness acceptance, while 30–40 points means a great illness acceptance [40].

Data analysis was performed using Microsoft Excel 2013 and Statistica v12.0. The level of dependence between the examined features was assessed using a Pearson χ^2 independence test. Results were considered statistically significant at $p < 0.05$. Normality of the data distribution was examined using a Kolmogorov–Smirnov test with Lilliefors correction and a Shapiro–Wilk test.

TABLE 1. Characteristics of the study group

	n	%
Sex		
female	113	85.6
male	19	14.4
Age		
X ±SD	36.0 ±12.6	
Me	32	
min.–max.	16–70	
Marital status		
single	29	22.0
married	71	53.8
divorced	4	3.0
informal relationship	28	21.2
Education		
elementary school	4	3.0
junior high school	1	0.8
vocational school	11	8.3
high school	63	47.7
university	53	40.2
Place of residence		
village / smaller town	33	25.0
city up to 5000 residents	5	3.8
city 5000–50,000 residents	37	28.0
city above 50,000 residents	57	43.2
Disease duration (in years)		
average duration of disease	17.6 ± 13.5	
Me	14.5	
Localization of psoriatic lesions		
localized	108	81.8
dispersed	24	18.2
The most common localization for psoriatic lesions		
scalp	103	78.0
elbows/knees	91	68.0
upper/lower limbs	85	64.4
torso	71	53.8
nails	70	5.3
genitals	63	47.7
hands/feet	56	42.4
face	52	39.4

RESULTS

The distribution of the results obtained on the basis of the Acceptance of Illness Scale (AIS)

On the basis of the AIS, respondents recorded an average score of 27.83 ($\sigma = 8.34$). The median was 29 ($Q1 = 21.5$, $Q3 = 35$). The distribution of scores obtained the max. possible range: 8–40. Most often, the results were at the max. range. Almost 65% of the study group obtained scores over 25. The tested distribution was not normal ($p < 0.01$).

The respondents most often reported a great (43.9%) and moderate (39.4%) illness acceptance, over 16% of them had a lack of illness acceptance (Tab. 2).

Analysis of the relationship between the demographic factors and the level of acceptance of the illness

Analysis of the collected data did not show statistically significant differences between the level of acceptance of the illness and the demographic factors (Tab. 3).

Analysis of the relationship between the course of the disease and the level of acceptance of the illness

A great illness acceptance was reported by the group of the patients with a disease duration from 20–38 years. In this group, the percentage of the highest AIS scores was almost twice higher than in the other groups (0.6:1:0.53). The percentage of the lowest AIS scores in this group was about 4 times lower compared to the other groups (3.79:1:4.62). The groups with the longest and shortest duration of the disease obtained a similar percentage distribution in terms of acceptance of the illness. Nevertheless, the statistical significance of the aforementioned relationship was not confirmed ($p = 0.05469$) – Table 4.

A great level of acceptance of the illness was declared by the patients with psoriatic lesions only in special localizations. The patients with dispersed lesions were characterized mostly by a moderate level of acceptance of the illness. Nevertheless, the statistical significance of the aforementioned relationship was not confirmed ($p = 0.49165$) – Table 5.

Analysis of the relationship between the patients' self-esteem in relation to the disease and negative reactions from society regarding the disease, and the level of acceptance of the illness

Data analysis showed a statistically significant relationship between the patients' self-esteem and the level of acceptance of the illness ($p = 0.00784$) – Table 6.

The patients who declared the acceptance of psoriasis and acceptance of their own body image, altered by the disease, more often obtained the highest scores in the AIS ($p = 0.00028$) – Table 7.

Next, the dependence between experiencing negative reactions from society regarding the disease, and the level of acceptance of the illness was examined. The patients not experiencing such reactions most often showed a higher level of acceptance of the illness. The respondents who experienced such reactions from other people were usually characterized by moderate illness acceptance. The significance of the aforementioned relationship was statistically confirmed ($p = 0.01000$) – Table 8.

The respondents who did not experience other people's negative reactions resulting from concerns about contracting the disease mostly showed a great illness acceptance. On the other hand, the patients who experienced such reactions from other people most often reported moderate illness acceptance, according to the AIS ($p = 0.00002$) – Table 9.

TABLE 2. The distribution of the scores on the basis of the Acceptance of Illness Scale

Statements from the AIS		Statements from the AIS					
		strongly agree (1)	agree (2)	undecided (3)	disagree (4)	strongly disagree (5)	total
I have problems with adjusting to the limitations imposed by the disease	n	27	25	35	24	21	132
	%	20.5	18.9	26.5	18.2	15.9	100.0
Due to my health condition I am not able to do what I like the most	n	30	16	30	21	35	132
	%	22.7	12.1	22.7	15.9	26.5	100.0
The disease makes me feel unwanted	n	22	12	18	15	65	132
	%	16.7	9.1	13.6	11.4	49.2	100.0
Health problems make me more dependent on others than I would like to be	n	23	12	20	20	57	132
	%	17.4	9.1	15.2	15.2	43.2	100.0
The disease makes me a burden for my family and friends	n	13	8	12	16	83	132
	%	9.9	6.1	9.1	12.1	62.9	100.0
Due to my health condition, I do not feel like a really valuable person	n	27	18	24	20	43	132
	%	20.5	13.6	18.2	15.2	32.6	100.0
I will never be self-sufficient to the extent to which I would like to be	n	21	10	14	21	66	132
	%	15.9	7.6	10.6	15.9	50.0	100.0
I believe people that stay with me are often embarrassed because of my disease	n	18	17	31	23	43	132
	%	13.6	12.9	23.5	17.4	32.6	100.0

