

ORIGINAL ARTICLE

Quality of Life and Emotional Status Among Women with Skin Disease: A Multicenter Cross-Sectional Study

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ABSTRACT

Introduction: Skin is considered the most noticeable organ. The impact of visible skin disorders extends far beyond its clinical features, especially among women, in terms of quality of life (QoL) and emotional status. The aim of the study is to determine the quality of life and emotional status among women with skin disease in public hospitals. **Method:** A cross-sectional study design was conducted at the dermatology clinics of Kuala Lumpur and Selayang Hospital from March 2023 to May 2023. The researcher utilized a proportionate and random sampling method involving 404 respondents. The self-administered questionnaire comprised the Dermatology Life Quality Index (DLQI) and Emotional State Questionnaire (EST-Q). **Results:** Most of the respondents were diagnosed with eczema (n=170, 42.1%) and aged 18–30 (n=217, 53.7%). Eczema patients had the most very large effect on DLQI score (n=61, 35.9%) and the highest depression in EST-Q score (n=61, 35.9%). There was no significant difference between types of skin diseases with emotional status subscales except for insomnia (p=0.012). Depression and insomnia were significantly associated with the DLQI score (p<0.05). **Conclusion:** These findings showed the need to develop comprehensive care approaches by dermatologists and nurses that address the multidimensional impact of skin diseases on patients to enhance their quality of life and health outcomes by implementing strategies to improve depression and insomnia. Malaysian Journal of Medicine and Health Sciences (2024) 20(2): 182-190. doi:10.47836/mjmhs.20.2.24

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INTRODUCTION

Skin is considered the body's largest and most noticeable organ of the human being (1). Any sickness or condition that deteriorates the human skin is called a skin disease (2). Skin disorders are among the most frequent medical concerns worldwide, regardless of culture, age, or socioeconomic status (3). Globally, skin disorders are the fourth most prevalent cause of all human diseases, impacting over one-third of the world's population, and their impact is typically underestimated (4). World Health Organization (WHO) mentioned that nearly 900 million people worldwide experience skin diseases at any given time, making them one of the most prevalent conditions affecting human health (5). Approximately 21 to 87% of the population is susceptible to at least one skin disease (1). According to the latest data published by World Health Organization (WHO) in 2017, skin disease deaths in Malaysia get to 957 or 0.69% of overall deaths, and the age-adjusted Death Rate is 4.25 per 100,000 population ranks Malaysia 35 in the world (6).

In Malaysia, a study related to skin diseases found that QoL among females and younger adults were more significantly influenced in terms of life quality than males and the elderly (7). Some common skin diseases that may affect patient's QoL, mainly in terms of psychology, include acne vulgaris, psoriasis, eczema, and other skin diseases (8). The psychological impact of skin illnesses like psoriasis, eczema, and acne is widely established, and they include depression, anxiety, and low self-esteem, among the most common symptoms that can affect patients' QoL (9). Anyone might be affected by skin disorders, but, certain skin disorders are more common among women, and according to the dermatologist, hormones, pregnancy, and lifestyle behaviours are the most common causes of these various skin diseases among women (10). Among both children and adults, skin diseases can cause physical discomfort and emotional distress and impact daily activities (11). A study by Kassab et al. in Malaysia, (7) reported that the three highest prevalence of skin disease with highest the most among women in their study were psoriasis, followed by eczema and acne vulgaris.

Only a few studies discuss the impact of skin disease on QoL and emotional status in Malaysia. None of the studies specifically identify the QoL and emotional

status related to skin disease among women. It is important to discover how skin diseases can impact the QoL of patients using scoring related to skin diseases, for example, by using the DLQI scoring system at least once during the patient's first visit to the dermatology department so that all the concerns discussed above can early identified. More comprehensive treatment delivery may consider all aspects of the patient's condition including psychology rather than just focusing on the disease physically. The objective of the study was to determine the quality of life and emotional status among women with skin disease in public hospitals. Thus, this study seeks to create awareness about all psychologically impacts in terms of emotional faced by patients women with skin disease attending public hospitals.

