

## Dermatology Life Quality Index (DLQI) of Condyloma Acuminata Patients at Dr. Soetomo General Regional Hospital in 2024

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### ABSTRACT

Condyloma acuminata is a sexually transmitted disease characterized by the appearance of warts in the genital area. The impact of this disease is known to cause significant disruption to the psychosocial aspects of patients. This study aims to evaluate the quality of life of condyloma acuminata patients based on demographic characteristics and patient history. This is a descriptive observational cross-sectional study using a questionnaire involving condyloma acuminata patients undergoing therapy in the Sexually Transmitted Infections Division of the Dermatology and Venereology Outpatient Unit of Dr. Soetomo Hospital, Surabaya. This research involves a total of 24 patients aged 15-44 with a gender distribution of female (41.7%) and male (58.3%). Disturbances in quality of life were experienced by 21 of 24 patients (87.5%) and 3 patients (12.5%) did not experience disturbances in quality of life. Patients felt that condyloma acuminata caused severe disturbances to their quality of life (41.7%), followed by moderate disturbances (29.2%), mild disturbances (8.3%), and very severe disturbances (8.3%). The main dimensions affected were symptoms, feelings, personal relationships, and sexual problems. The Dermatology Life Quality Index (DLQI) questionnaire scores were analyzed descriptively with frequency distribution tables and crosstabulation based on predetermined variables. This study showed that there was a disturbance in the quality of life in patients with condyloma acuminata, aligned with previous findings.

**Keywords:** condyloma acuminata; quality of life; DLQI.

### INTRODUCTION

Condyloma acuminata (CA) is a sexually transmitted disease (STD) caused by Human Papillomavirus (HPV), especially types 6 and 11, with manifestations in the form of fleshy, skin-colored papules that mostly affect the anorectal area. CA is mainly a problem for young adults and is among the most prevalent STD types. There are around 500,000 to 1,000,000 new cases of CA each year in the United States [1]. In Indonesia, the prevalence of CA ranges from 5-19% of all cases of sexually transmitted diseases [2].

Treatment options for condyloma acuminata include pharmacological agents such as trichloroacetic acid, podophyllotoxin, and imiquimod; surgical ablation such as cryotherapy and carbon dioxide laser; and surgical excision. The choice of therapy depends on

the size, number, and location of the lesions. Although treatment is successful, the recurrence rate of CA in patients cannot be eliminated [3]. High recurrence rates, threat of transmission, cancer risk, and discomfort from treatment can cause a great psychosocial burden on CA patients [4].

Health-Related Quality of Life (HRQoL) or Quality of Life (QoL) is used to determine each individual's perception of the patient's general well-being, including aspects such as happiness and life satisfaction [5]. QoL in patients with condyloma acuminata has been studied using EuroQoL-5D (EQ-5D), Cuestionnaire Específico para Condiloma Acuminado (CECA), International Index of Erectile Function (IIEF), Sexual Quality of Life-Men (SQOL-M), and Dermatology Life Quality Index (DLQI).

It is known that condyloma acuminata can cause a decrease in the patient's quality of life [5-7].

The formulation of the problem in this study is how the Dermatology Life Quality Index (DLQI) in patients with condyloma acuminata in the Division of Sexually Transmitted Infections, Outpatient Installation of Skin and Venereal Diseases, Dr. Soetomo Hospital, Surabaya in 2024?

The general objective of this study was to evaluate the DLQI of condyloma acuminata patients in the Division of Sexually Transmitted Infections, Outpatient Installation of Skin and Venereal Diseases, Dr. Soetomo Hospital, Surabaya, in 2024. The specific objective of this study was to evaluate the DLQI of condyloma acuminata patients in the Division of Sexually Transmitted Infections, Outpatient Installation of Skin and Venereal Diseases, Dr. Soetomo Hospital, Surabaya, in 2024 based on age, gender, work history, education history, sexual history, duration of disease, type of therapy, and duration of therapy.

The theoretical benefits of this study are the development of insight and knowledge regarding aspects of quality of life in Condyloma Acuminata patients. This study offers practical benefits by providing information or data that can serve as a reference, enhancing the quality of health services for patients and advancing future research. In addition, this study is expected to provide information to the public regarding condyloma acuminata disease and its relationship to quality of life so that it can increase public awareness of condyloma acuminata.