TABLE 3. Demographic factors and the level of acceptance of the illness (the Acceptance of Illness Scale)

Demographic factors		The level of acceptance of the illness								p
		lack of illness acceptance (8–18 points)		moderate illness acceptance (19–29 points)		great illness acceptance (30–40 points)		total		
		n	%	n	%	n	%	n	%	
Sex	female	18	0.14	44	0.33	51	0.39	132	1.00	0.7588
	male	4	0.03	8	0.06	7	0.05			
Age	16–33	15	0.11	28	0.21	30	0.23	132	1.00	0.35306
	34–51	3	0.02	16	0.12	21	0.16			
	52–70	4	0.03	8	0.06	7	0.05			
Marital status	single	3	0.02	14	0.11	12	0.09	132	1.00	0.86306
	married	12	0.09	26	0.20	33	0.25			
	divorced	1	0.01	1	0.01	2	0.02			
	informal relationship	6	0.05	11	0.08	11	0.08			
Education	elementary school	1	0.01	1	0.01	2	0.02	132	1.00	0.53834
	junior high school	0	0.00	1	0.01	0	0.00			
	vocational school	11	0.08	21	0.16	31	0.23			
	high school	2	0.02	7	0.05	2	0.02			
	university	8	0.06	22	0.17	23	0.17			
Place of residence	village / smaller town	6	0.05	11	0.08	16	0.12	132	1.00	0.29632
	city up to 5,000 residents	1	0.01	1	0.01	3	0.02			
	city 5000–50,000 residents	10	0.08	14	0.11	13	0.10			
	city above 50,000 residents	5	0.04	26	0.20	26	0.20			

TABLE 4. The relationship between the disease duration and the level of acceptance of the illness (the Acceptance of Illness Scale)

Disease duration (years)		The level of acceptance of the illness		
		lack of illness acceptance (8–18 points)	moderate illness acceptance (19–29 points)	great illness acceptance (30–40 points)
1–19	n	17	35	31
	%	12.9	26.5	23.5
20–38	n	2	12	23
	%	1.5	9.1	17.4
39–57	n	3	5	4
	%	2.3	3.8	3.0
Total: n = 132 (100%); p = 0.05469				

TABLE 5. The relationship between the localization of psoriatic lesions and the level of acceptance of the illness (the Acceptance of Illness Scale)

Localization of psoriatic lesions		The level of acceptance of the illness		
		lack of illness acceptance (8–18 points)	moderate illness acceptance (19–29 points)	great illness acceptance (30–40 points)
Localized	n	19	40	49
	%	14.4	30.3	37.1
Dispersed	n	3	12	9
	%	2.3	9.1	6.8
Total: n = 132 (100%); p = 0.49165				

TABLE 6. The relationship between the patients' self-esteem and the level of acceptance of the illness (the Acceptance of Illness Scale)

Patient's self-esteem		The level of acceptance of the illness		
		lack of illness acceptance (8–18 points)	moderate illness acceptance (19–29 points)	great illness acceptance (30–40 points)
High	n	4	10	28
	%	3.0	7.6	21.2
Medium	n	11	28	22
	%	8.3	21.2	16.7
Low	n	7	14	8
	%	5.3	10.6	6.1
Total: n = 132 (100%); p = 0.00784				

TABLE 7. The relationship between the patients' declaration of acceptance of psoriasis and body image, altered by the disease, and the level of acceptance of the illness (the Acceptance of Illness Scale)

Acceptance of psoriasis and body image, altered by the disease		The level of acceptance of the illness		
		lack of illness acceptance (8–18 points)	moderate illness acceptance (19–29 points)	great illness acceptance (30–40 points)
Yes	n	8	12	35
	%	6.1	9.1	26.5
No	n	14	40	23
	%	10.6	30.3	17.4
Total: n = 132 (100%); p = 0.00028				

TABLE 8. The relationship between the experience of negative reactions from society regarding the disease, and the level of acceptance of the illness (the Acceptance of Illness Scale)

The experience of the negative reactions from society regarding the disease		The level of acceptance of the illness		
		lack of illness acceptance (8–18 points)	moderate illness acceptance (19–29 points)	great illness acceptance (30–40 points)
Yes	n	12	40	29
	%	9.1	30.3	22.0
No	n	10	12	29
	%	7.6	9.1	22.0
Total: n = 132 (100%); p = 0.01000				

TABLE 9. The relationship between the experience of other people's reactions resulting from concerns about contracting the disease, and the level of acceptance of the illness (the Acceptance of Illness Scale)