MATERIALS AND METHODS

Study design and setting

This was a quantitative and a cross-sectional study conducted at the dermatology clinics of Kuala Lumpur and Selayang Hospital. The dermatology clinic of Kuala Lumpur Hospital is located on the 6th floor of the Specialist Complex and Ambulatory Care Centre (SCACC). Selayang Hospital's dermatology clinic is in a daycare complex on the 4th floor. These clinics were the important units that will receive referral cases from other departments and general practitioners, including from outside hospitals.

Participants and sampling procedure

Based on the sample size calculated using the Raosoft sample size calculator, (12) and considering a dropout rate of 10%, the total sample size was 420. About 300 respondents were from Kuala Lumpur Hospital and 120 were from Selayang Hospital. The study managed to have 404 patients answer the set of questionnaires with a total response rate of 96.2%. The response rate for Selayang Hospital was 100% (n=120), while for Kuala Lumpur Hospital was 94.7% (n=284).

A proportionate sampling method then was used in which the investigator divided a finite population (from Kuala Lumpur Hospital and Selayang Hospital) into subpopulations and applied random sampling techniques to each subpopulation. The number of patients was calculated based on the census in Key Performance Indicator (KPI) Dermatology clinic in HKL and the outpatient workload Dermatology Department in Selayang Hospital in 2021. A total of 404 respondents were recruited from March 2023 to May 2023.

The researcher focused on female patients attended dermatology clinic who diagnosed with psoriasis, acne vulgaris and eczema. The inclusion criteria include patients who were diagnosed with psoriasis and/or acne vulgaris and/or eczema, female patients aged ≥ 18 years old, and able to understand and read in Malay and/or

English. Individuals diagnosed with more than three chronic skin diseases and female patients aged > 60 years old are excluded. The random sampling techniques was used to each subpopulation, and women that meet the inclusion criteria was given a set of questionnaire to answer.

Study instruments

A set of questionnaires has been used to answer the research objectives in this study consisting of:

Section A: Sociodemographic data consist of age, race, religion, educational status, household income, employment status, and marital status.

Section B: Clinical data such as diagnosis, year of diagnosis, types of treatment, and comorbid disease

Section C: Dermatology Life Quality Index (DLQI) questionnaire used to identify respondents' quality of life. The questionnaire was the first quality of life survey that was dermatology-specific, and it was published in 1994 (13). The improvised of DLQI has been adopted in this study with permission (14). This validated scale consists of 10 questions that probe patients' perceptions of how various aspects of their health-related quality of life have changed over the past week because of skin conditions. It is available in more than 110 translations and has been used for a variety of skin conditions in more than 80 countries. Each question scored from 0 to 3 (Not relevant/Not at all=0, A little=1, A lot=2, Very much=3, Question7, 'prevented work or studying'=3). The interpretation from the total score 0-1 indicates no effect, 2-5 indicates small effect, 6-10 indicates moderate effect, 11-20 very large effect and 21-30 extremely large effect on the patient's life.

Section D: Emotional State Questionnaire (EST-Q) was designed to capture various aspects of emotions and feelings experienced by individuals at a particular point in time and it was adopted from the previous study (8). The symptoms listed in the DSM-IV and ICD-10 diagnostic criteria for anxiety and depression disorders served as the basis for the items to identify the respondents' emotional state. These questionnaires EST-Q was a self-rating scale that contained 28 questions, and it was further divided into different subscales, which were depression, anxiety, agoraphobia-panic, fatigue and insomnia. Each item was rated on a five-point scale (Not at all=0, Seldom=1, Sometimes=2, Often=3, and All the time=4). The cut-off points for clinically significant symptomatology were ≥ 12 points for depression and anxiety, ≥ 8 points for fatigue, ≥ 7 points for agoraphobia-panic, and ≥ 6 points for insomnia. Each subscale of EST-Q was represented by different questions (depression=questions no. 1-8, anxiety=questions no. 9-14, 20,21, agoraphobia-panic=questions no. 15-19, fatigue=questions no. 22-25, & insomnia=questions no. 26-28) (8).

