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Research Paper

Demographic profile, quality of life and other related factors among psoriatic patients: a cross-sectional survey

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ABSTRACT

Psoriasis is a common dermatological condition with a significant effect on patients' daily life. Methods: This is a cross-sectional study conducted in the Dermatology outpatient department. Non-probability type consecutive sampling was used for the current study. Respondents were included by following selected inclusion and exclusion criteria. Patients' demographic information was taken by pre-tested semi-structured questionnaires. DLQI were evaluated by 10 standard questions. Data accuracy, consistency, and confidentiality were maintained. Participants could withdraw at any time. Data analysis was done using SPSS 25.0. Results were presented visually through tables and diagrams for clarity. Results: The majority 87(39.9%) of respondents were between 30 to 35 years. A significant 114(52.3%) respondents were male while 127(58.3%) were married. Most 137(62.8%) of the patients are currently employed. Almost three-fourths of 160(73.4%) had a negative family history. A significant number 168(77.1%) were suffering from localized plaque psoriasis. Regarding BMI, the majority of patients 138(63.3%) had normal BMI. More than half 112(51.4%) were suffering from psoriasis for a duration of 3 to 5 years. Of diagnosed patients, only 62(28.4%) had joint or nail involvement. Due to the current disease process 169(77.5%) respondents did not affect their job. DLQI score for a significant number 71(32.6%) were scored in moderate category effect. Around half 105(48.2%) of the patient had mild involvement in their skin. Conclusion: Psoriatic patients were middle-aged married males with current employment. Usually, psoriatic patients do not have a familial history. Among diagnosed psoriatic patients, most of them were diagnosed with localized plaque psoriasis with normal BMI. Most of the patient had no effect of psoriasis on their job with moderate DLQI and mild skin involvement.

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1. INTRODUCTION

Psoriasis is a challenging disease that may seek long-term treatment due to its chronicity. This is one of the common diseases among the different dermatological conditions which had a different effect on patients' day-to-day life. Psoriasis is mainly an immune-related disease with a genetic predisposition. Sometimes patients had significant familial history. It mainly affects the skin and also the joints but it may involve both [1]. From a histological point of view, it shows hyperproliferative changes in the layer of the epidermis. There are also prominent, enlarged blood vessels with abnormally thick infiltration of perivascular lymphatics [2]. One of the main reasons concerning a case of psoriasis is due to its disfigurement caused by the disease process which may lead to the development of anxiety, depression, lower level of individual confidence and may also gradually turn into suicidal tendencies [3], [4]. Despite there are many methods for assessing the quality of life of patients suffering from dermatological conditions. For our current study, we used the Dermatology Life Quality Index (DLQI) which consists of 10 questions with a structured questionnaire to evaluate the life qualify of the patients who had psoriasis.

2. RELATED WORK

Psoriasis is a chronic dermatological condition with numerous effects. Numerous study shows that the disease process has a physical, economic and psychological effect. A recent study revealed that this is a disease which may cost around 20% of individuals' yearly income. There is around 13% rate of hospital admission but patients with moderate or severe diseases may need to get admitted around 26%. Sometimes a significant number of patients quit their jobs due to lower -levels of self-confidence and productivity [5], [6]. Though it is a medical condition it also has enormous psychological effects. Psoriasis may affect patients of all ages which also includes children. So, there is a requirement of medical and psychological treatment for the patient and their families which imposes an effect on their quality of life [7], [8]. The disease must be diagnosed clinically. It will show plaques which are erythematous-desquamative and follow a flare-up pattern. The disease severity is measured by the lesions and involvement of the body surface. Psoriasis can be classified as mild, moderate or severe form [9]. currently, the quality of life is an important matter of concern in clinical studies. In the case of dermatology, the quality of patients' lives can be evaluated by the Dermatology Life Quality Index (DLQI) [10].

