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QUALITY OF LIFE AND ITS ASSOCIATED FACTORS AMONG PSORIASIS PATIENTS IN AL-THAWRA HOSPITAL, SANA'A CITY, YEMEN: A CROSS-SECTIONAL STUDY

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ABSTRACT

Quality of Life and Its Associated Factors Among Psoriasis Patients in AL-Thawra Hospital, Sana'a City, Yemen: A Cross-Sectional Study.

Background: This study aimed to describe the health- related quality of life and its associated factors among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen

Methods: A descriptive cross-sectional study was conducted among 56 patients with psoriasis at the dermatology clinic in AL-Thawra hospital, Sana'a City, Yemen, via a self-administered questionnaire that included sociodemographic and clinical manifestations variables, the dermatology life quality index. Data obtained were analyzed using SPSS Software. Descriptive statistics were performed to describe the socio-demographic, risk factors for quality-of-life variables. Data described by frequencies, percentages, means & SD. Chi square test was used to test differences the risk factors for quality-of-life variable in relation with socio-demographic characteristics. Test considered to be significant p. value < 0.05.

Results: The results of the study showed that the quality of life was (42.9%) of psoriasis patients were affected to a very large extent, (1.8%) were affected very significantly, the quality of life of (26.8%) to a medium degree, (21.4%) quality of life was affected significantly and non-significantly, (7.1%) of patients with psoriasis were not affected. The results related to the demographic factors of psoriasis patients showed that most were females, average age 38.6 years, (83.9%) lived in urban, (42.9%) had a diploma, one third of them had a low educational level, two thirds of psoriasis patients were married, (73.2%) have not health insurance. average income (43,087) Yemeni riyals. The results related to Clinical factors of psoriasis patients, it found that the average weight was (62) km, the average height (157) cm, (83.9%) have age onset of less than 40 y, (46.4%) had a duration of injury less than 10 y, (44.6%) the sever moderate, the guttate psoriasis was prominent symptom, the affected skin site was the external skin (60.7%), 55% their had a skin surface lesion of less than 30%. Three quarters of the respondents do not smoke, (98.2%) non-alcoholic, (89.3%) non exercise. The results of the study showed that There was no relationship between Dermatology Life Quality Index and demographic variables, except for the family income level variable, and no relationship between Dermatology Life Quality Index and clinically relevant factors, except for the height variable, as well as no relationship between Dermatology Life Quality Index and lifestyle factors.

Conclusion: The results of the study showed that the quality of life for 44.7% out of 56 patients with psoriasis was affected to a very large extent, that psoriasis is a common disease that affects all groups. The level of clinical severity of psoriasis was moderate. Guttate psoriasis was a prominent symptom. The external skin was the most affected.The level of family income and the length of patients are important indicators in affecting the quality of life in patients with psoriasis, and there is no relationship between Dermatology Life Quality Index and lifestyle factors.

Keywords: psoriasis quality of life, Yemen.

الملخص العربي

جودة الحياة والعوامل المرتبطة بها بين مرضىالصدفية في مستشفى الثورة مدينة صنعاء،اليمن: دراسة وصفيةعرضية.

الخلفية: هدفت هذه الدراسة إلى وصف جودة الحياة المتعلقة بالصحة والعوامل المرتبطة بها بين مرضى الصدفية في العيادات الخارجية للأمراض الجلدية في مستشفى الثورة، مدينة صنعاء، اليمن.

المنهجية: أجريت دراسة مقطعية وصفية على ٥٦ مريضاً مصاباً بالصدفية في عيادة الأمراض الجلدية في مستشفى الثورة، مدينة صنعاء، اليمن، من خلال استبيان ذاتي تضمن العوامل الاجتماعية والديموغرافية والسريرية، ومؤشر جودة الحياة للأمراض الجلدية.تم تحليل البيانات التي تم الحصول عليها باستخدام الحزمة الإحصائية لبرنامج العلوم الاجتماعية. تم إجراء الإحصاء الوصفي لوصف عوامل الخطر الاجتماعية والديموغرافية لمتغيرات جودة الحياة. استخدم التكرارات والنسب المئوية والوسط الحسابيوالانحرافات المعيارية للبيانات. تم استخدام اختبار كاي سكوير لاختبار الاختلافات في عوامل الخطر لمتغير جودة الحياة فيما يتعلق بالخصائص الاجتماعية والديموغرافية. يعتبر الاختبار أن يكون قيمة p<٠,٠٥.