Ethical considerations

The respondent was required to complete four sections in a set of questionnaires within 5-30 minutes via face to face while waiting to be seen by a doctor at the clinic. The questionnaire was distributed to each of the participants after explanations regarding the participant's rights were done. After an agreement between the researcher and the participant was reached, then only a signature on the consent form was obtained. The study was approved by the Research Ethics Committee of Universiti Teknologi MARA: FERC/FSK/MR/2022/0211, Malaysia Research Ethics Committee (MREC), and Ministry of Health Malaysia: NMRR ID-22-02280-UDK (IIR).

Data analysis

The data in this study were analyzed independently using Statistical Packages for the Social Sciences (SPSS) Version 28. The mean, standard deviation (SD), minimum, and maximum values were provided for quantitative measures, whereas for categorical measurements, absolute percentage and relative frequencies were represented. The association between two quantitative variables was discovered using the one-way analysis of variance (ANOVA). The simple linear regression (SLR) was done to control for confounding factors before multiple linear regression (MLR). MLR have been used to model relationship between emotional state towards quality of life. Inferential analyses have been presented as 95% confidence intervals (95% confidence interval CI) and p-value of less than 0.05 is considered statistically significant throughout the analysis.

RESULTS

Sociodemographic Data of respondents

A total of 404 patients were included in this research. The mean age of the entire study population was 32.2 years old with standard deviation (SD) ± 10.2 and the majority were between 18–30 years ($n=217$, 53.7%). Most of the respondents were Malay ($n=318$, 78.7%), Islam ($n=329$, 81.4%), and graduated ($n=267$, 66.1%). The mean household income of the respondents was RM 4815.4 beside standard deviation (SD) ± 4408.8 . More than half ($n=255$, 63.1%) was categorized under B40 (<RM 4850), currently employed ($n=272$, 67.3%), and unmarried ($n=242$, 59.9%). Further information on the sociodemographic data is shown in Table I.

Clinical Data of respondents

The clinical data showed many of the respondents were diagnosed with Eczema ($n=170$, 42.1%), followed by Acne Vulgaris ($n=125$, 30.9%) and Psoriasis ($n=109$, 27.0%). Most of the respondents were diagnosed with the disease less than or equal to 5 years ($n=272$, 67.3%), they were given topical and pill as their type of treatment ($n=242$, 59.9%), and about 65.6% ($n=265$) of the respondents had more than one (1) number of treatments given. The mean year of diagnosis of the respondents was 5.8 years adjacent to standard deviation (SD) ± 7.0 . More

Table I: Sociodemographic Characteristics of the Respondent (N = 404)

Variable	Mean \pm SD	Frequency (n)	Percentage (%)
Age	32.2 \pm 10.2	Min = 18	Max = 60
Young Adults (18-30)		217	53.7
Middle-aged Adults (31-45)		138	34.2
Old-aged Adults (Above 45)		49	12.1
Race			
Malay		318	78.7
Chinese		38	9.4
India		31	7.7
Others (Iban, Kadazan, Bidayuh, Sikh)		17	4.2
Religion			
Islam		329	81.4
Buddhist		33	8.2
Christian		13	3.2
Hindu		28	6.9
Sikh		1	0.2
Educational status			
Primary		5	1.2
Secondary		109	27.0
Graduate		267	66.1
Others (No Specific Education)		23	5.7
Household Income	4815.4 \pm 4408.8	Min = 300	Max = 40000
B40 (<RM 4850)		255	63.1
M40 (RM 4850 - RM 10959)		133	32.9
T20 (\geq RM 10960)		16	4.0
Employment Status			
Employed		272	67.3
Unemployed		132	32.7
Marital Status			
Married		162	40.1
Unmarried (Single, Divorce, Widow)		242	59.9

than half of the respondents did not have any comorbid ($n=315$, 78.0%) which further categorized them had no number of comorbid ($n=315$, 78.0%). However, there were a few comorbid spotted by respondents such as Asthma ($n=37$, 9.2%), followed by Diabetes Mellitus ($n=19$, 4.7%), Hypertension ($n=11$, 2.7%), and other diseases as shown Table II.