3. METHODOLOGY

This is a descriptive type of cross-sectional study conducted in the outpatient department of Dermatology. Both male and female patients, who wanted to participate in the study were included. Patients who were aged less than 18 years were excluded from the study. Patients with any form of severity of disease with more than 6 months duration were the inclusive criteria. Non-probability type consecutive sampling was followed and informed written consent was taken after having ethical approval from the

Hospital Ethics Committee for the current study. History was taken carefully then clinical examinations were conducted and patients were also going through the required investigation to rule out any other medical conditions. Data regarding patients' demographic conditions were also taken through a pre- tested questionnaire. Data regarding DLQI were taken by the principal investigator herself which consisted of 10 standard questions. Each question consists of 4 options "Not at all" resembled 0, "A little" counted as 1, "A lot" was scored as 2 and "Very much" was given a score of 3. 7th numbered question also has two more part where "Yes" were given 3 and 0 for "Not relevant". But if the answer was "No" then the option "Not at all" was counted as 0, "A little" was given 1 and "A lot" scored as 2. Despite 4 options, questions 3 to 7 had one additional option named "Not relevant" which scored as 0. The final result of DLQI may score from 0 to 30, where 0 is the minimum score and 30 indicates the maximum effect on the patient's quality of life. From the score, we can divide the patient into 5 categories. Patients who scored 0 to 1 were counted as having "no effect at all on the patient's life". Respondents with a score of 2 to 5 indicate "small effect on the patient's life". A score from 6 to 10 stands for "moderate effect". Patients with a score of 11 to 20 are considered as "very large effect" while 21 or above is noted as "extremely large effect on a patient's life". Rule of 9 was used to measure the extent of disease involvement by Body Surface Area (BSA). Depending upon the extent of the disease, patients were divided into 3 types 0% to 25% involvement was counted as mild while 26% to 50% as moderate and more than 50% as severe disease. Completed questionnaires were meticulously reviewed for completeness, consistency, correctness, and any discrepancies. Confidentiality of the collected data was maintained throughout the study, and participants were assured of their right to withdraw at any point without providing a reason. Data analysis was performed by Statistical Package for Social Sciences (SPSS) version 25.0. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were employed to describe the nature of the data, while inferential statistics, such as the Chi-Square test, were utilized for analysis. Results were presented through tables and diagrams for clarity.

4. RESULTS AND DISCUSSION

Regarding the age, around three-fourths 64(29.4%) were less than 30 years, the majority 87(39.9%) were between 30 to 35 years and 67(30.7%) were 36 years or older mean age of 33.8±3.6 years. Among the respondents, 114(52.3%) were male and 104(47.7%) were female. Of them, 127(58.3%) were married, 71(32.6%) were single and 12(5.5%) were divorced and 8(3.6%) were widowed. Around two-thirds 137(62.8%) had a permanent job, 57(26.1%) were housewives and 24(11.1%) were either unemployed or retired from jobs. Of psoriatic patients, 58(26.6%) had a family history of psoriasis and the majority 160(73.4%) had a negative family history. A significant number of psoriatic patients, 168(77.1%) were suffering from localized plaque psoriasis, 26(11.9%) had generalized plaque and 24(11.0%) had another form of psoriasis. Regarding the BMI, 23(10.6%) had low BMI, majority 138(63.3%) had normal, 31(14.2%) were overweight and 26(11.9%) were obese. Around one-fourth 53(24.3%) were suffering from less than 3 years, 112(51.4%) from 3 to 5 years, 28(12.8%) from 6 to 10 years and only 25(11.5%) for more than 10 years. A significant number 156(71.6%) had no joint or nail involvement but only 62(28.4%) had joint or nail involvement. During the disease process, more than one-fourth of 49(22.5%) needed to quit their jobs but the majority 169(77.5%) did not affect their job due to psoriasis. Regarding the DLQI Score among the psoriatic patients, 36(16.5%) had "no effect at all on patient's life", 57(26.1%) had "small effect on patient's life", 71(32.6%) had "moderate effect", 1(14.2%) had "very large effect" and only 23(10.6%) had "Extremely large effect on a patient's life" Figure 1.

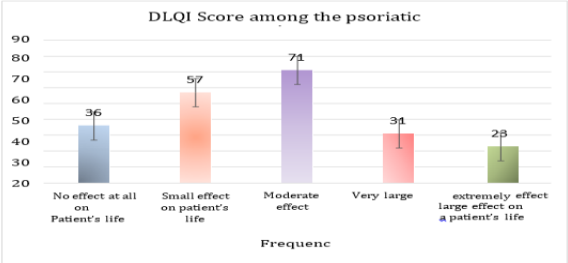


Figure 1. Respondents by DLQI Score

Regarding the involvement of body surface area, nearly half 105(48.2%) had mild involvement, 75(34.4%) had moderate and only 38(17.4%) had a severe form of disease Figure 2.

