

IMPROVING THE QUALITY OF LIFE IN PSORIASIS PATIENT THROUGH HEALTH PROMOTION APPROACH AT HAJI ADAM MALIK GENERAL HOSPITAL, MEDAN, INDONESIA

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ABSTRACT

Objective: Psoriasis is a chronic inflammatory skin disease, can affect all ages characterized by reddish plaques that are covered by thick scales of silvery white and firmly bounded. Psoriasis is a skin disease that is difficult to cure because psoriasis can interfere with life quality of life behavior even cause the level of stress for the patient. This study aims to evaluate the effect of health promotion of quality of life of psoriasis patients.

Methods: This research is an experiment between pre- and post-test that aims to know the effort of improving the quality of life of psoriasis patient through a health promotion approach. Population in this research is patient of psoriasis in the draft of human rights number 60 people. Then, divide the questioner to the respondents who made twice before the health promotion and after health promotion in the experimental group.

Result: The study showed significant differences between pre- and post-test values for quality of life, stress level, and behavior toward health promotion. Data analysis with paired t-test at 95% confidence level, quality of life with lecture method ($p=0.001$), quality of life ($p=0.001$), and behavior with method of Booklet ($p=0.001$).

Conclusion: It is recommended for health workers more often to provide health promotion because psoriasis is chronic and recidive disease, it is necessary to improve the quality of service in hospitals by providing education in the form of health promotion in patients not to quickly despair and can comply with doctor's advice.

Keywords: Quality of life, Psoriasis, Dermatology life quality index, Health promotion.

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INTRODUCTION

Psoriasis is a chronic inflammatory skin disease, can affect all ages characterized by reddish plaques that are covered by thick scales of silvery white and firmly bounded. In general, psoriasis lesions are distributed symmetrically with predilection especially in the elbow and knee, scalp, lumbosacral, buttocks, and genitalia [1,16-18].

Psoriasis can interfere with the quality of life of patients this is because the treatment often does not provide a satisfactory outcome, resulting in social and economic burden. Various studies over the past few decades have added to the knowledge of the pathogenesis of psoriasis, with the ultimate goal of getting more effective therapy or healing, but to date, the exact cause is still unknown [2].

Consensus by the American Academy of Dermatology states that any determination of the severity of psoriasis requires special attention and its effect on the quality of life of the sufferer [3]. One technique used to measure the severity of psoriasis is using the psoriasis area and severity index [4]. Although susceptibility genes have been identified, there is still no satisfactory treatment [5]. The treatment can be done still limited to physical treatment, not mental recovery [6].

Psoriasis which is a skin disorder characterized by hyperproliferation and inflammation of the epidermis with a clinical picture of erythematous plaque and layered plaque, which is chronic. Psoriasis can affect $\pm 2.5\%$ of the world's population, about 20-30% suffer from moderate to severe psoriasis [7]. Until now the exact cause of psoriasis is still debated, but some of the factors reported to worsen the condition of psoriasis include physical trauma, infection, stress, seasonal, and climatic changes, certain drugs, including lithium salts, beta blockers, and chloroquine antimalarials [8]. Similarly, alcohol consumption,

smoking, and obesity may aggravate psoriasis or complicate the management of psoriasis [9].

Based on medical record data of Haji Adam Malik General Hospital Medan, Indonesia, showed the increasing trend of psoriasis cases, especially in the period 2013-2015. Data, in 2013, diagnosed with psoriasis patients 47 new patients and 31 recurrent patients, then in 2014 increased new patient with psoriasis, 56 new patients, and 27 recurrent patients. The re-increment occurred in the period 2015 with 69 new patients and 20 recurrent patients (Medical record data of Haji Adam Malik General Hospital). Based on medical record data above can be concluded that the decreased number of patients who do follow-up every year against psoriasis disease while the new case of the trend to increase.

Research on the quality of life of psoriasis patients has also been the concern of some previous researchers, including research on the quality of life of psoriasis patients in the Osmanabad region, India. The results showed that the quality of life was low and very disturbing in life compared to other healthy individuals [10]. Another study examined the quality of life in patients with psoriasis in tertiary care hospitals concluded that psoriasis is a chronic recurrent disease and has a significant negative impact to the quality of life of the patient [11].