The Quality of Life score of respondents

As referred to Table III, the respondents showed a very large effect on DLQI scores ($n=130$, 32.2%). The eczema patients had the most very large effect ($n=61$, 35.9%), followed by psoriasis and acne vulgaris at 30.3% ($n=33$) and 28.8% ($n=36$) respectively.

The Relationship between Types of Skin Disease and Emotional Status among Women with Skin Disease

The emotional status variables included five (5) subscales which were depression, anxiety, agoraphobia-panic, fatigue, and insomnia. Emotional status of the respondents was measured using the EST-Q with cut-off point in various subscales as shown in Table IV. The highest proportion of depression was noted in eczema patients ($n=61$, 35.9%), followed by acne vulgaris and psoriasis at 40.0% ($n=50$) and 36.7% ($n=40$) respectively. Eczema

Table II: Clinical Data of the Respondents (N = 404)

Variable	Mean ±SD	Frequency (n)	Percentage (%)
Diagnosis			
Psoriasis		109	27.0
Acne Vulgaris		125	30.9
Eczema		170	42.1
Duration of diagnosis			
	5.8 ± 7.0	Min = 0 (< 1 year)	Max = 39
≤5 years		272	67.3
>5 years		132	32.7
Type of treatment			
Topical		116	28.7
Pill		12	3.0
Injection		12	3.0
Topical and Pill		242	59.9
Topical and Injection		2	0.5
Topical and Phototherapy		1	0.2
Pill and Injection		4	1.0
Topical, Pill, & Injection		11	2.7
Topical, Pill, & Laser		1	0.2
Topical, Pill, & Phototherapy		3	0.7
Number of treatments			
1 treatment		139	34.4
>1 treatment		265	65.6
Comorbid			
None		315	78.0
Asthma		37	9.2
Asthma and Arthritis		1	0.2
Asthma and Hypertension		2	0.5
Asthma and Rheumatoid		1	0.2
Allergic Rhinitis		1	0.2
Cancer		1	0.2
Diabetes Mellitus		19	4.7
Diabetes Mellitus and Hypertension		2	0.5
Diabetes Mellitus and Hyperlipidemia		1	0.2
Diabetes Mellitus and Rheumatoid		1	0.2
Heart Disease		1	0.2
Hypertension		11	2.7
Hypertension and Hyperlipidemia		1	0.2
Hyperlipidemia		2	0.5
Hyperthyroidism		1	0.2
Osteoarthritis		1	0.2
Rheumatoid Arthritis		1	0.2
Systemic lupus erythematosus (SLE)		1	0.2
Thyroid and Hyperlipidemia		1	0.2
Number of Comorbid			
None		315	78.0
1 Comorbid		79	19.6
>1 Comorbid		10	2.4

patients had the highest prevalence of anxiety (n=75, 44.1%), followed by acne vulgaris (n=53, 42.4%) and psoriasis (n=37, 23.9%). In terms of agoraphobia-panic, the most prevalent was noted among eczema patients (n=32, 18.8%), followed by psoriasis and acne vulgaris at 17.4% (n=19) and 13.6% (n=17) respectively. Fatigue was most prevalent in eczema patients (n=56, 32.9%), and the least was noted in acne vulgaris patients, at 28.8% (n=36). Insomnia was highest in eczema patients (n=65, 39.2%), followed by psoriasis (n=41, 37.6%) and acne vulgaris (n=34, 27.2%). The results of the one-way

Table III: Dermatology Life Quality Index (DLQI) Score among Respondents (N = 404)

