

# Analysis of Factors Affecting The Quality of Life in Vitiligo Patients at Dermato-Venereology Polyclinic dr. Zainoel Abidin General Hospital, Banda Aceh

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## Abstract

Vitiligo is a skin depigmentation disorder and chronic asymptomatic due to the destruction of melanocytes. Patients with vitiligo in addition to physical disorders also affect the psychological state that disrupts the quality of life of the patients. This study aims to identify the factors that affect the quality of life of vitiligo patients. Analytic study was conducted using cross-sectional design with questionnaire Dermatology Life Quality Index (DLQI) to vitiligo patients who went to the Dermato-Venereology Polyclinic dr. Zainoel Abidin General Hospital, Banda Aceh. The results of this study found that visible location and long-suffering vitiligo less than one year affect the quality of life of patients ( $p < 0.05$ ) which the duration of suffering vitiligo more influence than vitiligo location.

**Key words:** Vitiligo, quality of life, DLQI

## Introduction

Vitiligo is a skin depigmentation disorder caused by the destruction of melanocytes, characterized by creamy white patches demarcated by the edges lined with normal skin. Its regarding all age groups but is more common in the age of 10-30 years, 2-3 times more prevalent in women than men, and is estimated to occur in 0.1 to 2% of the population world (Berti *et al.*, 2011). The cause of vitiligo is not known but suspected there were several other factors such as genetic, autoimmune, neurogenic, and autocyctotoxic (Yaghoobiet *al.*, 2011). Clinically, vitiligoclassified into three types based on the expansion and distribution of the lesions; localized (focal, segmental, mucosal), generalized (acrofacial, vulgaris or mixed) and universal (Alikhanet *al.*, 2011).

Vitiligo disturbing the physical appearance also affects the psychological impact on the quality of patient's life. The patients feel embarrassed, worried, angry, even depressed. Almost 20% of cases reported to have depression, 10% of cases of suicidal thoughts, and 3,3% of cases ever attempt suicide. Research in Iran and Korea reported almost all the quality of life of patients with vitiligo disrupted especially in functional and emotional aspects. Other factors are the location of the lesions and marital status (Sampognaet *al.*, 2008 and Dolatshahiet *al.*, 2008).

The principle of vitiligo's treatment is the formation of new melanocytes. Many vitiligo treatment modalities have been developed both non-pharmacological, pharmacological, surgical, phototherapy, and depigmentation therapy. Evaluation of each of these therapies require a long time that is at least 3 months and the success rate is also still vary, so it would give a psychological impact to the patients (Park *et al.*, 2011).

In Indonesia, particularly the dr. Zainoel Abidin General Hospital Banda Aceh has been no research on the factors that affect the quality of life of patients with vitiligo. By knowing these factors is expected to anticipate the occurrence of impaired quality of life of patients with a holistic management that provide appropriate education and counseling if needed.

## Materials and Method

Research conducted cross-sectional analytic using questionnaires of Dermatology Life Quality Index (DLQI) for vitiligo patients who visited the Dermato-Venereology Polyclinic dr. Zainoel Abidin General Hospital Banda Aceh. All of respondents will be asked directly by researchers. Data analysis is done by using the non-parametric test Chi-squared and logistic regression test with SPSS.

## Results and Discussion

Seventy one respondents included in this study. Characteristics of the respondents can be seen in Table 1.

**Table 1.** Characteristics of respondents

Characteristics	Frequency (n)	Percentage (%)
Age		
< 25 Years	31	43,7
≥ 25 Years	40	56,3
Sex		
Male	27	38,0
Female	44	62,0
Marital status		
Singel	31	43,7
Married	40	56,3
Occupation		
Does not work	38	53,5
Work	33	46,5
Location of Vitiligo		
Visible	41	57,7
Not visible	30	42,3
Long-Suffering		
<1 Year	40	56,3
>1 Year	31	43,7