## METHODS

This study is an observational descriptive study with a cross-sectional design using a questionnaire in a population of patients with condyloma acuminata who have been clinically diagnosed in the Sexually Transmitted Infections Division of the Outpatient Installation of Skin and Venereal Diseases, Dr. Soetomo Hospital, Surabaya, in 2024. This study involved 24 patients who had met all sample inclusion criteria, namely patients aged over 15 years, undergoing therapy for KA at Dr. Soetomo Hospital, and willing to be research subjects.

The consecutive sampling technique was used in sampling. KA patient data was first taken from medical records in 2024, and then patients were asked to come to the Sexually Transmitted Infections Division of the Outpatient Installation (IRJ) of Skin and Venereal Diseases, Dr. Soetomo Hospital. After receiving an explanation of the research (information of consent) and agreeing to the informed consent given, an interview process and filling out of the questionnaire were carried out by the patients.

The instrument or indicator of quality of life used in this study was the Indonesian version of the Dermatology Life Quality Index (DLQI) questionnaire.

DLQI is the first dermatology-specific quality-of-life assessment instrument published in 1994 and has been tested for reliability. DLQI contains 10 questions about several aspects of life that can be affected by dermatological diseases during the past week, including symptoms, feelings, daily activities, leisure activities, school and work, personal relationships, and experiences with treatment. DLQI is calculated from the total score of each question, with a total score range of 0-30. The decline in quality of life in patients is greater as the total score approaches 30, and vice versa. So that the DLQI assessment can be classified as follows: no quality of life impairment [0-1], mild impairment [2-5], moderate impairment [6-10], severe impairment [11-20], or very severe impairment [21-30] [8,9].

IBM Statistical Package for Social Sciences (SPSS) software was used for the data analysis process. The collected data were subjected to descriptive statistical analysis using frequency distribution tables or diagrams, medians, mode values, and crosstabulation based on predetermined variables. This research has been reviewed by the Health Research Ethics Committee of Dr. Soetomo Hospital with reference number 0950/KEPK/III/2024 on March 27, 2024.

## RESULT

The subjects in this study were 24 patients, consisting of 14 male patients and 10 female patients with an age range of 15-24 years (50%) and 25-44 years (50%). The subjects' last educational history was obtained at the junior high school level (8.3%), high school (50%), and college undergraduate (41.7%). The subjects' work histories included self-employed (50%), entrepreneurs (16.7%), and students (20.8%). Other subjects worked as housewives, therapists, and babysitters.

**TABLE 1:** Demographic characteristics of condyloma acuminata patients in Dr. Soetomo General Hospital in 2024.

Demographic data	n (%)
<b>Age group</b>	
15-24	12 (50)
25-44	12 (50)
45-64	0 (0)
>65	0 (0)
<b>Total</b>	<b>24 (100)</b>
<b>Gender</b>	
Male	14 (58,3)
Female	10 (41,7)
<b>Total</b>	<b>24 (100)</b>
<b>Education</b>	
Elementary school	0 (0)
Junior high school	2 (8,3)
Senior high school	12 (50)
University (bachelor)	10 (41,7)
University (master)	0 (0)
University (doctoral)	0 (0)
<b>Total</b>	<b>24 (100)</b>

Demographic data	n (%)
<b>Occupation</b>	
Self-employed	12 (50)
Entrepreneur	4 (16,7)
Student	5 (20,8)
Others (housewife, therapist, babysitter)	3 (12,5)
Civil servant	0 (0)
Prostitute	0 (0)
<b>Total</b>	<b>24 (100)</b>

This study found 58.3% of subjects with heterosexual preferences, as well as homosexual (25%) and bisexual (16.7%). The number of subjects who had more than one sexual partner or were multisexual was higher (58.3%) compared to unisexual subjects. As many as 45.8% of subjects admitted to having sex with their husband or wife, while 37.5% had sex with friends or boyfriends, and 16.7% had irregular sexual partners. The subjects stated that they had suffered from condyloma acuminata for more than 3 months (58.3%), 1-3 months (25%), and less than 1 month (16.7%). Therapy for condyloma acuminata had been undergone by the subjects for less than 1 month (45.8%) and more than 1 month (54.2%) with trichloroacetic acid (TCA) is the most widely used therapy modality.