DLQI Scores	Skin Diseases			Total (%)
	Psoriasis n=109 n (%)	Acne Vulgaris n=125 n (%)	Eczema n=170 n (%)	
No effect	3 (2.8)	13 (10.4)	10 (5.9)	26 (6.4)
Small effect	25 (22.9)	35 (28.0)	31 (18.2)	91 (22.5)
Moderate effect	35 (32.1)	34 (27.2)	49 (28.8)	118 (29.2)
Very large effect	33 (30.3)	36 (28.8)	61 (35.9)	130 (32.2)
Extremely large effect	13 (11.9)	7 (5.6)	19 (11.2)	39 (9.7)
Scoring/ Mean±SD (Min–Max)	11.1±7.7 (1–30)	8.8±6.5 (1–27)	11.0±6.9 (1–30)	-
Total (%)	109 (100.0)	125 (100.0)	170 (100.0)	404 (100)

ANOVA test indicated a significant difference of types of skin diseases on insomnia (F(2, 401)=4.48, p=0.012). This finding suggests that there were significant differences in insomnia on types of skin diseases. The researcher observed from subsequent Tukey post-hoc test that insomnia was statistically significant in patients with psoriasis (M=4.8, SD=3.5, p=0.020) and eczema (M=4.6, SD=4.6, p=0.032) as compared to patients with acne vulgaris (M=3.4, SD=3.4). There was no statistically significant difference between patients with psoriasis and eczema groups (p=0.89).

The Relationship Between the Types of Skin Disease and Quality of Life among Women with Skin Disease

As referred to in Table V, the results of the ANOVA indicated there were significant relationships between types of skin diseases with DLQI scores (F(2, 401)=4.61, p=0.010). This finding suggests that there were significant differences in types of skin diseases on DLQI scores. To further explore the nature of these differences, the researcher conducted post-hoc test using the Tukey method, which controls for multiple comparisons. The post-hoc analysis revealed significant differences in DLQI scores between certain pairs of types of skin disease. The researcher observed from subsequent Tukey post-hoc test that DLQI scores was statistically significant in patients with psoriasis (M=11.1 SD=7.7, p=0.029) and eczema (M=11.0, SD=6.9, p=0.019) as compared to patients with acne vulgaris (M=8.8, SD=6.5). There was no statistically significant difference between patients with psoriasis and eczema groups (p=0.991).

The Relationship of Emotional Status Toward the Quality of Life among Women with Skin Disease

The simple linear regression analysis found that, all the subscales for emotional states have a significant positive association with quality of life (p<0.05). It was suggested that higher depression, anxiety, agoraphobia-panic, fatigue, and insomnia scores were associated with increased quality of life score. The result of the multiple linear regression (MLR) statistical analysis revealed that depression women had significantly higher DLQI score by 0.3 point which indicates more quality of

Table IV: Emotional State Questionnaire (EST-Q) Cut-Off in Various Subscales (N = 404)