Most respondents vitiligo by ≥25 years of age is 56.3%. According to Kyriakis *et al* (2009), reported that vitiligo often occurs at the age of 30 years in women and men aged 31-60 years. No literature that describes the factors causing the frequent occurrence of vitiligo in adults, but they have higher stress levels than younger age. The number of female patients with vitiligo (62.0%) are greater than male (38.0%). This study is similar to Borimenjad *et al* (2006) that of the 77 respondents vitiligo, there are 53 female and 24 male respondents. It might be caused by female patients pay more attention to healthy skin so that they went to the Dermatology Polyclinic for therapy. The number of respondents who are married (56.3%) more numerous than unmarried. The patients who are unmarried would be embarrassed if the disease is known by others so that they prefer to go to private doctors than hospital (Parsad *et al.*, 2003). Based on the occupation, number of vitiligo patients who do not work more than people who work. The patients who do not work have much time to see a doctor for treatment of the disease.

The number of respondents that location of vitiligo are visible more than respondents that location not visible. Al-Mubarak *et al.* (2011) reported a significant difference between the number of vitiligo patients with lesions at the face, neck, hands, and fingers with vitiligo lesions that are not visible because it is clothing as in abdominal area, chest, back and genitals. Vitiligo patients with visible lesions would greatly affect their quality of life in social interaction so they will seek the treatment. The number of patients who suffered from vitiligo for less than 1 year is more common than over 1 year. It can be caused by new vitiligo patients more disturbed due to their disease, therefore they often visited the Dermatology Polyclinic for treatment (Zandi *et al.*, 2010).

The frequency distribution of the quality of life in vitiligo patients can be seen in Table 2, which the quality of life disturbed were often found. The relationship between age, sex, marital status, occupation, location and duration of suffering from vitiligo with the quality of life can be seen in Table 3.

**Table 2.** Distribution of respondents by the quality of life in vitiligo patients

Quality of Life	Frequency (n)	Percentage (%)
Not Disrupted	0	0
Little Disrupted	15	21,1
Disrupted	30	42,3
Great Disrupted	26	36,6
Extremely Great Disrupted	0	0
Total	71	100

**Table 3.** The relationship between age, sex, marital status, occupation, location and long-suffering with Quality of Life in vitiligo patients

	Quality of Life of Patients with Vitiligo						<i>P value</i>
	Little Disrupted		Disrupted		Great Disrupted		
	n	%	n	%	n	%	
Age							
< 25 years	8	25,8	15	48,4	8	25,8	0,244
≥ 25 years	7	17,5	15	48,4	18	45,0	
Sex							
Male	9	33,3	10	37,0	8	39,7	0,140
Female	6	13,5	20	45,5	18	41,0	
Marital Status							
Singel	8	25,8	15	48,4	8	25,8	0,151
Married	7	17,5	15	48,4	18	45,0	
Occupation							
Does not Work	9	23,7	19	50,0	10	26,3	0,244
Work	6	18,2	11	33,3	16	48,5	
Location of Vitiligo							
Visible	5	12,2	18	43,9	18	43,9	0,047
Not Visible	10	33,3	12	40,0	8	26,7	
Long-suffering							
<1 year	9	31,1	13	46,4	6	21,4	0,031
>1 year	1	5,3	7	36,8	11	57,9	

Based on chi square analysis, we conclude that there is no significant relationship between age and the quality of life of people with vitiligo; *p value* = 0.244 ( $p > 0.05$ ). The results are consistent with Zandieta<sup>l</sup> (2010) that found no significant relationship between age and the quality of life of vitiligopatients; *p value* = 0.33 ( $p > 0.05$ ). In another research reported that both young and old age are equally disrupted the quality of life due to the disease. Vitiligo provide social and psychological disorders, psychiatric morbidity, anxiety, even lead to depression regardless of age group (Wang and Baba, 2012).

