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Investigating The Impact of Pruritus on The Quality of Life of the Elderly in Surakarta Nursing Home

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Abstract

Background: The elderly population has been growing rapidly in recent decades. Research has shown that the prevalence of itching (pruritus) increases with age, with 20.8% of individuals aged 60-69 years experiencing it, 22.9% for those aged 70-79 years, and 26% for those aged 75 years and above. Assessing the skin's barrier function by measuring transepidermal water loss (TEWL) using a tool called a Tewameter is important for objectively evaluating dry skin, which is the most common cause of itching in the elderly. It's important to understand how itching affects the quality of life of the elderly, particularly in nursing homes. **Objective:** This study aims to determine how itching affects the quality of life of the elderly in nursing homes in Surakarta City, especially at PMI Peduli and Aisyiyah Nursing Homes. **Methods:** This research used an observational, cross-sectional design. Data was collected through interviews using the 5D itch scale questionnaire, and the quality of life was measured using the DLQI (Dermatology Life Quality Index) questionnaire. TEWL levels were also measured using a Tewameter. **Results:** 29 subjects participated in the interviews, with 69% being women and 31% being men. Most subjects were aged 60-69 years (41%), and the most common comorbidity was hypertension (41%). The 5D Itch Scale questionnaire revealed that itching affected the subjects for less than 6 hours daily (66%), and during the last 2 weeks, itching did not significantly impact the subjects' activities, including sleep, hobbies, housework, and work (51%-69%). The most common location of itching was the back (14%). The DLQI data showed that itching had a severe impact on the subjects (65.5%), followed by a moderate impact (24.1%), and a very severe impact (10.3%). TEWL data indicated that all subjects had an increase of >10 g/h/m2. **Conclusion:** The study found that itching had a mild impact on the lives and activities of the subjects in general, lasting for less than 6 hours a day. The statistical results showed a positive and significant relationship between the intensity of itching and the quality of life of the elderly with pruritus.

Keywords*: Pruritus, elderly, Quality of life, TEWL*

Abstrak

Latar Belakang*: Populasi lansia meningkat dengan pesat pada beberapa dekade terakhir. Darjani et al. menunjukkan peningkatan prevalensi pruritus seiring bertambahnya usia, sebagai berikut: 20,8% pada usia 60-69 tahun, 22,9% pada usia 70-79 tahun, dan 26% pada usia 75 tahun ke atas. Pengukuran fungsi penghalang dengan mengevaluasi kehilangan air transepidermal (TEWL) menggunakan tewameter merupakan parameter penting dalam menilai xerosis kutis yang merupakan penyebab tersering pruritus pada lansia secara obyektif. Penulis merasa perlu untuk mengetahui hubungan antara pruritus dan kualitas hidup lansia terutama di Panti Wreda PMI Peduli dan Aisyiyah Kota Surakarta.* ***Tujuan****: Penelitian ini bertujuan untuk mengetahui pengaruh pruritus terhadap kualitas hidup lansia di Panti Wreda Kota Surakarta.* ***Metode****: Metode penelitian ini merupakan studi observasional dengan desain potong lintang (cross sectional). Pengumpulan data dilakukan dengan cara wawancara menggunakan kuisioner 5D itch scale. Pengukuran kualitas hidup menggunakan*

kuisioner DLQI (Dermatology Life Quality Index). Pemeriksaan dilanjutkan dengan pengukuran kadar TEWL menggunakan Tewameter. ***Hasil:*** *Terdapat sebanyak 29 subyek yang dapat diwawancara secara kooperatif. Distribusi jenis kelamin lebih didominasi oleh wanita (69%) dibandingkan pria (31%). Mayoritas subyek berusia 60-69 tahun (41%) dengan komorbid paling umum yang diderita pasien adalah hipertensi (41%). Data kuesioner 5D Itch Scale menunjukkan bahwa keluhan gatal mempengaruhi subyek kurang dari 6 jam setiap harinya (66%). Selama 2 minggu terakhir, keluhan gatal tidak mempengaruhi aktivitas subyek baik tidur, hobi, pekerjaan rumah, dan pekerjaan (51%-69%). Dari kuesioner ini didapatkan punggung sebagai lokasi anatomis tersering yang mengalami keluhan gatal (14%). Data DLQI menunjukkan hasil bahwa keluhan yang dialami memiliki dampak berat pada keparahan (65,5%), diikuti dampak sedang (24,1%), dan dampak sangat berat (10,3%). Data TEWL menunjukkan semua subyek mengalami peningkatan > 10 g/h/m2.* ***Kesimpulan****: Pada penelitian ini, keluhan gatal mempengaruhi subyek kurang dari 6 jam sehari dalam intensitas yang ringan sehingga hanya berdampak kecil pada kehidupan dan aktivitas subyek secara umum. Menurut hasil statistik didapatkan hubungan yang positif dan signifikan intensitas gatal terhadap kualitas hidup lansia dengan pruritus.*