EST-Q Subscales	Skin Diseases			Total (%)	F-statistic ^a (df)	p-value
	Psoriasis n=109 n (%)	Acne Vulgaris n=125 n (%)	Eczema n=170 n (%)			
Depression					0.50 (2, 401)	0.605
Depression (score ≥ 12)	40 (36.7)	50 (40.0)	61 (35.9)	151 (37.4)		
None depression (score < 12)	69 (63.3)	75 (60.0)	109 (64.1)	253 (62.6)		
Scoring/ Mean±SD (Min–Max)	10.2±8.7 (0–32)	10.5±8.0 (0–32)	9.6±7.7 (0–32)	-		
Anxiety					0.56 (2, 401)	0.569
Anxiety (score ≥ 12)	37 (23.9)	53 (42.4)	75 (44.1)	165 (40.8)		
None anxiety (score < 12)	72 (66.1)	72 (57.6)	95 (55.9)	239 (59.2)		
Scoring/ Mean±SD (Min–Max)	9.8±8.2 (0–32)	11.0±9.0 (0–32)	10.2±8.2 (0–32)	-		
Agoraphobia-panic					0.16 (2, 401)	0.848
Panic-agoraphobia (score ≥ 7)	19 (17.4)	17 (13.6)	32 (18.8)	68 (16.8)		
None Panic-agoraphobia (score < 7)	90 (82.6)	108 (86.4)	138 (81.2)	336 (83.2)		
Scoring/ Mean±SD (Min–Max)	3.1±4.4 (0–20)	3.1±3.6 (0–18)	3.3±4.2 (0–19)	-		
Fatigue					0.10 (2, 401)	0.902
Fatigue (score ≥ 8)	32 (29.4)	36 (28.8)	56 (32.9)	124 (30.7)		
None Fatigue (score < 8)	77 (70.6)	89 (71.2)	114 (67.1)	280 (69.3)		
Scoring/ Mean±SD (Min–Max)	5.6±4.7 (0–16)	5.4±4.7 (0–16)	5.7±5.8 (0–16)	-		
Insomnia					4.48 (2, 401)	0.012^b
Insomnia (score ≥ 6)	41 (37.6)	34 (27.2)	65 (38.2)	140 (34.7)		
None Insomnia (score < 6)	68 (62.4)	91 (72.8)	105 (61.8)	264 (65.3)		
Scoring/ Mean±SD (Min–Max)	4.8±3.5 (0–12)	3.4±3.4 (0–12)	4.6±4.6 (0–12)	-		
Total	109 (100.0)	125 (100.0)	170 (100.0)	404 (100)		

Note: The cut-off point for depression and anxiety was ≥ 12, followed by agoraphobia-panic ≥ 7, fatigue ≥ 8, and insomnia ≥ 6 (Prajwala, 2017).

^a One-way ANOVA test

^b Only “psoriasis and acne vulgaris” (p=0.020) and “eczema and acne vulgaris” (p=0.032) pairs are significantly different by post-hoc test Tukey procedures.

Table V: The Relationship Between Types of Skin Disease and Quality of Life (N = 404)

Skin Disease	Quality of life DLQI			
	Mean (SD)	95% CI	F-statistic ^a (df)	p-value
Psoriasis	11.11 (7.70)	9.65, 12.57	4.611 (2,401)	0.010 ^b
Acne Vulgaris	8.76 (6.46)	7.62, 9.90		
Eczema	11.00 (6.89)	9.96, 12.04		

^a One-way ANOVA test

^b Only “psoriasis and acne vulgaris” (p=0.029) and “eczema and acne vulgaris” (p=0.019) pairs are significantly different by post-hoc test Tukey procedures.

life is impaired at p<0.001 (95% CI: 0.17, 0.43 score). Insomnia women had impaired quality of life as by 0.2 point score (p=0.025, 95% CI: 0.03, 0.39 score). The result indicates that, women who were more depressed will be more impaired in term of life quality by 0.3 point. While women with increase in insomnia will have lower quality of life by 0.2 point (Table VI).

DISCUSSION

Table VI: The Relationship of Emotional Status toward Quality of Life (N = 404)

EST-Q Subscales	Simple Linear Regression				Multiple linear regression			
	Adj. B	95% CI	T stat	p-value	Adj. B	95% CI	T stat	p-value
Depression	0.505	4.38, 6.18	14.117	<0.001	0.296	0.17, 0.43	4.459	<0.001*
Anxiety	0.442	0.37, 0.512	12.488	<0.001	0.043	-0.10, 0.19	0.576	0.565
Agoraphobia-panic	0.734	0.58, 0.89	9.270	<0.001	0.034	-0.16, 0.23	0.343	0.731
Fatigue	0.568	0.48, 0.59	3.212	<0.001	-0.111	-0.28, 0.06	-1.30	0.193
Insomnia	0.754	0.60, 0.91	9.517	<0.001	0.206	0.03, 0.39	2.252	0.025*

Note: Multiple Linear Regression, *p-value is significant at p<0.05.