The common thing that is often found in people with psoriasis is despair of the disease because it cannot be cured so that sometimes occur psychological disorders and decreased the quality of life. Breaking expectations have an impact on mental health and quality of life so that it unknowingly affects the emergence of various other health problems. Psoriasis indirectly causes death, but the effects of discomfort and length of the healing process have a serious impact on quality of life. Based on this phenomenon, researchers intend to know the implementation

of the most effective health promotion model in support of efforts to improve the quality of life of patients with psoriasis.

In harmony with the impact of psoriasis on quality of life, the researchers gave the idea that it is necessary to approach health promotion in the form of health education so that various physical and mental impacts can be minimized. This idea is encouraged because as far as the researcher's observation the attention of the treatment is still limited to pay attention to physical impact regardless of mental state. Although psoriasis generally does not cause death give a very great impact to quality of life of the sufferer, hence need to be done effort to improve quality of life through health promotion approach in the form of empowerment and health education.

METHODS

Study design using an experimental model with quasi-experimental type with Non-Equivalent Control Group design aimed to know the effort to improve the quality of life of psoriasis disease using health promotion method at Haji Adam Malik General Hospital Medan. Sample recruitment using consecutive sampling method from patient recorded in the medical record of Haji Adam Malik General Hospital.

The inclusion criteria are patient with a diagnosis of psoriasis, willing to follow the stages of research, age above 18 years old. The exclusion criteria in this research are respondents who did not willing to participate in the research stages. Quality of life assessment is done using the dermatology life quality index (DLQI), giving education is divided into three methods such as use lectures, booklets, and social media. Group receiving intervention was divided using the simple random method, and then made a comparison between the change of life quality before and after the intervention. Statistical analysis used is a normality test to find out data distribution and paired sample t-test to compare the quality of life before and after the intervention.

RESULTS

This study used 60 psoriasis patients who were divided into three groups equally, namely group lectures, booklet groups, and social media groups. Subject characteristics are shown in Table 1.

Based on Table 1, the age group of patients with psoriasis was the most in the range of 35–40 years, women tend to be more affected by psoriasis which is 35 people (58.3%), and the majority of research subjects have senior education in high school as many as 42 people (70%).

A description of the quality of life before and after the intervention can be shown in Tables 2 and 3.

In Table 2, it was found that the quality of life of the majority of respondents was disrupted, namely for the lecture group as much as 16 respondents (80%), for Booklet group as many as 15 respondents (75%), and for social media group as many as 11 respondents (55%). The result of the research on psoriasis patient after getting health promotion got DLQI with an average degree of disturbance of quality of life is 28.52 (slightly disturbed).

In Table 3, it is found that the quality of life of the respondents after getting the health promotion of the majority is slightly disturbed for the lecture group as much as 11 respondents (55%) and uninterrupted 6 respondents (30%), for booklet group as many as 12 respondents (60%), and group social media as much as 16 respondents (80%).

Normality test

Normality test is a requirement that must be fulfilled using t-test. The test of normality aims to find out whether the data used is normally distributed using Kolmogorov-Smirnov test. Based on the normality test on the variable of quality of life with lecture method, booklet, and social media, it is obtained that some normally distributed variables with $p > 0.05$ (Table 4).

Influence of media model lecture on the quality of life of psoriasis patients

Because the data is normally distributed so that paired sample t-test is used to compare the quality of life in conditions before and after intervention.

The result of calculation influence of lecture media model to the quality of life, behavior, and stress degree of psoriasis patient is shown in Table 5.

Based on Table 5, there was an improvement in DLQI score after lecture media model intervention from 22.80 (disrupted) to 30.55 (slightly disrupted). The result of paired t-test is obtained $p < 0.001$ which means there is difference in dermatology quality of life index of person living with psoriasis before and after get health promotion with lecture method. This

Table 1: Subject characteristics

Characteristics	Frequency (%)
Age (years)	
<35	22 (36.67)
35–40	24 (40)
40–45	14 (23.33)
Gender	
Male	25 (41.67)
Female	35 (58.33)
Educational level	
Junior high school	10 (16.67)
Senior high school	42 (70)
Higher education	8 (13.33)

Table 2: DLQI before health promotion

Health promotion type	Quality of life	Frequency (%)
Before health promotion (lectures method)	Not disturbed	0 (0)
	Slight disturbed	4 (20)
	Moderately disturbed	16 (80)
	Very disturbed	0 (0)
	Total	20 (100)
Before health promotion (booklet method)	Not disturbed	0 (0)
	Slight disturbed	2 (10)
	Moderately disturbed	15 (75)
	Very disturbed	3 (15)
	Total	20 (100)
Before health promotion (social media method)	Not disturbed	0 (0)
	Slight disturbed	2 (10)
	Moderately disturbed	11 (55)
	Very disturbed	7 (35)
	Total	20 (100)