**TABLE 2:** History of condyloma acuminata patients in Dr. Soetomo General Hospital in 2024.

History	n (%)
<b>Sexual preference</b>	
Heterosexual	14 (58,3)
Homosexual	6 (25)
Bisexual	4 (16,7)
<b>Total</b>	<b>24 (100)</b>

<b>Sexual history</b>	
Unisexual	10 (41,7)
Multisexual	14 (58,3)
No sexual partner	0 (0)
<b>Total</b>	<b>24 (100)</b>
<b>Relationship with sexual partner</b>	
Husband/wife	11 (45,8)
Boyfriend/girlfriend	9 (37,5)
Others	4 (16,7)
<b>Total</b>	<b>24 (100)</b>
<b>Duration of CA (month)</b>	
< 1	4 (16,7)
1-3	6 (25)
> 3	14 (58,3)
<b>Total</b>	<b>24 (100)</b>
<b>Duration of therapy (month)</b>	
< 1	11 (45,8)
> 1	13 (54,2)
<b>Total</b>	<b>24 (100)</b>
<b>Therapy</b>	
Fucidic acid	12 (50)
Surgery	1 (4,2)
Cryotherapy	7 (29,2)
Cauterization	12 (50)
TCA	21 (87,5)

Table 3 shows that 21 subjects (87.5%) reported impaired quality of life-based on their DLQI scores, while 3 patients (12.5%) had no disturbance. Patients felt that condyloma acuminata caused severe disturbance to their quality of life (41.7%), followed by moderate disturbance (29.2%), mild disturbance (8.3%), and very severe disturbance (8.3%). The subjects' answers to each questionnaire question (Table 4) showed that disturbance due to symptoms, feelings, personal relationships, and sexual problems were the dimensions with the most disturbance compared to other dimensions.

**TABLE 3:** DLQI score of condyloma acuminata patients in Dr. Soetomo General Hospital 2024.

Minimum score	Maximum score	Median	Mean	Standard deviation
0	29	11,00	11,00	7,360

**TABLE 4:** DLQI's Quality of Life of condyloma acuminata patients in Dr. Soetomo General Hospital 2024.

DLQI's Quality of Life	n (%)
No impairment	3 (12,5)
Mild impairment	2 (8,3)
Moderate impairment	7 (29,2)
Severe impairment	10 (41,7)
Very severe impairment	2 (8,3)
<b>Total</b>	<b>24 (100)</b>

**TABLE 5:** DLQI dimensional evaluation of condyloma acuminata patients in Dr. Soetomo General Hospital 2024.

Dimension	Minimum score	Maximum score	Median	Mean	Standard Deviation
Symptoms	0	3	1,00	1,08	0,654
Feelings	0	3	2,00	2,04	1,042
Household	0	3	1,00	0,92	0,929
Clothing	0	3	1,00	0,96	0,955
Leisure and social	0	3	1,00	0,87	0,947
Sport	0	3	1,00	0,88	0,947
Work and Study	0	3	1,00	0,71	0,806
Private relationship	0	3	1,50	1,33	1,049
Sexual problems	0	3	1,50	1,46	1,250
Treatment	0	3	0,00	0,79	1,021

The data in Table 6 shows the results of the DLQI assessment based on each subject's characteristics. There was a tendency towards severe impairment in both men (35.7%) and women (35.7%). However, there were 2 male patients (14.3%) with very severe impairment, while there were no patients with very severe impairment in the female group. In addition, the results of the DLQI assessment based on age characteristics showed a tendency towards severe impairment in the 25-44-year age group (50%)

compared to the 15-24-year group which was dominated by moderate disorders (41.7%). Almost all groups of work history experienced a tendency towards severe impairment, except for the student/college student group with a tendency towards moderate disorders (80%). Likewise, on the characteristics of the education history, severe impairment was most commonly experienced by the high school group (41.7%), and college undergraduate groups (50%).

**TABLE 6:** DLQI based on demographic data of condyloma acuminata patients in Dr. Soetomo General Hospital 2024.

DLQI's Quality of Life						
Demography	N	No impairment n (%)	Mild impairment n (%)	Moderate impairment n (%)	Severe impairment n (%)	Very severe impairment n (%)
<b>Age group</b>						
15-24	12	1 (8,3)	1 (8,3)	5 (41,7)	4 (33,3)	1 (8,3)
25-44	12	2 (16,7)	1 (8,3)	2 (16,7)	6 (50)	1 (8,3)
45-64	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
>65	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Gender</b>						
Male	10	2 (20)	0 (0)	3 (30)	5 (50)	0 (0)
Female	14	1 (7,1)	2 (14,3)	4 (28,6)	5 (35,7)	2 (14,3)