Experience of other people's reactions, resulting from concerns about contracting the disease		The level of acceptance of the illness		
		lack of illness acceptance (8–18 points)	moderate illness acceptance (19–29 points)	great illness acceptance (30–40 points)
Yes	n	10	38	17
	%	7.6	28.8	12.9
No	n	12	14	41
	%	9.1	10.6	31.1
Total: n = 132 (100%); p = 0.00002				

DISCUSSION

According to the analysis of the collected data, 43.9% of the respondents had a great illness acceptance, 39.4% of them – moderate, and 16.7% of them did not accept psoriasis at all. The average score of the AIS was 27.83. A similar study was carried out by Adamska et al., where the mean score of the AIS was similar (26.9), although the majority of the patients reported moderate acceptance of the disease [41]. Subsequent research on the acceptance of psoriasis using the AIS was carried out by Zielińska-Więczkowska and Pietrzak. The average AIS score was at a slightly higher level than the values obtained in our research and amounted to 30.37. As shown by the authors, acceptance was high in 62.4% of respondents, moderate in 26.7%, and low in 10.9% [42]. Based on the results of the study, it can be seen that the vast majority of the patients achieved a high and moderate level of acceptance of the illness.

Examination of the level of acceptance of the illness among the patients with psoriasis can be compared with studies on other diseases. Kurpas et al. reported the average score of 29 in patients with various types of diabetes, with high acceptance in 57% patients, moderate in 27%, and low in 16% [43]. On the other hand, in the study by Kurowska and Lach, the average score on the same scale was 25.16 in patients with type 2 diabetes. In their study group 28.6% of patients showed high acceptance, 54.5% – moderate, and 16.9% – low acceptance [44].

Among the subjects with leukemia examined by Wiraszka and Lelonek, the overall score was 23.27, with the respective percentages of 15.5%, 61.8% and 22.7% [45]. In a group of patients with Graves' disease, the average score was 28.48. Men after a heart attack received average scores of 22.14, and women with breast and uterine cancer 28.16 [46]. Therefore, it may concluded that the level of acceptance of psoriasis in our study is similar to that in patients suffering from other chronic diseases.

The external appearance and the attitude regarding their body image, altered by the disease, is one of the key dimensions of the mental condition of a human being. The external appearance of the body, and in particular, the condition of the skin, affects good mental functioning, well-being, shaping self-assessment and self-esteem. The perceived body image changes with the onset of a dermatological disease [47]. Analysis of the results of our research showed a statistically significant relationship between the acceptance of the body image, altered by the disease, and the level of acceptance of the illness. The patients who declared an acceptance of psoriasis and of their own body image, altered by the disease, more often obtained the highest scores in the AIS.

In addition, there was a statistically significant relationship between the patients' self-esteem, and the level of acceptance of the illness. According to Rosińska et al., a disturbed perception of their body image and low self-esteem not only contributes to a reduction of acceptance of the illness, but also increases the risk of depressive disorders [48].

Analysis of our research material showed a statistically significant relationship between the acceptance of psoriasis and the experience of negative reactions from society regarding the disease. Over 60% of the patients with psoriasis have experienced ridicule, finger-pointing, refusal to perform a procedure, and contemptuous glances. Fear of such situations has caused as many as 56.1% of the respondents to hide the fact of the disease from new friends. The results of the research by Wyderka and Darowska seem to confirm this dependence – according to them, 46% of the respondents hid the disease from the majority of their friends, and 24% of them from all of their friends [49].

Haassengier et al. conducted a study on the level of knowledge in Polish society about psoriasis. It showed that nearly every 3rd Pole did not know that psoriasis is not an infectious disease. However, our own research showed that 49.2% of the patients suffering from psoriasis experienced other people's reactions resulting from concerns about contracting the disease. This may indicate that the problem of low knowledge and public awareness about psoriasis is still valid [50].

Analysis of the research material did not show a statistically significant impact of demographic factors such as sex, age, marital status, education, and place of residence, on the level of acceptance of the illness. There was also no correlation between the duration of the disease, the localization of psoriatic lesions, and the level of acceptance of the illness, although the level was close to statistical significance – this indicates the need for further research in this area.

In analyzing the results of this study, it can be concluded that the level of acceptance of the illness among the patients with psoriasis mainly concerns psychological factors, such as body image, self-esteem, negative emotions felt by other people. Acceptance of the illness is a key issue in the effective fight against psoriasis. Therefore, it is necessary to support and help patients with this chronic illness to accept themselves as they are, regardless of their appearance. Open, kind, understanding and a cooperative approach to patients with psoriasis, and education of the whole of society about the disease may positively affect the results of treatment and the psychological well-being of the patients.

CONCLUSIONS

The obtained results indicate a great illness acceptance among the examined group of the patients with psoriasis. The level of acceptance of the illness was influenced by the patient's self-esteem in relation to the disease, acceptance of their own body image, altered by the disease, experiencing negative reactions from the society regarding the disease, and the reactions of the other people resulting from concerns about contracting the disease.

LIMITATIONS

Psoriasis affects both sexes equally. Our study involved more women than men, which could affect the results.

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