النتائج: أظهرت نتائج الدراسة أن نوعية الحياة كانت (٤٢,٩٪) من مرضى الصدفية قد تأثروا إلى حد كبير جداً، (١,٨٪) تأثروا بشكل كبير جداً، (٢٦,٨٪) تأثرت بدرجة متوسطة،(٢١,٤٪) تأثرت بشكل ملحوظ وغير معنوي.(٧,١٪) من مرضى الصدفية لم يتأثروا.أظهرت النتائج المتعلقة بالعوامل الديموغرافية لمرضى الصدفية أن معظمهم من الإناث بمتوسط عمر ٣٨,٦ سنة،(٨٣,٩٪) يعيشون في الحضر، (٤٢,٩٪) حاصلون على دبلوم، ثلثهم من ذوي المستوى التعليمي المنخفض، ثلثا مرضى الصدفية كانوا متزوجين،(٧٣,٢٪) ليس لديهم تأمين صحي. متوسط الدخل (٤٣،٠٨٧) ريال يمني. أما النتائج المتعلقة بالعوامل السريرية لمرضى الصدفية فقد وجدت أن متوسط الوزن كان (٦٢) كم،متوسط الطول (١٥٧) سم، (٨٣,٩ ٪) لديهم بداية عمرية أقل من ٤٠ سنة، (٤٦,٤ ٪) كانت مدة الإصابة أقل من ١٠ سنوات،كانت الأعراض البارزة للصدفية النقطية (٤٤,٦٪) معتدلة وخيمة، و (٦٠,٧٪) كان موقع الجلد المصاب هو الجلد الخارجي،و٥٥٪ لديهم آفة سطحية جلدية أقل من ٣٠٪. ثلاثة أرباع المبحوثين لا يدخنون، (٩٨,٢٪) غير مدمنين، (٨٩,٣٪) لا يمارسون الرياضة. أظهرت نتائج الدراسة عدم وجود علاقة بين مؤشر جودة الحياة للأمراض الجلدية والمتغيرات الديموغرافية، باستثناء متغير مستوى دخل الأسرة، وعدم وجود علاقة بين مؤشر جودة الحياة للأمراض الجلدية والعوامل السريرية ذات الصلة، باستثناء متغير الطول، وكذلك لا توجد علاقة بين مؤشر جودة الحياة للأمراض الجلدية وعوامل نمط الحياة.

الخلاصة: الخلاصة: أظهرت نتائج الدراسة أن نوعية الحياة لـ ٤٤,٧٪ من أصل ٥٦ مريضاً بالصدفية تأثرت إلى حد كبير جداً، وأن الصدفية مرض شائع يصيب جميع الفئات. كان مستوى الشدة السريرية للصدفية معتدلاً. كانت الصدفية النقطية من الأعراض البارزة. كان الجلد الخارجي هو الأكثر تضررا. يعتبر مستوى دخل الأسرة وطول المرضى من المؤشرات المهمة في التأثير على نوعية الحياة لدى مرضى الصدفية، ولا توجد علاقة بين مؤشر جودة الحياة للأمراض الجلدية وعوامل نمط الحياة.

الكلمات المفتاحية: الصدفية، نوعية الحياة، اليمن.

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DEDICATION

To our biggest supporter who keep saying " we proud of you " in our failures before our successes.To our fathers. "Everything we are, or ever will be, we owe it to our mothers"our success is because of our mother

To those who set us on the path of life, made us calm and took care of us until we become old (our mothers and our fathers).

APPROVAL

We certify that an Examination Committee has met on / /2023 to conduct the final examination of

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Our thesis entitled "Quality of Life and Its Associated Factors Among Psoriasis Patients in AL-Thawra Hospital, Sana'a City, Yemen: A Cross-Sectional Study" in accordance with the regulations approved by the Senate of 21 September University of Medical and Applied Sciences. The Committee recommends that the candidate be awarded the relevant degree, and it has been accepted by the Senate of 21 September University of Medical and Applied Sciences as fulfilment of the requirements for the degree of Bachelor in the medicine. The members of the Examination Committee are as follows:

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Professor/Dean of Graduate 21 September

Date:

DECLARATION BY STUDENTS

We hereby declare that the thesis is based on my original work except for quotations and citations, which have been duly acknowledged. we also declare that it has not been previously or concurrently submitted for any other degree at 21 September University or other institutions.

Name of researchers: (Candidate name)

Date:(XX/XX/2023)

DECLARATION BY SUPERVISORS

This is to confirm that:
The research conducted and the writing of this thesis was under our supervision.