In this study found no significant relationship between the sexes with the quality of life of patients with vitiligo (*p value* = 0.140,  $p > 0.05$ ). This is consistent with the results of Zandiet<sup>al</sup> (2010), All of patients feel their quality of life disrupted by vitiligo. The average value DLQI in men was 6.64 while in women is different 5,81. Al Mubarak *etal* (2011) reported a significant relationship between the sexes with the quality of life in vitiligo patients, the average score for men was 11.1 and for women is 23.9 with *p value* <0.05. It is concluded that women are more impaired quality of life than men. The difference in the results may be due to differences in the number of samples, lifestyle and way of thinking of a society which is strongly influenced by the environment in which they live.

In the study found no significant relationship between marital status with quality of life of people with vitiligo, *p value* = 0.151 ( $p > 0.05$ ). This is according to research conducted by Zandieta<sup>l</sup> (2010), who reported that the average value DLQI in patients who are not married is 5.97, while married is 6.44 with *p value* = 0,38 ( $p > 0.05$ ) so that there is no association between marital status and quality of life of vitiligo patients. The quality of life in vitiligopatients either already married or not married are equally disrupted due to illness.

The study concluded there was no significant relationship between work and quality of life of patients with vitiligo with *p value* = 0.244 ( $p > 0.05$ ). This Results differs from Al Mubarak *etal* (2011) who reported that the quality of life in vitiligo patients who have a job is more disrupted than the patients who did not work ( $p < 0.05$ ). The difference results may be due to the mindset and habits of a person's life is different for each region.

In this study showed a significant relationship between vitiligo locations with the quality of life of patients, *p value* = 0.047 ( $p < 0.05$ ). The patients with vitiligo in a visible location will affect the quality of life 10 times greater than in patients with lesions not visible. Zandieta<sup>l</sup> (2010) also reported that vitiligopatients with locations on the face, neck, hands and fingers have impaired quality of life compared to the patients with locations of vitiligo are not visible, *p value* = 0.02 ( $p < 0.05$ ). This research is also consistent with Al Mubarak *etal* (2011) that the average score of the quality of life in patients with a visible location is 5.0 while the patients with a location not visible was 3.4

( $p < 0.05$ ). The patients with vitiligo visible location often get psychological disorders such as anxiety and embarrassment when they meet new people, even some that up to attempted suicide. Long suffering from vitiligo in the study had a significant relationship with quality of life in patients,  $p$  value = 0.031 ( $p < 0.05$ ). Vitiligo patients with long-suffering less than one year will affect the quality of life 13 times greater than long-suffering vitiligo more than one year. These results differ from a study by Zandi *et al* (2010) that obtained no significant relationship between long-suffering with the quality of life of patients,  $p$  value = 0.74 ( $p > 0.05$ ). Baba and Wong (2012) also concluded that there was no significant relationship between long-suffering vitiligo with quality of life of patients. Several theories explain that vitiligo is one of chronic diseases and require long-term treatment with therapeutic response varied. In effective therapy would slow down the healing process that affect the quality of life of patients because the disease does not heal. Therefore, good management can improve the quality of life of patients with vitiligo.

This study conducted logistic regression of variable location and long-suffering vitiligo with the quality of life of patients. The quality of life is divided into two groups: little disrupted and combine great disrupted and extremely great disrupted quality of life into a single group. The logistic regression results can be seen in Table 4.

**Table 4.** Logistic regression location and long-suffering vitiligo

Variabel	<i>P</i> value	Exp (B)
The location of vitiligo	0,04	10,42
Long suffering from vitiligo	0,04	12,56

On this study, the long-suffering vitiligo factors have more influence on the quality of life of patients compared with vitiligo location factor. Long suffering from vitiligo less than one year will affect the quality of life of patients about 13 times greater than the long-suffering vitiligo more than one year. In patients with vitiligo visible location will affect the quality of life of patients 10 times larger than the location of vitiligo is not visible.

### Conclusion

There is no significant relationship between sex, occupation and marital status with quality of life of vitiligo patients, but there is a significant relationship with the location and long-suffering vitiligo. Long-suffering from vitiligo have more influence on the quality of life of patients than location of vitiligo.

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