DLQI: Dermatology life quality index

Table 3: DLQI after health promotion

Health promotion type	Quality of life	Frequency (%)
Before health promotion (lectures method)	Not disturbed	6 (30)
	Slight disturbed	11 (55)
	Moderately disturbed	3 (15)
	Very disturbed	0 (0)
	Total	20 (100)
Before health promotion (lectures method)	Not disturbed	0 (0)
	Slight disturbed	12 (60)
	Moderately disturbed	8 (4)
	Very disturbed	0 (0)
	Total	20 (100)
Before health promotion (lectures method)	Not disturbed	0 (0)
	Slight disturbed	16 (80)
	Moderately disturbed	3 (15)
	Very disturbed	1 (5)
	Total	20 (100)

DLQI: Dermatology life quality index

Table 4: Normality test

Variable	Health promotion model					
	Lecturer		Booklet		Social media	
	p-value	Index	p-value	Index	p-value	Index
Life quality DLQI						
Before intervention	0.894	Normal	0.405	Normal	0.277	Normal
After intervention	0.653	Normal	0.486	Normal	0.178	Normal
Life quality						
Before intervention	0.975	Normal	0.837	Normal	0.766	Normal
After intervention	0.179	Normal	0.966	Normal	0.185	Normal

DLQI: Dermatology life quality index

Table 5: Influence of media model lecture on the quality of life of psoriasis patients

Variable	Mean±SD	p-value
Life quality DLQI		
Before intervention	22.80±3.65	<0.001**
After intervention	30.55±4.04	
Life quality		
Before intervention	59.60±5.98	<0.001**
After intervention	81.15±7.63	

**Significant. DLQI: Dermatology life quality index, SD: Standard deviation

Table 6: Influence of media booklet model on quality of life of psoriasis patients

Variable	Mean±SD	p-value
Life quality DLQI		
Before intervention	20.60±3.23	<0.001**
After intervention	26.95±3.70	
Life quality		
Before intervention	61.10±4.86	<0.001**
After intervention	74.40±8.70	

**Significant. DLQI: Dermatology life quality index, SD: Standard deviation

Table 7: Influence of social media model on quality of life, behavior, and degree of stress of psoriasis patients

Variable	Mean±SD	p-value
Life quality DLQI		
Before intervention	18.75±3.58	<0.001**
After intervention	28.05±4.80	
Life quality		
Before intervention	62.65±5.08	<0.001**
After intervention	74.95±6.09	

**Significant. DLQI: Dermatology life quality index, SD: Standard deviation

means that there is a significant influence of the lecture media model on the dermatology quality of life index of people living with psoriasis.

The average value of quality of life before given lecture method is 59.60 (moderate) and after lecture, an increase is 81.15 (Good). The result of paired t-test is obtained $p < 0.001$ which means there is the difference in the quality of life of person living with psoriasis before and after get health promotion with the method of lecture. This means there is a significant influence of media model of lecture to the quality of life of psoriasis patient (Table 4).

Influence of media booklet model on quality of life of psoriasis patients

Based on the results of the analysis with paired t-test test obtained results improved quality of life, behavior, and degree of stress psoriasis

patients through health promotion approach with booklet media. The result of calculation influence of booklet media model to the quality of life, behavior, and stress degree of psoriasis patient is shown in Table 6.

In Table 6, the mean value of the dermatology quality of life index was given before booklet method 20.60 (disturbed) and after the booklet method was given an increase of 26.95 (slightly disturbed). The result of paired t-test is obtained $p < 0.001$ which means there is difference of dermatology quality of life index of person living with psoriasis before and after get health promotion by booklet method. This means that there is a significant effect of media booklet model on the dermatology quality of life index of people living with psoriasis.

The average value of quality of life before given method of the booklet is 61.10 (moderate) and after given booklet there is an increase that is 74.40 (Good). The result of paired t-test is obtained $p < 0.001$ which means there is difference in the quality of life of psoriasis patient before and after get health promotion by booklet method. This means there is a significant influence model of booklet media on the quality of life of psoriasis patients (Table 6).

Influence of social media model on quality of life, behavior, and degree of stress of psoriasis patients

Based on the results of the analysis with paired t-test results obtained results improved quality of life, behavior, and degree of stress psoriasis patients through health promotion approach with social media. The result of calculation of influence of social media model to quality of life, behavior, and stress degree of psoriasis patient is shown in Table 7.