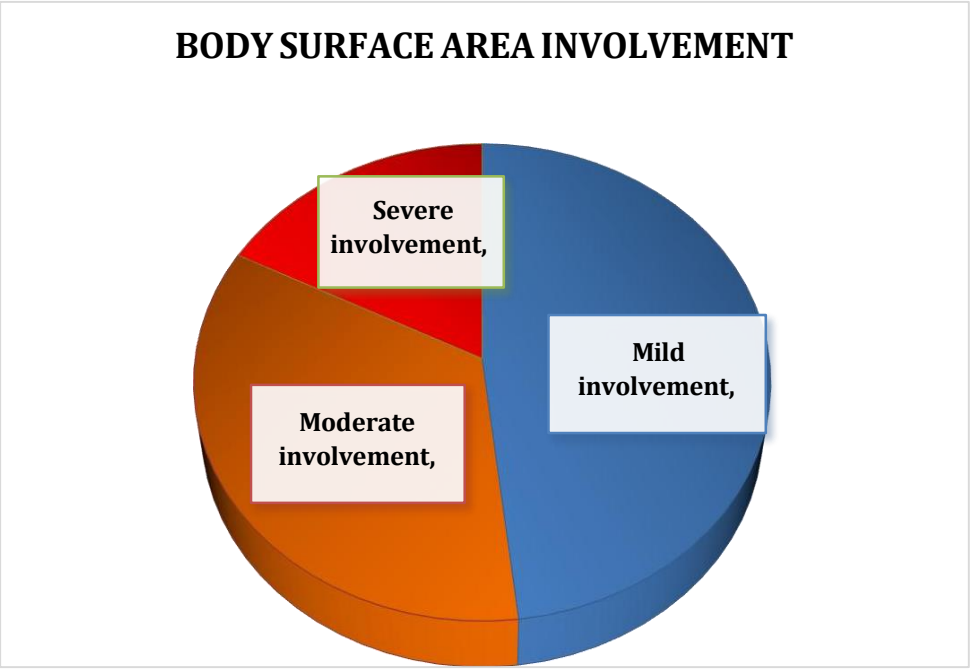


Figure 2. Respondents by Involvement of Body Surface Area

As shown in Figure 2 and Table 1 Regarding the association between Body Surface Area Involvement and joint or nail involvement, it was found that there was a significant (p<0.005) association between them.

Table 1. Association between BSA Involvement and Joint or Nail Involvement

Joint or Nail Involvement	Body Surface Area Involvement			Total N (%)	P Value
	Mild	Moderate	Severe		
No	88	55	13	156(100)	<0.005
Yes	17	20	25	62(100)	
Total	105	75	38	360(100)	

As shown in Table 2 the patients, it was revealed that there is a statistically significant (p<0.005) relationship between DLQI and joint or nail involvement.

Table 2. Association between DLQI and Joint or Nail Involvement

DLQI	Joint Or Nail Involvement		Total N(%)	P Value
	No	Yes		
No effect at all on patient's life	36	0	36(100)	<0.005
Small effect on patient's life	57	0	57(100)	
Moderate effect	62	9	71(100)	
Very large effect	1	30	31(100)	
Extremely large effect on a patient's life	0	23	23(100)	
Total	156	62	218(100)	

Discussion

Regarding the age, around three-fourths 64(29.4%) were less than 30 years, majority 87(39.9%)