Signature : _____

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Faculty :

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LIST OF ABBREVIATIONS

QoL	Quality of Life
HRQoL	Health-Related Quality of Life
PASI	Psoriasis Area and Severity Index
BSA	Body Surface Area
PGA	Physician Global Assessment
DLQI	Dermatology Quality of Life Index
PQOL-12	Psoriasis Quality of Life-12
OR	Odd Ratio
CI	Confidence Interval

LIST OF SYMBOLS

α	Alpha
>	More than
<	Less than
≥	More or less than
≤	Less or equal
%	Percentage/ Percent

CHAPTER 1

Introduction

1.1 Research Background

Psoriasis is a chronic autoimmune skin disease that speeds up the growth cycle of skin cells (CDC, 2020). It is a common, chronic, noncommunicable skin disease, with no clear cause or cure. The negative impact of this condition on people's lives can be immense. Psoriasis affects people of all ages, and in all countries (WHO, 2016), and associated with multiple comorbidities, including psoriatic arthritis, cardiometabolic diseases, and mental health conditions (Coates & Helliwell, 2017; Liang, Cohen, & Ho, 2019). Psoriasis and its comorbidities can lead to significant decrement in quality of life and incur substantial societal costs (Brezinski, Dhillon, & Armstrong, 2015).

Globally, 125 million people, 2-3% of the total population have psoriasis according to the world psoriasis in 2022 (Foundation, 2022), Making psoriasis a serious global problem with at least 100 million individuals affected worldwide. Psoriasis has an unpredictable course of symptoms, a number of external triggers and significant comorbidities, including arthritis, cardiovascular diseases, metabolic syndrome, inflammatory bowel disease and depression (WHO, 2016).

In adults, the incidence of psoriasis varied from 30.3 per 100 000 person years (95% confidence interval 26.6 to 34.1) in Taiwan to 321.0 per 100 000 person years in Italy. The prevalence of psoriasis varied from 0.14% (95% uncertainty interval 0.05% to 0.40%) in east Asia to 1.99% (0.64% to 6.60%) in Australasia. The prevalence of

psoriasis was also high in western Europe (1.92%, 1.07% to 3.46%), central Europe (1.83%, 0.62% to 5.32%), North America (1.50%, 0.63% to 3.60%), and high income southern Latin America (1.10%, 0.36% to 2.96%) ***(Parisi et al., 2020).***

Several systematic reviews have demonstrated the negative effect of psoriasis on the health-related quality of life (HRQOL) and the positive effect of biological treatment on the HRQOL compared to systemic or topical treatment ***(Norris et al., 2017; Obradors, Blanch, Comellas, Figueras, & Lizan, 2016a)***. Psoriasis vulgaris has a pronounced psychosocial dimension. It is associated with anxiety and depression, mood disorders, substance dependence or abuse ***(Ferreira, Abreu, Dos Reis, & Figueiredo, 2016),*** and problems with sleep ***(Kaaz, Szepietowski, & Matusiak, 2019)***. In a review article by Fleming et al. (2017), the prevalence of anxiety in patients with psoriasis was between 7–48% ***(Fleming et al., 2017)***. The perception of the disease describes mental representations and personal thoughts of people about their illness ***(Broadbent et al., 2015).*** This is understood as a significant phenomenon determining patient behavior ***(Hagger & Orbell, 2003),*** treatment adherence and coping mechanisms (Zhang et al., 2016), thereby changing the course and results of the disease. Illness perception integrated areas such as timeline, causal factors, treatment control, emotional representation, and illness concern ***(Broadbent, Petrie, Main, & Weinman, 2006)***.

This study will be conducted to assess the quality of life and its associated factors among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen.

1.2 ProblemStatement

Determining the psoriasis is critical because such information has several important implications. Psoriasis is a chronic, no communicable, painful, disfiguring and disabling disease for which there is no cure and with great negative impact on patients' quality of life (QoL). It can occur at any age, and is most common in the age group 50–69 (GBoDC, 2012). The impact on quality of life by psoriasis is common problem globally, whereas the patient with psoriasis should be live stable and normal life with standard quality of life that meaning. well-being Solidarity, Financial stability, good nutrition, do not have stress and concerns (Meneguin, de Godoy, Pollo, Miot, & de Oliveira, 2020).

Nevertheless, there is no studies conducted to assess the quality of life and its associated factors among psoriasis patients in Yemen. Therefore, this study will be conducted to assess the quality of life and its associated factors among patients with psoriasis in Yemen.

This study was conducted to assessment of determinants of quality of life in psoriasis patients attending the dermatology outpatient clinic in AL-Thawra hospital, Sana'a city, Yemen, and help educate the patients pertaining to the same with the aim to reduce morbidity related to psoriasis. In addition, practical way of promotion and improving psoriasis for individual and community level especially in Yemen which suffer from the highest level of psoriasis. Furthermore, the Yemen recently has experienced a civil war that led to worsening the health status of Yemeni population. This study can be a good base or background for further studies in a specific area depending on finding or relationship between variables. Finally, the findings of the

study could be used by the authorities to create and implement health education and health promotion programs by applying a strategy to raise knowledge in patients.

1.3 Justification of Study

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depending on finding or relationship between variables. Finally, the findings of the study could be used by the authorities to create and implement health education and health promotion programs by applying a strategy to raise knowledge in patients.

1.4 Question of Study

- What are the sociodemographic variables among patients with psoriasis in dermatology outpatient clinics at Al Thawra Hospital, Sana'a City, Yemen?