DLQI's Quality of Life						
History	N	No impairment n (%)	Mild impairment n (%)	Moderate impairment n (%)	Severe impairment n (%)	Very severe impairment n (%)
<b>Education</b>						
Elementary school	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Junior high school	2	1 (50)	0 (0)	0 (0)	0 (0)	1 (50)
Senior high school	12	0 (0)	2 (16,7)	4 (33,3)	5 (41,7)	1 (8,3)
University(bachelor)	10	2 (20)	0 (0)	3 (30)	5 (50)	0 (0)
University(master)	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
University(doctoral)	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Table 7 shows that severe impairment is more common in heterosexuals (50%) compared to bisexuals who are dominated by mild disorders (50%). However, there are 33.3% of homosexuals experience very severe impairment, which is not found in the other 2 preference groups. Severe impairment also dominates the unisexual (50%) and

multisexual (35.7%) groups, with 2 multisexual patients in very severe impairment (14.3%). Severe to very severe impairment tends to be experienced by the husband/wife sexual partner group and the casual sexual partner group, while the friend/boyfriend group is dominated by moderate disorders (44.4%).

**TABLE 7:** DLQI based on history of condyloma acuminata patients in Dr. Soetomo General Hospital 2024.

History	N	DLQI's Quality of Life				
		No impairment n (%)	Mild impairment n (%)	Moderate impairment n (%)	Severe impairment n (%)	Very severe impairment n (%)
<b>Sexual preference</b>						
Heterosexual	14	3 (21,4)	0 (0)	4 (28,6)	7 (50)	0 (0)
Homosexual	6	0 (0)	0 (0)	2 (33,3)	2 (33,3)	2 (33,3)
Bisexual	4	0 (0)	2 (50)	1 (25)	1 (25)	0 (0)
<b>Sexual history</b>						
Unisexual	10	2 (20)	0 (0)	3 (30)	5 (50)	0 (0)
Multisexual	14	1 (7,1)	2 (14,3)	4 (28,6)	5 (35,7)	2 (14,3)
No sexual partner	0	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>Relationship with a sexual partner</b>						
Husband/wife	11	2 (18,2)	1 (9,1)	2 (18,2)	6 (54,5)	0 (0)
Boyfriend/girlfriend	9	1 (11,1)	1 (11,1)	4 (44,4)	3 (33,3)	0 (0)
Others	4	0 (0)	0 (0)	1 (25)	1 (25)	2 (50)
<b>Duration of CA (month)</b>						
< 1	4	1 (25)	0 (0)	0 (0)	3 (75)	0 (0)
1-3	6	2 (33,3)	0 (0)	2 (33,3)	2 (33)	0 (0)
> 3	14	0 (0)	2 (14,3)	5 (35,7)	5 (35,7)	2 (14,3)
<b>Therapy</b>						
Fucidic acid	12	3 (25)	1 (8,3)	2 (16,7)	5 (41,7)	1 (8,3)
Surgery	1	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)
Cryotherapy	7	1 (14,3)	0 (0)	1 (14,3)	4 (57,1)	1 (14,3)
Cauterization	12	2 (16,7)	0 (0)	3 (25)	7 (58,3)	0 (0)
TCA	21	2 (9,5)	2 (9,5)	7 (33,3)	8 (38,1)	2 (9,5)
<b>Duration of therapy (month)</b>						
< 1	11	2 (18,2)	0 (0)	4 (36,4)	5 (45)	0 (0)
> 1	13	1 (7,7)	2 (15,4)	3 (23,1)	5 (38,5)	2 (15,4)

## DISCUSSION

### 1. Demographic Characteristics of Condyloma Acuminata Patients

This study showed a balanced number of subjects aged 15-24 years and 25-44 years. This is slightly different from other studies by Nareswari et al. With a dominance of the 21-30-year age group (12). However, overall there are similarities in the incidence of condyloma acuminata in adolescents and adults who are productive ages. The proportion of men in this study was greater than women. This is in accordance with research at Sanglah General Hospital (RSUP) Denpasar for the period 2015-2017 with a proportion of male patients of 55.30% (13). It is known that the prevalence of condyloma acuminata patients which is higher in men can be due to the high risk of sexual activity in the male population (14). The high history of self-employed work is also in line with research at the Dermatology and Venereology Polyclinic of Dr. H. Abdul Moeloek Hospital, Lampung Province for the period 2018-2020 (15), while in terms of education history, similar things were also found in other studies with the largest proportion in the high school group (12).