Kata Kunci*: Pruritus, lansia, Quality of life, TEWL*

I. INTRODUCTION

The elderly populatio has been increasing rapidly in recent decades, and it is projected that one-fifth of the world's population will be over 65 years old by 2050.[1,2] In Indonesia, the elderly population accounts for 8.75% of the entire population. According to the Central Java Statistics Agency (BPS), in 2016, there were 2,729,117 elderly individuals, making up 8.02% of the total population of 34,019,095. The elderly population in Surakarta City is 50,326 people3. Studies worldwide have found varying prevalences of pruritus among the elderly, ranging from 6.4% in Tunisia to 41% in Thailand. In the United States, one-third of elderly individuals in nursing homes and 40.6% of elderly African Americans in the general population experienced pruritus. Research by Darjani et al. indicated an increasing prevalence of pruritus with age: 20.8% at age 60-69 years, 22.9% at age 70-79 years, and 26% at age 75 years and above.[3]

The International Forum for the Study of Itch (IFSI) categorizes pruritus into 3 groups, namely group 1 (pruritus in skin diseases), group 2 (pruritus in non-skin diseases), and group 3 (pruritus with chronic secondary lesions). The most common etiology of pruritus in the elderly is cuticular xerosis.[4] In elderly skin, the rate of keratinocyte renewal slows down, and their number may decrease due to increased apoptosis. The stratum corneum formed by keratinocytes is an important element of the skin's barrier function, its breakdown leads to increased water loss skin dehydration and itching sensation.[5] Objective signs of cuticular xerosis include dry, scaly, rough, dull and slightly greyish skin. In addition, the skin is characterised by reduced elasticity, rough texture, and wrinkles; erythema and fissures may also occur. Subjective symptoms include tightness and itching, which may also be perceived as pain or burning sensation by some patients.[6] Cuticular xerosis is related to a defect in skin barrier function and/or a deficiency of moisturizing factors in the skin, leading to reduced skin hydration.

Several non-invasive biophysical measurement methods can be used to objectively assess the subjective feeling of dry skin and diagnose cuticular xerosis. Transepidermal water loss (TEWL) can be evaluated using a tewameter, and skin hydration can be measured using corneometry. These methods provide important objective measurement parameters, particularly in clinical trials.[7]

Cutaneous xerosis, particularly when accompanied by pruritus, can significantly diminish a patient's quality of life. Although the quality of life concerning pruritus in the elderly has not been extensively studied, persistent itching is a prevalent issue that has a considerable impact on the well-being of this population.[8] According to the World Health Organization (WHO), quality of life can be evaluated across six dimensions: physical health, mental well-being, independence in daily activities, social relationships, environment, and spirituality. Gender, age, level of education, occupation, interpersonal relationships, and comparison standards all influence an individual's quality of life. [9] The Dermatology Quality Life Index (DLQI) is a questionnaire designed to assess the impact of skin conditions on an individual's quality of life over the past week.[10] This research report aims to examine the relationship between pruritus and the quality of life of elderly individuals at PMI Peduli and Aisyiyah Nursing Homes in Surakarta.

II. METHODS

This study utilizes an observational approach with a cross-sectional design. The study's inclusion criteria required participants to be willing to take part, cooperative, and have skin-related complaints, while exclusion

criteria applied to uncooperative individuals. A total of 34 subjects with skin complaints were included, with 29 of them reporting itching as their primary complaint.

Data was gathered through interviews using the 5D Itch Scale Questionnaire, focusing on the duration, intensity, frequency, and distribution of itching, as well as its effects on sleep, social life, and work. Additional inquiries covered daily drinking habits, bathing routines, soap usage, daily sun exposure, moisturizer application, presence of systemic diseases, and medication use. Quality of life was quantified using the DLQI (Dermatology Life Quality Index) questionnaire. Following the interviews, TEWL (Transepidermal Water Loss) levels were measured using a Tewameter.