- What are the risk factors for quality of life among patients with psoriasis in dermatology outpatient clinics at Al Thawra Hospital, Sana'a City, Yemen?

- Is there an association between sociodemographic variables and risk factors for quality of life among patients with psoriasis in dermatology outpatient clinics at Al Thawra Hospital, Sana'a City, Yemen?

- What are the determinants of associations between health-related quality of life and risk factors for psoriasis patients in dermatology outpatient clinics at Al Thawra Hospital, Sana'a City, Yemen?

1.5 Objectives of Study

1.5.1 General objective

This study was aimed to describe the health- related quality of life and its associated factors among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana’a City, Yemen.

1.5.2 Specific objectives

- To describe the socio-demographic variables among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen.

- To determine the risk factors of quality of life among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen.

- To determine association between sociodemographic characteristic variables and risk factors of quality of life among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen.

- To determine association determinants of health-related quality of life and risk factors in psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen.

CHAPTER 2

Literature Review

2.1 Introduction of psoriasis

2.1.1 Quality of Life and Health Related Quality of Life definition

World Health Organization defined QoL as ‘‘the individuals’ perception of their position in life, in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards and concerns (Group, 1995). The description implies the importance of subjective experience to quality of life rather than healthcare worker’s observation. In clinical practice, subjective assessment of quality of life is often not in line with the improvement of clinical parameters. Patients with similar severity of diseases usually have different opinions about their own quality of life. Therefore, instead of observant evaluation, self- reporting assessment becomes the mainstay method to measure QoL. On the other hand, the term “Health-Related Quality of Life (HRQOL)” specifically indicates the quality of life under disabilities, disorders, or diseases. It differs from the concept of general QoL in a sense that HRQOL focuses more on the aspects that are influenced by health status or that can influence health status. Without the absolute definition, HRQOL is commonly perceived as a collected result from physical, psychological, and social dimension. In clinical practice, it has increasingly become crucial for its usefulness on allocating resources or determining clinical trialendpoint(Cappelleri, Bushmakin, Harness, & Mamolo, 2013).

Psoriasis is manifested with erythematous papules or thickened plagues covered with silver-white scales. It causes daily life inconvenience like pruritus, burning sensation, dryness in the inflicted area. Negative influence on appearance like exfoliating epidermal residues, crumbled and pigmented fingernails are the biggest complaints. Based on the morphology and distribution of the symptoms, psoriasis can be categorized as several subtypes: plague psoriasis, inverse psoriasis, guttate psoriasis, erythrodermic psoriasis, generalized pustular psoriasis, and palmoplantar psoriasis (Meier & Sheth, 2009).

The most common one is plaque type, which highlighted with red patches and silver scales; inverse psoriasis happens on any area where two patches meet together, such as groin and abdominal folds; guttate psoriasis is more common in youngsters and children, with eruption of round oval shaped papules no bigger than 1 cm; erythrodermic psoriasis refers to symptoms that diffuse to more than 90% of the body; generalized pustular psoriasis is the most dangerous form featured with clustered blister, pustules followed by fever and infection; palmoplantar psoriasis involves palms and soles. Painful joints from inflammatory arthritis especially on knees and elbows may also occur. Pathological reasons for psoriasis are not fully understood. Genetic mutation on chromosome 1q, 2q, 7q, 6q, 8q, that normally modulate keratinocyte differentiation and development, are proven to increase the susceptibility for psoriasis, though exact pattern of inheritance is not clear. Human leukocyte antigen (HLA) gene region falls within these aberrant chromosomes that mediates the immune cells functions, suggesting immune response deregulation is the major pathogenesis in psoriasis (Harden, Krueger, & Bowcock, 2015).

Current treatment in standard medicine ranges from topical corticosteroid to human monoclonal antibody, immunosuppressants and phototherapy. While treatments in outpatient setting is quite enough for most patients, some patients having a sudden flare-up or in critical condition will need to be hospitalized(Steinke, Peitsch, Ludwig, & Goebeler, 2013). Inpatient setting will offer more rigorous regimen of topical corticoid, systemic biological agents, or UV lights. The cost of management of psoriasis is often enormous due to life-long use of drugs and higher price from advanced therapy. In China, despite the mainstream western treatment, many resort to Traditional Chinese Medicine (TCM) including herbal drugs and acupuncture(Koo & Arain, 1998). A combination of western medicine and Traditional Chinese Medicine is common in clinical practice throughout the country.