Sociodemographic Data of respondents

In our study, the mean age of the study population was 32.2 years old, and the majority were between 18–30 years. Exploring the racial distribution within the sample of this study, the Malay ethnic group constituted most participants. The Malay also higher align with the statistics by Department of Statistics Malaysia, (15) that the composition of Bumiputera as for year 2022 was 69.9%, followed by Chinese 22.8%, Indian 6.6% and others 0.7%. The study also incorporated respondents from various religious backgrounds and majority of them were Muslims. Regarding the level of education, most of the respondents graduated. The respondents in this study were also employed, unmarried and had household income under B40 category. Since majority of the respondents were employed and unmarried, their mean incomes concurrent with the latest average monthly salaries and wages reported by Department of Statistic Malaysia, (16) of female workers which was RM 2968.

Most of the respondents were between 18–30 years and employed. This might be probably because of the stigma in young adults age and increasing awareness of working people with skin disease to improve their life quality as well as emotional states. This finding was similar with other study that most of their responder from the younger age group (21–40 years) and employed (8). Regarding the level of education, most of the respondents graduated. This study was like the previous study that most of the participants had graduated from college, or university (17). It was showed that there were positive effects of education where better educated people in any society typically have attached to health facilities to seek treatment for better health outcomes.

Clinical Data of respondents

Most of the respondents in this study were diagnosed with eczema, followed by acne vulgaris and psoriasis. Analysis of the clinical data revealed trends in the duration of diagnosis in this study was less than or equal to 5 years with minimum year of diagnosis was zero (<1 year) and maximum year of diagnosis was 39 years which again similar to the previous study (7). Regarding the types of treatment received, the clinical data towards this study demonstrated respondents mostly were given topical and pill as their type of treatment.

There were a few comorbid spotted by respondents in this study with the highest was asthma, followed by diabetes mellitus, hypertension, and other diseases. This finding contradicted with the previous research where the comorbidities presence was greater in hypertension, diabetes mellitus and other diseases (7). However, the study finding regarding asthma was collateral with research conducted by Weidinger et al., (18) which identified that asthma and allergic rhinitis are two other diseases that have a strong heritability component and frequently co-occur with eczema. The

comorbid condition might further affect the life quality and emotional status among women with skin disease.

The Quality of Life score of respondents

The respondents showed a very large effect on DLQI scores with eczema was the most. It was kin with the finding by Ghafoor et al., (19) that the DLQI score for eczema, acne, and psoriasis ranged from 11 to 20, which has a very large effect on quality of life. It was also supported by previous study in Malaysia where eczema was discovered to worsen patients' quality of life (QOL) more than the other two skin conditions combined and revealed that women's QOL was affected more severely than men's was (7).

The Relationship between Types of Skin Disease and Emotional Status among Women with Skin Disease

The highest proportion of EST-Q scores for each subscale was noted in eczema patients. This was comparable with the other studies that also found eczema patients have exceeded the cut-off points for the subscales of the EST-Q (8). Focusing on anxiety, the finding was similar with the study by Tan et al., (20) that reported it was high in eczema. However, this was different with the study by Kassab et al., (7) acne vulgaris patients reported a greater levels of anxiety and depression. The situation might be due to the flare of eczema and the worsening of the symptoms. It was mentioned in an article by National Eczema Association (21) that the psychological repercussions of eczema might include rage, despair, anxiety, and low self-esteem.

The research findings revealed there was no significant association between the types of skin disease and emotional status variables among the participants except for insomnia (p -value<0.05). The subsequent Tukey post-hoc test derived from one-way ANOVA found that insomnia was statistically significant in patients with psoriasis and eczema as compared to patients with acne vulgaris. This research finding also supported by previous scoping review article that several research have looked into the emotion and discovered that persons with psoriasis and eczema are the ones that experience it the most (22). A few studies had analogous finding with this study where their respondents with psoriasis showed significant disturbance in sleep quality and insomnia severity (23,24).