were between 30 to 35 years and 67(30.7%) were 36 years or older. This is consistent with the findings of Valenzuela F *et al.,* where the mean age of the respondents was 42.7 years [11]. Among the respondents, 114(52.3%) were male and 104(47.7%) were female. This is supported by the findings of Megna M and team revealed that 64.4% of patients were males and 35.6% were females [12]. Of the respondents, 127(58.3%) were married, 71(32.6%) were single and 12(5.5%) were divorced and 8(3.6%) were widowed. This is corroborated by the findings of Silva MF *et al.,* who opined that 17.1% were single, 54.2% were married, 22.9% were divorced and only 5.8% were widowed [13]. Of the patients, around two-thirds 137(62.8%) had a permanent job, 57(26.1%) were housewives and 24(11.1%) were either unemployed or retired from jobs. This is close to the findings of the study conducted by Jung S and team where regarding employment status, 71.2% were full-time employed, 9.0% were part-time employees and 19.7% were unemployed or students or housewives [14]. Regarding family history, 58(26.6%) had a family history of psoriasis and the majority 160(73.4%) had a negative family history. This is similar to the findings of Valenzuela F *et al.,* where 47.1% of patients had a positive family history [11]. Of patients, 168(77.1%) had localized plaque psoriasis, 26(11.9%) had generalized plaque and 24(11.0%) from other form of psoriasis. This is in line with the study findings of Salman A and team, where in their study they found that 62.1% were suffering from localized plaque psoriasis, 22.4% had generalized plaque, 3.4% had guttate, 1.7% had Palmoplantar, 1.7% had Scalp and 3.4% had nail involvement with 5.2% missing data [15]. Of the patients, 23(10.6%) had low BMI, majority 138(63.3%) had normal BMI, 31(14.2%) were overweight and 26(11.9%) were obese. This is inconsistent with the current study findings Park SY *et al.,* revealed that Regarding BMI, <18.5 BMI for 4.2%, 18.5–22.9 BMI for 46.6%, 23.0–24.9 BMI for 24.6%, ≥25 BMI for 24.6% which might be attributed to variations in the study group of the population, study area, and difference in sample size [16]. Of the study respondents, around one-fourth 53(24.3%) were suffering from less than 3 years, 112(51.4%) from 3 to 5 years, 28(12.8%) from 6 to 10 years and only 25(11.5%) for more than 10 years. This is close to the findings of the study conducted by Sendrasoa FA *et al.,* where 50% suffered from Less than 1 year, 32.5% were from 1 to less than 5 years, 6.25% from 5 to less than 10 years and 11.25% suffering from 10 years or more [17]. More than one-third 62(28.4%) had joint involvement and a significant number 156(71.6%) had no involvement. This is vindicated by the study of Ahmad-Fuat MS and team where of psoriatic patients, 40.1% had Joint/nail involvement and 59.9% had no Joint/nail involvement [18]. During the disease process, more than one-fourth 49(22.5%) needed to quit their jobs but the majority 169(77.5%) did not quit their job due to psoriasis. This is corroborated by the findings of Jung S and team where 30.8% quit their job due to psoriasis while 69.2% were not affected due to psoriasis [14]. Among current study respondents, 36(16.5%) patients had "no effect at all on patient's life", 57(26.1%) had "small effect on patient's life", 71(32.6%) suffered from "moderate effect", 31(14.2%) scored to had "very large effect" and only 23(10.6%) had "Extremely large effect on a patient's life". This is supported by the findings of Khan MJ and team in their study found that 12.5% of respondents had "No effect", 32.5% had "Small effect", 42.5% of psoriatic patients had "Moderate effect", 9.4% of patients had "Very large effect" and 3.1% had "Extremely large effect" among them [19]. A significant number of patients 105(48.2%) had mild involvement, 75(34.4%) had moderate and only 38(17.4%) had a severe form of disease. This is consistent with the findings of the study conducted by Jung S *et al.,* in their study found that 48.8% had mild BSA severity, 21.7% had moderate and 29.4% had severe form of skin involvement [14].

5. CONCLUSION

Psoriasis is among the common dermatological conditions where sufferers are usually middle-aged males, who are currently married. Most of the patients have permanent employment but due to psoriasis, some of the patients quit their jobs. A significant number of patients do not have a positive family history and their most common diagnosis is localized plaque psoriasis or generalized plaque psoriasis. Psoriatic patients may have normal BMI. Many patients are suffering from psoriasis for a significant duration and some of them have joint or nail involvement. The majority of the patients were in the group of "moderate effect", regarding DLQI score with mild skin involvement.

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Author Contributions Statement

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C: **C**onceptualization
M: **M**ethodology
So: **So**ftware
Va: **Va**lidation
Fo: **Fo**rmal analysis
I: **I**nvestigation
R: Resources
D: Data Curation
O: Writing- **O**riginal Draft
E: Writing- Review& **E**diting
Vi: **Vi**sualization
Su: **Su**pervision
P: **P**roject administration
Fu: Funding acquisition

Conflict of Interest Statement

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Informed Consent

All participants were informed about the purpose of the study, and their voluntary consent was obtained prior to data collection.

Ethical Approval

The study was conducted in compliance with the ethical principles outlined in the Declaration of Helsinki and approved by the relevant institutional authorities.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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