### 2. History of Condyloma Acuminata Patients

This study also found that heterosexual preferences occupied the largest proportion, but different findings were obtained in previous studies by

Anggraini et al where homosexuals occupied the largest proportion (16). As many as 58.3% of subjects were included in the multisexual group. A similar finding was found in a study of condyloma acuminata patients in Brazil (17). This may be related to one of the risk factors for condyloma acuminata, namely a history of the number of lifetime sexual partners (18).

### 2. Dermatology Life Quality Index (DLQI) of Condyloma Acuminata Patients

There was a disturbance in the quality of life in 21 condyloma acuminata patients (87.5%) with a percentage of severe impairment (41.7%) and moderate (29.2%) in this study. These results are in line with the studies of Luthfiandi et al and Nia et al, but contrary to the results of the study by Camargo et al who did not find any disturbance in the quality of life in most condyloma acuminata patients (5,7,19). Differences in patient quality of life can be influenced by several factors, such as differences in the severity of symptoms that appear in each patient and the existence of dimensions of assessment in aspects of personal life so that the results of the DLQI assessment are subjective. Previous studies have found that condyloma acuminata can cause anxiety, depression, and disturbances in social and sexual life (6,19,20). Similar things were also found in this study where most patients felt major to every major

disturbances in the dimensions of symptoms, feelings, personal relationships, and sexual problems. Meanwhile, in other dimensions such as household activities, personal activities, social activities, sports activities, and work and study activities, only minor to no disturbances were found. Several factors that may underlie these findings are the location of the condyloma acuminata lesions in the genital area covered by clothing so that the symptoms that appear are not dominant enough to interfere with daily activities directly.

### 3. DLQI Based on Demographic Characteristics

The large number of subjects in the female group who suffered from severe impairment is supported by previous studies that stated similar things (6,19). Severe impairment was more common in the 25-44-year age group compared to the 15-24-year age group. The occurrence of condyloma acuminata which tends to be more common in young age groups who are sexually active and higher sexual activity in older age groups, is known to influence perceptions of condyloma acuminata (21). The high DLQI scores obtained in most groups in the characteristics of work, education, duration of therapy, and type of therapy were greatly influenced by the assessment of other dimensions in the DLQI questionnaire because most patients only experienced minor disorders in the dimensions that assess work, education, and disorders due to treatment.

### 4. DLQI Based on History

Severe impairment was also felt more by patients with a disease duration of less than one month compared to the other 2 groups. This may be related to a better adaptation process in patients with a longer disease duration. In addition, the uneven distribution of patients in groups according to the characteristics of disease duration can also affect the results of this study. Previous studies have found that condyloma acuminata can cause sexual disorders in both men and women (7,22). Most female patients experience decreased libido, whereas male patients experience more erectile dysfunction. Emotional disorders are also found in both men and women in all characteristics of sexual history (23). Supported by the results of the assessment of sexual problem dimensions, similar findings were also obtained in this study where moderate to severe impairment based on the DLQI score occurred in almost all characteristics of sexual history, both in preference, number, and relationships with sexual partners.

### CONCLUSIONS

From the study of the Dermatology Life Quality Index (DLQI) of condyloma acuminata patients in the Division of Sexually Transmitted Infections IRJ Dermatology and Venereology, Dr. Soetomo Hospital, Surabaya, it can be concluded that 21 out of 24 subjects (87.5%) experienced impaired quality of life and only three subjects (12.5%) did not experience impairment. Severe impairment was found in the largest number of both male and female subjects, namely 35.7% and 50%. However, there were two male subjects (14.3%) who experienced

very severe impairment. The 25-44-year age group had a tendency towards severe impairment (50%) compared to the 15-24-year age group. This may be related to higher sexual activity in the 25-44-year age group. The tendency towards severe impairment was found in the private employee occupational group, entrepreneurs, and the "other" group. Based on educational history, the tendency towards severe impairment was found in the high school/vocational school and undergraduate groups. Moderate to severe impairment based on the DLQI score occurred in almost all characteristics of sexual history, disease duration, and duration of disease. Based on the type of therapy, subjects who received therapy with fucidic acid, cryotherapy, cauterization, and TCA tended to have severe impairment. Regardless of the results of this study, further research is needed on the quality of life of patients with condyloma acuminata. If necessary, referral to psychiatry for patients with severe emotional disorders due to condyloma acuminata can be done.

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