2.2 The Prevalence of Psoriasis

Prevalence of psoriasis in different countries varies from 0.09% (5) to 11.4% (Danielsen, Olsen, Wilsgaard, & Furberg, 2013). In industrialized countries, it ranges between 1.5% to 5% (Parisi, Symmons, Griffiths, & Ashcroft, 2013). Most cases happen in adults but can also occur on children. Age onset of psoriasis are often between 15 to 30 years old. Early onset of psoriasis (before or equal to 40 years old) is proposed to be attributable to HLA gene, and late onset of psoriasis (after 40 years old) is lacking HLA association, though this bimodality is not observed in every study (Je, 2007). Epidemiology data indicates psoriasis is most common among Northern Europe population and the least in eastern Asia population(Organization, 2016). This is in line with the result of gene polymorphism analysis showing that Asian are less likely to develop psoriasis compared to Caucasian (Yin et al., 2015). In a study from United States, Caucasians have twice higher prevalence of psoriasis than Black,

Hispanic, and other ethnic groups (Rachakonda, Schupp, & Armstrong, 2014). In China, there are few epidemiological studies for psoriasis but they are either outdated (Shao, 1987) or sampling in mostly the rural areas (Ding et al., 2012). Large scale multicenter study in 2012 (Ding et al., 2012)shows prevalence of psoriasis is 0.47%, with 0.54% for men and 0.44% for women.

2.3 Quality of life among psoriasis patients

In a survey done by Edson-Heredia E, Zhu B, Guo J, Maeda-Chubachi T, Lebwohl M, 2015, almost 75% of patients believed that psoriasis had a moderate to large negative impact on their quality of life, with alterations in their daily activities and at least 20% of psoriasis patients had contemplated suicide(Edson-Heredia, Zhu, Guo, Maeda-Chubachi, & Lebwohl, 2015).

A systematic review and meta-analysis which looked into psychosocial interventions primarily using cognitive behavioral or mindfulness-based techniques showed the importance and effectiveness of addressing psychosocial burden in patients with psoriasis (Zill et al., 2019).

A systematic review of the European literature found female gender, young patients, visibility of skin lesions, disease activity, disease severity, and pruritus were associated with poorer Healthrelated quality of life (HRQoL) while patients treated with systemic therapies and biologics had better HRQoL (Obradors, Blanch, Comellas, Figueras, & Lizan, 2016b).

A systematic review which sought the use of quality-of-life instruments for psoriasis found the Dermatology Life Quality Index (DLQI) was the most commonly

used QoL instrument, followed by the 36-Item Short Form Survey (SF-36), EuroQoL-5D, Psoriasis Disability Index, and Skindex (Ali et al., 2017).

A qualitative study carried out in a dermatology outpatient clinic of the São Paulo State University medical school, Botucatu, Brazil among psoriasis patients claimed that disease symptoms, social and clothing restrictions, impairment of professional activities and the absence of a cure negatively influenced their perceptions concerns (Meneguin et al., 2020).

2.4 Severity measurement of psoriasis

There are many ways to examine psoriasis severity. Psoriasis Area and Severity Index (PASI) is perceived as a gold standard. It uses standardized mathematic formula with each factors weighted to produce the total score by taking into account the body surface area (BSA) involvement, lesion location, the extent of redness and thickness. However, PASI has limitation because of the insensitivity to small affected body surface area and variability on measuring body surface area (Robinson, Kardos, & Kimball, 2012). These drawbacks limit its use in clinical practice and reproducibility. Dispute about whether PASI serves as single indicator for psoriasis severity remains inconclusive among clinicians.

European Medicines Agency recommended examining the improvement of Physician Global Assessment (PGA) along with PASI to determine psoriasis severity in a clinical trial (Agency, 2005). PGA has been applied for various diseases in the clinical assessment due to its simplicity. It is a subjective evaluation relying on doctor's judgments on lesions characteristics without considering how much body surface areas involved or where the lesion is. Such way to evaluate the severity,

though a little abstract, is in parallel with clinical practice that meticulous measures on characteristics of psoriatic lesions are seldom performed and often replaced with crude observation. The validation of PGA is not widely done, but some studies suggest it has sound and validated in psoriasis Bushmakin study (Cappelleri et al., 2013). However, there is no standardized version of PGA. Multiple items form (i.e., the extent of erythema, plague elevation, scale was specified) or single item form (i.e., final score assigned without lesion traits specified) are both available and no consensus has been made for scoring scale for PGA. Clinical workers often choose among 5 points, 6 points, and 7 points according to how detailed the severity needs to be described in the interested study. But the method for rating is the same: lowest score represents “clear condition” or “slight” and the highest score is “serious” or “severe”.

2.5 HRQOL components

Individual characteristics increase the likelihood to develop a disease and also interact with clinical factors to disrupt quality of life. Environmental characteristics relate to how a person with psoriasis fit into the surroundings and influence how well the patient cope with the disease. Clinical factors decide the exact disease status and meanwhile interact, associate with individual and environmental factors. Individual and environmental characteristics also interact with each other.