III. RESULTS

A total of 29 cooperative subjects were interviewed, with women accounting for 69% and men for 31%, resulting in a male to female ratio of 1:2. Itching was the primary complaint among all subjects. The majority of participants were in the 60-69 age group (41%), with hypertension (41%) and cuticle xerosis (60%) being the most common comorbidities (Table 1). Cuticle xerosis is impacted by TEWL, with all subjects recording TEWL results above 10 g/h/m2 using Tewameter (Table 2).

TABLE 1. SUBJECT CHARACTERISTICS

Variabel	Cases	Persentase
Sex		
Male	9	31%
Female	20	69%
Age		
60-69	12	41%
70-79	12	41%
≥80	5	17%
Diagnosis		
Scabies	3	4%
DKA	3	4%
Xerosis kutis	15	60%
Eritroderma	3	4%
Tinea	4	16%
Dermatitis seboroik	5	20%
DKI	3	4%
Candidiasis	3	4%
Neurodermatitis	3	4%
Cellulitis	1	4%
Comorbidity		
Hypertension	12	41%
Diabetes Mellitus	2	7%
Osteoarthritis	1	3%

TABLE 2. TEWL RESULTS

Name	Age	TEWL Results			Aver age
		1	2	3	
Tn. An	65	34,93	30,22	26,16	30,44
Ny. Wa	67	27,49	21,75	26,88	25,37
Ny. As	65	16,5	16,54	16,33	16,46
Ny. Sr	68	12,51	12,62	13,59	12,91
Tn. Mu	74	10,9	14,51	13,9	13,10
Tn. Ha	55	11,14	13,47	20,95	15,19
Tn. Ht	75	12,25	16,78	14,91	14,65
Tn. To	69	15,73	12,24	14,57	14,18
Tn. Ag	82	17,45	34,73		26,09
Tn. Sa	69	20,4	27,79		24,10
Tn. Ra	73	18,7	17,82	18,74	18,42
Tn. Ha	70	30,54	39,56		35,05
Ny. Sum	72	14,44	13,96	13,73	14,04
Ny. Ta	65	15,91	15,63	14,75	15,43
Ny. Suw	61	24,39	16,61	15,14	18,71
Ny. Sup	67	41	23,2	26,2	30,13
Ny. Ma	71	37,29	39,53	39,67	38,83
Ny. Srh	68	43,76	40,38	40,4	41,51
Ny. Po	53	42,95	40,17	42,49	41,87
Ny. A	76	49,36	42,92	56,37	49,55
Ny. Sun	83	31,98	29,47	28,59	30,01
Ny. Srw	72	15,8	15,8	15,01	15,54
Ny. Srm	84	46,18	43,32	46,83	45,44
Ny. Sur	76	32,01	34,13	26,61	30,92
Ny. Sra	80	33,67	38,74	37,82	36,74
Ny. Suk	65	49,96	44,63	45,74	46,78
Ny. Jum	70	35,08	29,49	31,66	32,08
Ny. Suk	61	25,25	25,38	23,56	24,73
Ny. Sul	58	39,78	40,52	40,17	40,16

According to the DLQI questionnaire data, the complaints had a severe impact on severity for 65.5% of the participants, a moderate impact for 24.1%, and a very severe impact for 10.3% (Table 3). Despite experiencing itching complaints, the majority of subjects (45% - 89%) were not significantly affected in terms of comfort, shopping, dressing, social activities, sports, work, family relationships, and sexual aspects (Table 4).

TABLE 3. DLQI INTERPRETATION

Skor DLQI	Interpretasi	Subyek	Persentase
0-1	Tidak berdampak	0	0
2-5	Dampak ringan	0	0
6-10	Dampak sedang	7	24,1%
11-20	Dampak berat	19	65,5%
21-30	Dampak sangat berat	3	10,3%