According to findings reviewed in 2015, low estrogen levels may contribute to the development of psoriasis in females (25). In eczema patients, itching was probably to blame for sleep problems (26). Same with the study by Nowowiejska et al., (27) that people with psoriasis had less quality sleep than those without skin conditions. The percentage of children and adults with eczema who report having trouble falling and staying asleep due to cause by scratching and itching (pruritus) ranges from 47% to 80% (28). The study by Bawany et al., (29) revealed that sleep disruptions rose up from 60% to

83% during eczema flares. An article written by Nall, (30), explain that the female sex hormones increase the activity of the T helper 2 cells (Th2) implicated in eczema whereas testosterone decreases them.

The Relationship Between the Types of Skin Disease and Quality of Life among Women with Skin Disease

Based on this research result, women experiencing higher score of depression and insomnia, and activity impairment due to their skin condition reported to have more impact on their quality of life. It was similar with the study by Arima et al., (31) that patients with eczema reported significantly lower health-related quality of life (HRQoL) in comparison to non-eczema controls. It was regulated with this study finding that eczema patients were the most as compared to psoriasis and acne vulgaris patients. Opposed with another study, majority of participants stated that their health had small to no effect related to skin diseases towards quality of life (1).

The Relationship of Emotional Status Toward the Quality of Life among Women with Skin Disease

The result of this research coincided with previous study that nearly every aspect of a person's life can be negatively impacted by skin conditions where depression was a common form of psychological distress linked (7). Ali et al., (32) in their study also find out that dermatology patients continue to struggle with depression and other psychiatric conditions as their significant problems, which may have an impact on treatment compliance, cause early treatment termination, and alter the course of the disease. Research by Guo et al., (33) disclosed such patients with different skin diseases had significantly different levels of anxiety and depression, indicating that different skin diseases affect patients psychologically to varying degrees. More than 30% of those with eczema had depression and/or anxiety, according to a recent (21). Study by Prajwala, (8) reported that physical impact was determined by the size and activity of skin lesions as well as any accompanying symptoms, such as itching, which has been linked to emotional distress and subjective distress in conditions like psoriasis and hand eczema.

This study observed a certain significant relationship between insomnia and quality of life among patients with skin disease. This was similar with the study by Talamonti et al., (26), where the data showed that poor sleep quality and a high risk of depression are related to quality of life. It was also supported by the other study which identified skin disease patients' sleep patterns and insomnia had a positive correlation with their anxiety and depressive symptoms (23). Other than that, Nowowiejska et al., (27) revealed in their study such patients with psoriasis also have an increased risk of metabolic and psychiatric disorders due to insomnia.

Study Limitation

This cross-sectional study offers a snapshot of a population

at a specific point of time, making it challenging to establish causality sequence of events. As a result, one significant limitation continues to be the incapacity to comprehend the complex experiences and perspectives of those who are impacted. To address these limitations and gain a comprehensive understanding of the psychosocial impact and lived experiences of women with skin conditions, the incorporation of qualitative research methods is essential.

CONCLUSION

Skin disease was experienced by all people around the world regardless of their age, gender, race, as well as economic status. This study revealed that women experiencing higher score of depression and insomnia due to their skin condition reported to have more impact on their quality of life. In conclusion, thus, this research project finding underscores the importance of addressing the emotional wellbeing of individuals living with skin diseases to optimize their overall quality of life. This highlights the importance of focusing mental health issues which was depression in individuals living with skin diseases to improve their overall wellbeing. Insomnia severity was also found to be significantly associated with quality of life, suggesting that sleep disturbances can play a role in influencing the overall functioning and wellbeing of women with skin conditions. Addressing sleep-related problems could potentially have a positive impact on the life quality outcomes.

These results have important implications for healthcare professionals and researchers in developing comprehensive care approaches that address the multidimensional impact of skin diseases on individuals' lives. Overall, this research project contributes to the understanding of the complicated interplay between skin diseases and emotional state toward quality of life. Further research in this area can help identify specific interventions and support services that target these factors to enhance the well-being and quality of life of women living with skin conditions.

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