Age and gender are linked to the psoriasis quality of life with elder people experiencing higher psychological stress and females having more anxiety and depression (Sampogna et al., 2006). Ethnicity difference in quality-of-life impact is observed in the previous study where non-Caucasians are shown to feel more impact from the disease than Caucasians do (Shah, Arthur, Yang, Stevens, & Alexis, 2011).

Emotional support can be provided by marriage to deal with mental stress from skin diseases (Alexis & Blackcloud, 2014). Income and medical insurance correlates to the health care patients received, hence affects the severity of disease. Having better income and insurance also helps personal satisfaction and mental preparedness for the disease. Education could help to achieve better skin disease intervention (Pickett, Frampton, & Loveman, 2016) and low education level is inclined to have lower self-perceived health (Regidor et al., 1999). Overweight is correlated with high psoriasis severity (Setty, Curhan, & Choi, 2007) and alters a patient's feeling by influencing the self-conception of body image. Tobacco use is a known triggering factor for psoriasis by facilitating the inflammation and it has previously shown to be associated with higher clinical severity in psoriasis (Lara, Federica, Leonardo, Gionata, & Francesca, 2012). Heavy alcohol intake is reportedly a aggravating factor for inflamed skin diseases (Poikolainen, Reunala, Karvonen, Lauharanta, & Kärkkäinen, 1990) by stimulating production of pro-inflammatory factors (Ockenfels, Keim-Maas, Funk, Nussbaum, & Goos, 1996). Continued drinking interferes with treatment compliance (Gupta, Schork, Gupta, & Ellis, 1993). Exercise helps weight control thus helps psoriasis healings and facilitate the stress reduction (Naldi et al., 2014).

Psoriasis incidence relates to geographical region (7) and different climate in different provinces influences how often the symptoms flared up (Pascoe & Kimball, 2015). Clinical factors are the major components determining the extent of disability and directly impair patients' emotion and social function. Long duration of disease is associated with more anger and shame (Sampogna, Tabolli, & Abeni, 2012); early onset of psoriasis has shown to cause more interpersonal difficulties than late onset patients (Remröd, Sjöström, & Svensson, 2013); overall severity suggest how strong the itchy and pain feeling is; psoriasis patients are found at higher risk to develop

common comorbidities such as cardiovascular disease and diabetes (Gottlieb & Dann, 2009), both of which add up the disease burden (Sanchez-Carazo, López-Estebaranz, & Guisado, 2014).

2.6 HRQOL instruments

When it comes to dermatology, there are 3 kinds of HRQOL instruments available: generic instruments, dermatology specific instruments, and condition specific instruments (Both, Essink-Bot, Busschbach, & Nijsten, 2007). Generic instrument can be used for any general disease, irrespective of the types of illness or conditions, e.g., World Health Organization Quality of Life (WHOQOL), Short Form Health Survey (SF-36).

Dermatological specific instruments are suitable and valid for skin diseases only, e.g., Dermatology Quality of Life Index (DLQI), Skindex 16, Skindex 29. Condition specific instruments are only for comparison between patient groups who have same diagnosis, e.g., Psoriasis Disability Index (PDI), Psoriasis Quality of Life-12 Items (PQOL-12). The choice of instruments depends on the interests of researchers and the aim of the study. If used in other countries, different language versions of HRQOL questionnaires need to go through backward and forward translation and tested before they used for the research. DLQI is the most commonly used HRQOL instrument in dermatology. Mandarin Chinese version of DLQI in previous research has shown reliability (internal consistency, Cronbach's α is 0.91) and established convergent validity by spearman correlation (r=0.77 correlated with Psoriasis Disability Index and r=-0.35 to -0.56 correlated with SF-36) and confirmatory factor analysis (Pathirana et al., 2009). Some guidelines perceive DLQI

above 10 together with PASI as the criterion for a psoriasis patient to be treated with a biological agent (He et al., 2013).

2.7 Associated risk factors among psoriasis patients

A younger age of onset has been linked to more widespread and recurring disease (Queiro, Tejon, Alonso, & Coto, 2014).

There were no clear conclusions about whether the disease varied according to gender. Studies done in Trinidad and Tobago and Japan showed that more than half of the psoriatic cases were males. But another study done in Egypt reported that 52 % of cases were females (Queiro et al., 2014).

When compared to patients with mild psoriasis, patients with severe psoriasis had lower income and employment (Häbel et al., 2021).

Evidence suggest that obesity is associated with psoriasis, aggravates existing psoriasis, and that weight reduction may improve the severity of psoriasis in overweight individuals. It has been demonstrated that obese individuals are more likely to present with severe psoriasis. However, obesity does not appear to have a role in defining the onset of psoriasis (Paroutoglou, Papadavid, Christodoulatos, & Dalamaga, 2020).