TABLE 4. DLQI QUESTIONNAIRE RESULTS

Question	Category	n	Percentage
During the past week, how bad was the itching, burning, pain, or stinging of your skin?	Not suitable	4	14%
	Not at all	8	27%
	Mild	9	31%
	Severe	8	28%
	Very Severe	0	0%
During the past week, how embarrassed or uncomfortable were you because of your skin disorder?	Not suitable	2	7%
	Not at all	13	45%
	Mild	9	31%
	Severe	5	17%
	Very Severe	0	0%
During the past week, how much did your skin disorder interfere with shopping, house or yard work?	Not suitable	1	4%
	Not at all	18	62%
	Mild	7	24%
	Severe	3	10%
	Very Severe	0	0%
During the past week, how much did your skin disorder affect the way you dress?	Not suitable	1	4%
	Not at all	21	72%
	Mild	4	14%
	Severe	3	10%
	Very Severe	0	0%
During the past week, how much did your skin disorder affect your social or leisure activities?	Not suitable	2	4%
	Not at all	13	45%
	Mild	10	34%
	Severe	4	14%
	Very Severe	0	0%
During the past week, how much did your skin disorder make it difficult for you to exercise?	Not suitable	1	3,5%
	Not at all	20	69%
	Mild	7	24%
	Severe	1	3,5%
	Very Severe	0	0%
During the past week, has your skin disorder prevented you from working or studying?	Not suitable	2	7%
	Not at all	18	62%
	Mild	8	28%
	Severe	1	3%
	Very Severe	0	0%
During the past week, how much did your skin disorder cause problems with your partner, close friends or family?	Not suitable	2	7%
	Not at all	23	79%
	Mild	4	14%
	Severe	0	0%
	Very Severe	0	0%
During the past week, how much did your skin disorder cause sexual problems?	Not suitable	3	10%
	Not at all	25	86%
	Mild	1	4%
	Severe	0	0%
	Very Severe	0	0%
During the past week, how disruptive was your skin treatment, such as dirtying the house or taking up your time?	Not suitable	3	10%
	Not at all	20	69%
	Mild	5	17%
	Severe	1	4%
	Very Severe	0	0%

The data from the 5D Itch Scale questionnaire indicated that a majority of subjects experienced itching for less than 6 hours a day (66%). The perceived itchiness ranged from mild to unbearable. Additionally, the questionnaire revealed that the back was the most common anatomical location for itching complaints (14%) (see Table 5). The intensity of itching was predominantly mild (58.6%), followed by moderate (31.0%) and severe (10.3%) (Table 6).

TABLE 5. 5D ITCH SCALE QUESTIONNAIRE RESULTS

Question	Category	Percentage
Over the past 2 weeks, how many hours a day have you been itching?	All day	3%
	18-23 h/d	0%
	12-28 h/d	9%
	6-12 h/d	19%
	<6 h/d	69%
Please rate the intensity of your	Unbearable	3%
	Severe	14%
	Moderate	17%

itching over the past few weeks?	Mild	31%
	None	35%
In the past 2 weeks, has your itching improved or worsened compared to the previous month?	Getting worse	3%
	No improvement	28%
	Slightly improved	14%
	More improved	17%
	Free from itching	38%
Please rate the impact of your itching on sleep over the past 2 weeks.	Sleeplessness and frequent awakenings	6%
	Difficulty falling asleep and occasionally waking up	10%
	Frequent difficulty falling asleep	10%
	Occasional difficulty falling asleep	6%
	Does not affect sleep	68%
Rate the impact of your itching on hobbies over the past 2 weeks.	Always disturbed	3%
	Often disturbed	7%
	Sometimes disturbed	17%
	Rarely disturbed	21%
	Not disturbed	52%
Rate the impact of your itching on housework over the past 2 weeks..	Always disturbed	3%
	Often disturbed	7%
	Sometimes disturbed	14%
	Rarely disturbed	14%
	Not disturbed	62%
Rate the impact of your itching on work over the past 2 weeks.	Always disturbed	3%
	Often disturbed	7%
	Sometimes disturbed	10%
	Rarely disturbed	14%
	Not disturbed	66%
Mark whether you have had itching in the following body parts over the past 2 weeks. If any body part is not listed, choose the closest anatomically.	Face	4%
	Chest	1%
	Abdomen	10%
	Back	5%
	Thighs	12%
	Lower limbs	6%
	Tip of the foot	9%
	The sole of the foot	8%
	Palm of the hand	3%
	Back of hand/fingers	1%
	Upper arm	2%
	Forearm	8%
	Groin	10%
	Face	4%