In Table 7, the mean value of the dermatology quality of life index was given before the 18.75 (disrupted) booklet method and after the social method was given an increase of 28.05 (slightly disturbed). The result of paired t-test is obtained $p < 0.001$ which means there is difference of dermatology quality of life index of psoriasis sufferer before and after get health promotion with the social method. This means that there is a significant effect of social media model on the dermatology quality of life index of psoriasis patients.

The average value of quality of life before given the social method that is 62.65 (mediocre) and after being given a booklet an increase of 74.95 (Good). The results of paired t-test test results obtained $p < 0.001$ which means there are differences in quality of life of psoriasis patients before and after getting health promotion by social methods. This means there is a significant effect of social media model on the quality of life of psoriasis patients (Table 7).

Multivariate analysis

Multivariate analysis was used to determine the quality of life comparison between intervention groups, used to assess the most effective methods of improving quality of life. Multivariate analysis is shown in Table 8.

Based on Table 8, there are a significant difference in quality of life and DLQI between group intervention (lecture, booklet, and social media) ($p < 0.05$). If seen from the average value can be explained that

Table 8: Comparison of health promotion model for quality of life improvement in psoriasis patient

Variable	Mean±SD	F	p-value
Life quality DLQI			
Lecturer method	30.55±4.04	3.838	0.027*
Booklet method	26.95±3.70		
Social media method	28.05±4.80		
Life quality			
Lecturer method	81.15±7.63	4.922	0.011*
Booklet method	74.40±8.78		
Social media method	74.95±6.09		

*Significant, DLQI: Dermatology life quality index

the DLQI sufferers of psoriasis after being given health promotion with media model lecture is better than the media booklet and social media. Where the average DLQI of psoriasis patients after being given health promotion with media lecture model is 30.55 higher than media booklet 26.95 and social media 28.05.

The improved quality of life can be explained that there are differences in the quality of life of psoriasis patients who are given health promotion with lecture media, booklet media, and social media with a value of F is 4.922 with $p=0.011$ ($p<0.05$). If seen from the average value can be explained that the quality of life of psoriasis patients after being given health promotion with media model lecture is better than the media booklet and social media. Where the average quality of life of psoriasis patients after being given health promotion with media lecture model is equal to 81.15 higher than media booklet 74.40 and social media 74.95 (Table 8).

DISCUSSION

Psoriasis is a stress-related disease; there is a close relationship between psoriasis and stress, which causes various clinical consequences. This suggests that psoriasis can be triggered by stress, leading to an increase in disease severity and a less than satisfactory outcome of therapy. A study conducted by Yang and Yang on the quality of life of psoriasis patients in Taiwan, which compares the quality of life of patients with psoriasis and other skin diseases. Patients with psoriasis tend to have frustration, depression, and greater shyness. Also regarding the social function of patients with psoriasis tend to have difficulty to interact with others, the fear to meet others, and difficulty to interact in work. Overall, it makes patients with psoriasis have a much lower quality of life compared to other skin diseases [11]. Another study by Garcia *et al.*, who evaluated the quality of life in patients with psoriasis in Spain. The study found mean DLQI score was 12, so it can be concluded that patients with psoriasis experience a severe disability [12,13].

Patients with psoriasis experienced problems with interpersonal and stigmatic conditions, in one survey, 27% of psoriasis patients experienced difficulty in sexual activity, 81% experienced a shame when psoriasis was seen by others, and 88% were very worried about worsening of the disease. In addition to the stigma experienced also need to be considered, stigma is an attitude by the public against a condition and also the behavior of discrimination against patients with psoriasis which will cause psychological stress and disability of the patient [14].

In this study proved the existence of an improvement after the health promotion of the quality of life of patients with psoriasis. This is allegedly due to a change in the process of thinking of psoriasis disease, so this provides a change in the psychological mindset that can accept the continuity of life with the disease and a deeper knowledge of the disease itself [14,15].

CONCLUSION

Patients with psoriasis tend to have moderate impairment regarding the quality of life as measured using the DLQI, teaching-based health promotion Interventions, social media, and booklets can improve the quality of life in patients with psoriasis.

AUTHOR'S CONTRIBUTION

All authors contributed to all of the writing process of this article.

CONFLICTS OF INTEREST

Authors have no conflicts of interest regarding all elements in this study.

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