**Original Research**

# STUDY ON DLQI SCORE IN NONVENERAL GENITAL DERMATOSIS

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## Abstract

**Background:** Genital dermatoses are a group of skin diseases that affect both the female and male genital areas. They can be classified into venereal (sexually transmitted) and nonvenereal (no transmission). Nonvenereal genital dermatoses are classified based on their pathogenesis. They are inflammatory, infectious, congenital, benign and malignant conditions. The most common venereal genital dermatoses are herpes genitalis, syphilis, lymphogranuloma venereum, chancroid, anogenital verruca, granuloma inguinale and molluscum contagiosum. The most common nonvenereal genital dermatoses are vitiligo, fungal infection, lichen simplex chronicus, lichen sclerosus, psoriasis, folliculitis, lichen planus and contact dermatitis.

**Aim and Objectives:** the objective of the present study is to evaluate the quality of life index in patients with genital dermatoses.

**Materials and Method**s: Clinical and histopathological examinations were used to determine the patients' diagnoses. A questionnaire that included demographic information, a 10-item dermatology life quality index (DLQI) and a 21-item depression anxiety stress score (DASS-21) was filled out by each patient. The DLQI score reflected the impact of the disease on the quality of life in the previous week. Demographic information about the patients included their age, gender, marital status (married, single/divorced), occupation (employed and unemployed), education level (basic, intermediate and advanced) and income level (income equal to expenses [IEE], income more than expenses [IME], or income less than expenses [ILE]). The DLQI scores were interpreted as no effect (0–1), mild effect (2–5), moderate effect (6–10), large effect (11–20) and extremely large effect (21-30).

**Discussion and Conclusion:** In the present study, we included total of 100 patients based on inclusion and exclusion criteria, out of which 68 were males and 32 were females. Most of the patients belong to the age group 31-40 years. 78% were employed and 22% were not employed. We studied different types of genital dermoatosis nonveneral, we found 43% had fungal infections, 23% psoriasis, 9% contact dermatitis, 9% lichen planus, 5% vitiligo, 4% bacterial infections, 2% bechets disease, 4% hidradenitis suppurative and 1% had scabies and their DLQI were 5.23, 13, 13.2, 10.2, 3.2, 6.32, 10.2, 3.2, 6.32, 14.5, 18.2 and 28 respectively. We compared DLQI scores with occupation, marital status, gender we did not find statistically significant differences.

According to these findings, the quality of life of patients with genital dermatoses is often poor.We believe screening these patients with DLQI scores at their first admission, and follow-up will benefit dermatologists and patients.

**Key-words:** quality of life, genital dermatosis, nonveneral and fungal infections

## INTRODUCTION:

Genital dermatoses are a group of skin diseases that affect both the female and male genital areas. They can be classified into venereal (sexually transmitted) and nonvenereal (no transmission) [1]. Nonvenereal genital dermatoses are classified based on their pathogenesis. They are inflammatory, infectious, congenital, benign and malignant conditions. The most common venereal genital dermatoses are herpes genitalis, syphilis, lymphogranuloma venereum, chancroid, anogenital verruca, granuloma inguinale and molluscum contagiosum [2]. The most common nonvenereal genital dermatoses are vitiligo, fungal infection, lichen simplex chronicus, lichen sclerosus, psoriasis, folliculitis, lichen planus and contact dermatitis [3].
When the onset of genital dermatoses coincides with suspected sexual contact, patients' levels of depression, anxiety and stress increase dramatically. This has a negative effect on their quality of life. Furthermore, pain, itching, discharge and swelling can have a negative impact on the patient's quality of life [4]. Hence patients with these diseases should be evaluated for their quality of life index, depression, anxiety and stress levels both before and during treatment. Very few studies have evaluated the impact of genital dermatoses on patients' quality of life, depression, anxiety and stress levels [5-9]. This study aimed to evaluate the effects of the quality of life index in patients with genital dermatoses.

## AIM AND OBJECTIVES:

the objective of the present study is to evaluate quality of life index in patients with genital dermatoses.

## MATERIALS AND METHODS:

The present study was conducted at our tertiary care hospital in the Dept. of Dermatology, we included a total of 100 subjects based on inclusion and exclusion criteria in the age group 20-60 years.

**Study design:** Prospective hospital based study.

**Sample size:** 100

**Inclusion Criteria:** This study included patients admitted to the dermatology outpatient clinic with genital skin complaints of our tertiary care hospital. The patients underwent a full-body dermatological examination. Patients with isolated genital skin disease were chosen for the study.

**Exclusion Criteria:** Patients with psychiatric diseases were excluded from the study.

**Data collection:** Clinical and histopathological examinations were used to determine the patients' diagnoses. A questionnaire that included demographic information, a 10-item dermatology life quality index (DLQI) and a 21-item depression anxiety stress score (DASS-21) was filled out by each patient. The DLQI score reflected the impact of the disease on the quality of life in the previous week.
Demographic information about the patients included their age, gender, marital status (married, single/divorced), occupation (employed and unemployed), education level (basic, intermediate and advanced) and income level (income equal to expenses [IEE], income more than expenses [IME], or

income less than expenses [ILE]). The DLQI scores were interpreted as no effect (0–1), mild effect (2–5), moderate effect (6–10), large effect (11–20) and extremely large effect (21-30).

**Statistical analysis:** Descriptive statistics were analysed in IBM Statistical Package for the Social Sciences (SPSS) 22.0 program. For categorical variables, frequency differences between groups were compared using Pearson's Chi-square. The t-test was used to compare the means of two independent groups in a normal distribution. The statistical significance was accepted as $P < 0.05$ for this study.