TABLE 6. 5D ITCH SCALE RESULTS

5D Itch Scale Score	Interpretasi	n	%
6-10	Gatal Ringan	17	58.6%
11-15	Gatal Sedang	9	31.0%
16-20	Gatal Berat	3	10.3%
21-25	Gatal Sangat Berat	0	0.0%

TABLE 7. THE CORRELATION BETWEEN SEVERITY OF ITCHING AND THE DERMATOLOGY QUALITY OF LIFE INDEX

Itchy intensity (Skor 5D Itch Scale)	Indeks Kualitas Hidup Dermatologi (Skor DLQI)						r	p-value
	Moderate Impact		Severe Impact		Very Severe Impact			
	n	%	n	%	n	%		
Low	6	35.3%	11	64.7%	0	0.0 %	0.451	0.014*
Moderate	1	11.1%	6	66.7%	2	22.2%		
Severe	0	0.0 %	2	66.7%	1	33.3%		

In Table 7, it is evident that patients experiencing mild itch intensity tend to have a moderate (35.3%) and severe (64.7%) impact on their quality of life, while those with moderate itch intensity tend to experience equal impacts of moderate

(11.1.0%) and severe (66.7.0%). Patients with severe itch intensity tend to have a severe impact (66.7.0%) and very severe impact (33.3%) on their quality of life. The statistical test yielded a correlation coefficient value of r = 0.451 and p = 0.014 (p < 0.05), indicating a positive and significant relationship between itch intensity and the Dermatology Quality of Life Index, with a moderate effect (r = 0.400-0.599). This suggests that the heavier the itch intensity, the greater the impact on dermatology's quality of life.

IV. DISCUSSION

The impact of pruritus on the quality of life of elderly individuals has been understudied. However, it is a prevalent issue with significant effects on both quality of life and sleep in this population.[11] Research conducted by Darjani et al. revealed an increase in pruritus prevalence with age, with rates of 20.8% among individuals aged 60-69 years, 22.9% among those aged 70-79 years, and 26% among those aged 75 years and above. Cuticular xerosis is the most common cause of pruritus in the elderly, affecting 60% of the subjects in the study.

In elderly, the renewal rate of keratinocytes slows down, and their numbers may decrease due to increased apoptosis. The stratum corneum, formed by keratinocytes, is crucial for the skin's barrier function. Its degradation leads to increased water loss. Furthermore, a decrease in the number and function of sebaceous glands weakens the lipid layer, the skin's barrier, and its waterproofing. These factors contribute to skin dehydration, resulting in a weakened skin barrier and the onset of an itchy sensation. Objective signs of dry skin include dry, scaly, rough, dull, and slightly greyish skin, reduced elasticity, a rough texture, wrinkles, erythema, and fissures.[5] Assessing transepidermal water loss (TEWL) using a tewameter and measuring skin hydration using corneometry are important parameters for objectively assessing dry skin.[12]

The research conducted by Lacouture in 2016 revealed that patients with cuticular xerosis have an average transepidermal water loss (TEWL) ranging from 1-15.72 g/h/m2, which is higher than the average TEWL of normal adult skin, at 2.26 g/h/m2.[13] This study focused on non-small cell lung carcinoma (NSCLC) patients, aged 44 to over 65 years, who were undergoing EGFR inhibitor therapy. It was noted that EGFR inhibitor therapy can slow keratinocyte growth, leading to skin disorders, particularly cuticular xerosis. TEWL reflects the amount of water released from the body to the atmosphere through skin diffusion and evaporation per unit time, typically ranging from 300-400 ml/day. The accuracy of TEWL measurement can be influenced by environmental factors such as humidity, temperature, and ventilation, as well as intrinsic factors including age, race, skin location, temperature, perspiration, circadian rhythm, and skin health. Furthermore, the primary cause of sun-induced skin damage is attributed to ultraviolet A and ultraviolet B (UVA and UVB) rays.

In a study by Mizuno, it was observed that TEWL (transepidermal water loss) values increased with a single exposure to UV light, even without visible redness. Prolonged exposure to the sun's UV rays can lead to a weakening of the stratum corneum (the skin's outermost layer), which serves as a crucial barrier relying on intercellular lipids and a hydrolipidic film on the skin's surface.[14] This barrier is essential in limiting water evaporation from the body. Impairment of the skin barrier leads to diminished water retention and increased water evaporation, as indicated by the increase in TEWL.[15]

The study by Vyumvuhore et al. measured TEWL in cuticular xerosis. The study included 15 subjects of a mean age of 58 years with normal skin and 19 subjects of a mean age of 57 years with cuticular xerosis.