A Systematic review and meta-analysis conducted to compare the prevalence and incidence of type 2 diabetes mellitus between patients with psoriasis and those without, psoriasis was associated with an increased prevalence and incidence of diabetes. The association of psoriasis with diabetes may be strongest among patients with severe psoriasis (A. W. Armstrong, Harskamp, & Armstrong, 2013).

Psoriasis is connected with dyslipidemia. Although the precise relation between psoriasis and dyslipidemia has never been established, those affected by psoriasis had their proinflammatory cytokines elevated: example. TNF IL-1 or IL-6, and they can besides all else also affect the metabolism of lipids (Salihbegovic et al., 2015).

A systematic review and meta-analysis conducted to assess the association between psoriasis and hypertension found a statistically significant association between psoriasis and hypertension risk (OR= 1.43; 95% CI 1.25–1.64; P=.000; I2=94.1%) (Duan et al., 2020).

Psychosomatic factors are deemed to play a role in psoriasis, and stressful life events have been linked with the risk of incident psoriasis.Psoriatic patients reported stressful life events like the death of a family member, divorce, death of a close friend; and change in work conditions much more frequently than the general population. Case-control studies evaluating stressful events rates before exacerbation (n = 6) or onset (n = 6) of psoriasis varied in time lag to recollection (≤ 9 months to ≥ 5 years). Pooling five studies evaluating stressful events preceding the onset of psoriasis gave an odds ratio (OR) of 3·4 [95% confidence interval (CI) 1·8–6·4; I2 = 87%] (Snast et al., 2018).

Drugs can act as a trigger to unmask preexisting psoriasis. This is called drug triggered psoriasis in which the disease may progress even after discontinuation of the drug. Alternatively, few drugs are implicated in drug-induced psoriasis where discontinuation of the drug will stop disease progression (Dogra & Kamat, 2019).

Varies infections including Streptococcus, HIV, Staphylococcus aureus, Helicobacter pylori, Malassezia, Candida and Papillomaviruses has been associated with psoriasis (Lee, Wu, Lee, Bhutani, & Wu, 2018).

Psoriasis has repeatedly been linked to smoking. A systematic review and meta-analysis found an association between psoriasis and current smoking (OR= 1·78, 95% confidence interval (CI) 1·52–2·06], as well as between psoriasis and former smoking (OR= 1·62, 95% CI 1·33–1·99). A subset of studies also examined the association between moderate-to-severe psoriasis and smoking, (OR = 1·72 (95% CI 1·33–2·22) for prevalent smoking(A. Armstrong, Harskamp, Dhillon, & Armstrong, 2014).

A systematic literature review that looked into the association between psoriasis and alcohol consumption concluded that alcohol consumption is higher in psoriasis patients than in the general population. Four studies concluded that alcohol was a risk factor for psoriasis. (AOD= 2.55 (95% CI 1.26–5.17). However, it remains still unclear whether alcohol represents a genuine risk factor or is merely a consequence of psoriasis(Brenaut et al., 2013)..

2.8 Previous Study

In Malaysia 2019, study conducted by (Ahmad Fuat, Mat Yudin, Muhammad, & Mohd Zin, 2022) a study found that the 20.5% of the patients had severely impaired Quality of Life (QOL) quality of life, while 79.5% of the patients had non-impaired QOL. Multiple logistic regression analysis showed that the psoriatic severity [Adjusted OR = 1.91, 95% CI: 1.76, 9.93; $p < 0.001$] and exposed area [Adjusted OR 2.93, 95% CI: 0.38, 2.29; $p = 0.050$] had a significant association with severely impaired QOL. Among the patients, 18.7% had a positive result in the screening for depression, which revealed a significant association between QOL and depression scores ($r = 0.47$, 95% CI: 0.35, 0.56, $p < 0.001$).

In China 2016, research conducted by Ching-Yuan Chen, research found that the psoriasis serious (OR 3.50; 95% CI [1.11-10.98]; P=0.035) and severe severity (OR 7.25; 95% CI [1.29-40.69]; P=0.029) by physician global assessment were associated with largely affected quality of life. Having exercise habit was associated with lower risk of having largely affected quality of life (OR 0.74; 95% CI [0.56-0.97]; P=0.035) (Chen, 2016).

In Madagascar 2018, study conducted by FandresenaArilalaSendrasoa et al, a study found that the 80 patients were included, their mean age was 36.5 years, and the male to female was 1.5:1. The mean Dermatology Life Quality Index (DLQI) score was 13.8. Symptoms, feelings, and psychic were the most altered dimensions. Quality of Life (QoL) was impaired in young patients, single, having medium level education. Even though patients with disease duration more than 5 years had higher DLQI score than other patients, the difference was not statistically significant (p = 0:36). Furthermore, the clinical presentation of psoriasis did not influence the patient's QoL (p = 0:73). Patients with nail involvement had QoL impaired but the difference with another localization was not statistically significant (p = 0:2). The quality of life was influenced by body area involved. The higher the body surface area involved, the more QoL is impaired (p = 0:002). Furthermore, the higher the psoriasis area severity index (PASI), the more QoL is altered (p = 0:002) (Sendrasoa et al., 2020).