## RESULTS:

This study included patients admitted to the dermatology outpatient clinic with genital skin complaints of our tertiary care hospital. The patients underwent a full-body dermatological examination. Patients with isolated genital skin disease were chosen for the study.

**Table 1: Shows the Demographic Variables of patients with nonvenereal genital dermatosis**

| | Number | Percentage |
|---|---|---|
| Gender | | |
| Males | 68 | 68% |
| Females | 32 | 32% |
| Age | | |
| 20-30 | 18 | 18% |
| 31-40 | 32 | 32% |
| 41-50 | 28 | 28% |
| 51-60 | 22 | 22% |
| Occupation | | |
| Employed | 78 | 78% |
| Not employed | 22 | 22% |
| Marital status | | |
| Married | 78 | 78% |
| Single | 22 | 22% |

**Table 2: Shows DLQI score in patients with genital dermatosis**

| | Number | Percentage | DLQI |
|---|---|---|---|
| Fungal infections | 43 | 43% | 5.23 |
| Psoriasis | 23 | 23% | 13 |
| Contact dermatitis | 9 | 9% | 13.2 |
| Lichen planus | 9 | 9% | 10.2 |
| Vitiligo | 5 | 5% | 3.2 |
| Bacterial infections | 4 | 4% | 6.32 |
| Bechets disease | 2 | 2% | 14.5 |
| Hidradenitis suppurative | 4 | 4% | 18.2 |
| Scabies | 1 | 1% | 28 |

**Table 3: Shows comparison of DLQI scores in patients with genital dermatosis**

| | | |
|---|---|---|
| Gender | | |
| Males | 7.2 | |
| Females | 8.3 | P = 0.38 |
| Occupation | | |
| Employed | 6.8 | P = 0.22 |
| Not employed | 8.1 | |
| Marital status | | |
| Married | 6.8 | P = 0.34 |

| | | |
|---|---|---|
| Single | 8.2 | |

## DISCUSSION:

The present study was conducted at our tertiary care hospital in the Dept. of Dermatology, we included a total of 100 subjects based on inclusion and exclusion criteria in the age group 20-60 years. Clinical and histopathological examinations were used to determine the patients' diagnoses. A questionnaire that included demographic information, a 10-item dermatology life quality index (DLQI) and a 21-item depression anxiety stress score (DASS-21) was filled out by each patient. The DLQI score reflected the impact of the disease on the quality of life in the previous week. Demographic information about the patients included their age, gender, marital status (married, single/divorced), occupation (employed and unemployed), education level (basic, intermediate and advanced) and income level (income equal to expenses [IEE], income more than expenses [IME], or income less than expenses [ILE]). The DLQI scores were interpreted as no effect (0–1), mild effect (2–5), moderate effect (6–10), large effect (11–20) and extremely large effect (21-30).

In the present study, we included total of 100 patients based on inclusion and exclusion criteria, out of which 68 were males and 32 were females. Most of the patients belong to the age group 31-40 years. 78% were employed and 22% were not employed. We studied different types of genital dermoatosis nonveneral, we found 43% had fungal infections, 23% psoriasis, 9% contact dermatitis, 9% lichen planus, 5% vitiligo, 4% bacterial infections, 2% bechets disease, 4% hidradenitis suppurative and 1% had scabies and their DLQI were 5.23, 13, 13.2, 10.2, 3.2, 6.32, 10.2, 3.2, 6.32, 14.5, 18.2 and 28 respectively. We compared DLQI scores with occupation, marital status, gender we did not find statistically significant differences.

Nonvenereal genital dermatoses in males was studied by Vinay *et al*., Nyati *et al*., Saraswat *et al*. and Puri *et al* [10-12]. The mean age ranged from 27.1 to 32.2 years in their studies. Scrotal dermatitis, vitiligo, white penile papules, sebocystoma multiplex and permanent drug eruption were the most prevalent nonvenereal genital dermatoses in males. On the contrary, psoriasis and fungal infections were the most prevalent nonvenereal genital dermatoses in this study. Nonvenereal genital dermatoses in females were studied by Puri *et al*. and Vinay *et al*. Shaik *et al*., Mondal *et al*., Singh *et al*. and Kaur *et al* [13-15]. The mean age ranged from 37 to 38 years in their studies. Fungal infections, lichen simplex chronicus, lichen sclerosus et atrophicus and vitiligo were the most prevalent nonvenereal genital dermatoses in females. On the contrary, contact dermatitis, psoriasis and lichen planus were the most prevalent nonvenereal genital dermatoses in this study. Geographical factors, participant numbers of studies and prevalence changes may explain the differences. A few studies have investigated the impact of genital dermatoses on quality of life. Anogenital verruca was one of the most examined venereal genital dermatoses in terms of quality of life. Senecal *et al*., Woodhal *et al*. and Mohta *et al*. studied this subject. They all showed that anogenital verruca has a negative impact on dermatological quality of life. The mean DLQI scores of patients with anogenital verruca in this study indicated mild-moderate impairment. This finding was consistent with the literature. Despite the small number of patients in this study, there were cases of molluscum, syphilis and herpes genitalis. These patients' mean DLQI scores also indicated mild-moderate impairment. These findings can be interpreted as the patient's fear of stigma and embarrassment. There are few studies in the literature regarding nonvenereal genital dermatoses' quality of life. These researches mainly focused on psoriasis, vitiligo, lichen planus and lichen scleroatrophic. These studies all showed the negative impact of the diseases above on patients' quality of life. In addition to the literature, this study found that several additional nonvenereal genital dermatoses had a negative impact on the quality of life. (mild to moderate impairment) [10-15].

## CONCLUSION:

According to these findings, the quality of life of patients with genital dermatoses is often poor.We believe screening these patients with DLQI scores at their first admission, and follow-up will benefit dermatologists and patients.

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