Results showed that there was a significant increase in TEWL measured using a tewameter.[16] A significant increase in TEWL in dry skin is associated with a high degree of dryness. These results were confirmed by in vivo confocal microspectroscopy experiments that revealed cell shape modifications in dry skin, showing rounded shapes and scaly arrays, which are associated with disorganisation of the skin barrier.[17]

The study by Mohammed et al. examined the variability of the human skin barrier across various anatomical locations, measuring TEWL at the cheek, abdomen, wrist, and forearm. The findings revealed significantly higher TEWL at the cheek compared to other locations, and higher TEWL at the wrist compared to the forearm and abdomen.[18] However, assessing skin condition based on TEWL measurements at different anatomical locations presents challenges. To ensure accurate interpretation, TEWL measurements should include mean values, standard deviations for all estimates, details about measurement conditions, and characteristics of the sample, including ethnic origin, gender, age, as well as geographical and climatic conditions.[19]

In a systematic review conducted by Akdeniz et al., it was found that healthy elderly individuals have lower Transepidermal Water Loss (TEWL) compared to those in the 18-64 age group. The study included 167 MEDLINE and EMBASE-based studies, which measured TEWL in healthy individuals aged 65 years and above, as well as those aged 18-64 years. However, there was a lack of consistency in the skin area measured for TEWL in this study. The results showed that all study subjects exhibited TEWL results above 10 g/h/m², with a mean of 27.5 g/h/m².

The Dermatology Life Quality Index (DLQI) is a questionnaire used to assess the quality of life of individuals with skin disorders. In this study, the DLQI questionnaire indicated that the reported disease-related complaints had a moderate impact on 24.1% of the subjects, a severe impact on 65.5%, and a very severe impact on 10.3%. Although the overall DLQI score indicated that the majority of subjects experienced a severe impact, it did not significantly disrupt most of their activities.

In Figure 1, it can be observed that the majority of subjects reported that their itching complaints did not significantly affect activities such as shopping, dressing, exercise, work, time with friends, and sexual function, with percentages ranging from 45-89%. This apparent discrepancy between the final score and the score per question item was attributed to the fact that the subjects, who were residents of nursing homes, rarely engaged in these activities.

In contrast, the study by Jindal et al. showed different results. This study utilized the DLQI on subjects aged over 60 years who were outpatients of the Himalayan Institute of Medical Science. Of the 117 subjects, 40% had predominantly erythematous disorders, and 17% experienced senile pruritus. The DLQI results indicated that only 16.2% of subjects reported a moderate to major impact, with the majority (46.2%) experiencing a minor impact from their complaints.[20]

The 5D Itch Scale questionnaire is a comprehensive tool to assess various aspects of life affected by itching. This study applied the questionnaire to elderly individuals in nursing homes and found that the majority experienced itching for less than 6 hours a day (66%) and reported mild discomfort that did not significantly interfere with activities such as shopping, dressing, socializing, exercise, work, or family relationships. Another study by Hawro et al. involving 800 subjects aged over 18 years presented slightly different results. It showed that only 30.8% experienced constant pruritus throughout the day, with 11.8% reporting

severe pruritus associated with suicidal thoughts as measured by HADS-Depression. Subjects with suicidal thoughts exhibited more prominent clinical depression and anxiety compared to other subjects with similar pruritus severity.[21]

Based on this study, it is evident that individuals with mild itch intensity tended to experience a moderate impact on their quality of life (35.3%) or severe impact (64.7%). Those with moderate itch intensity tended to have a severe impact (66.7%) or very severe impact (22.2%), while individuals with severe itch intensity tended to have a severe impact (66.7%) or very severe impact (33.3%). Statistical tests revealed a significant positive relationship ($r=0.451$, $p=0.014$, $p<0.05$) between itch intensity and the Dermatology Quality of Life Index, with a moderate effect ($r=0.400$-0.599), indicating that heavier itch intensity corresponded to a more pronounced impact on dermatology quality of life.

V. CONCLUSION

The individuals involved in this study reported experiencing mild itching for less than 6 hours a day, which had little impact on their daily routines and activities. The statistical analysis uncovered a significant and positive relationship between the intensity of itching and the Dermatological Quality of Life Index.

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