In Mexico 2017, study conducted by Liliana García-Sánchez et al, a study found that the patients were 43% male, 57% female, with a mean age 51.22 (15-77) ± 14.05 years. Education: bachelor's degree 23.6%, housework occupation 26.4%, duration of the disease 12.25 (1-50) ± 10.58 years. Psoriasis plaques occurred in 88.9%, the Psoriasis Severity Index was mild in 70.8%. The result of the impact on quality of life

was moderate in effect in 33.3%, the difference between the degree of involvement of the disease and the impact on quality of life was $p = 0.104$, and correlation between the quality of life and degree of psoriasis was $p = 0.463$ (García-Sánchez et al., 2017).

In India 2015, research conducted by Deepa Mary Joseph et al, a study found that the significant correlation between the clinical severity score and the total psoriasis disability index (PDI) score ($P < 0.001$)(Joseph, Binitha, Jithu, Vasudevan, & Jishna, 2021). In PDI, the work-related questions scored the maximum (5/9, 55.5%) followed by the daily activities related questions (6.06/15, 40.4%). Patients with early age of onset, history of addiction, and history of itching had high PDI scores, but a statistically significant association was noted only for itching. There was no statistically significant association for both mean PASI and PDI scores with gender, marital status, employment status, and family history of psoriasis in our study (Joseph et al., 2021).

CHAPTER 3

Methodology

3.1 Study design

A cross sectional study.

3.2 Study location /sitting

The present study was carried out in Dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen.

3.3 Study duration

This study was conducted from 1st December 2022 to 1st march 2023.

3.4 Study population

A study population was among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen, who eligible to participate in the study.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusions criteria

The following criteria will to be satisfied for recruiting a study participate:

i. Patient age between 10 to 70 years old.

ii. Duration of disease > 6 month

iii. Both genders.

iv. Resided in Sana'a city.

v. Patients who consented to participate in the study were asked to complete a questionnaire.

3.5.2 Exclusion criteria

i. Patient under 10 years old and above 70 years old.

ii. Had severe-condition (serious illnesses or had mental retardation, physical challenges.

iii. Not resided in Sana'a city.

iv. Participant who will refuse to participate

3.6 Sample Size Determination

The minimum sample size for the study is estimated used Open Epi- info (version 2) according to the following setting:

- Confidence interval (1-α) 95%.
- Power: 80%.

- P1-The proportion expected frequency of among psoriasis patients in Turkey which is at 5.5%.

The sample was approximately 62 psoriasis patients, an addition 0.15% for the reason dropout and non-participants, yield total 73 sample size.

3.7 Study variables

The variables of this study were divided into independent and dependent variables.

3.7.1 Dependent variables

Determents of Quality of life in psoriatic patient.

3.7.2 Independent variables

i. Socio-demographic (residence, age- sex -patient education - marital status, patient job, food preference -patient income average frequency of outpatient visits per month, average frequency of inpatient visit last year, having comorbidities or not, specific comorbidities).

ii. Clinical profile characteristics.

iii. Life style: whether or not habits of smoke, alcohol, exercise and their amounts. Generic and dermatology specific health related quality of life questionnaires (Skindex16, Skindex29, DLQI, WHOQOL).

3.8 Sampling technique

This study was used systematic sampling method because it ensured each subject in the known population and equal chance of being selected which prevented sampling bias. The following formula will be used to systematically recruit subject:

$$K = \frac{N}{n}$$

K = sampling interval

N = the size of the population.

N = sample size

K= 273/73 = 3.7 which is approximately 4.

Therefore, every 4th subject from the queue as they attended the follow up clinic was included in the study until sample was interviewed.

The researcher was responsible for doing systematic sampling. Respondent who met the inclusion criteria was interviewed privately after giving information clearly about the study and obtained consent to participant in the study.

3.9 Data Collection and Instruments

3.9.1 Data Collection

Ten medical students were collected data. Data on socio-demographic characteristics, clinical characteristics, and Life style was collect using the

questionnaire. The principal investigator through face-to-face interview was administer the questionnaires with the participants.

3.9.2 Measurement Tools

Data was collected by ten medical students were collected data. Data on socio-demographic characteristics, clinical characteristics, and Life style was collect using the questionnaire. The principal investigator through face-to-face interview was administer the questionnaires with the participants.

All the psoriatic patients in the selected study was approached by study team. Data on socio-demographic characteristics, clinical characteristics, and Life style was collected using the questionnaire.

3.9.2.1 Questionnaires

Data on socio-demographic characteristics, clinical profile, and life style facts was collected using the questionnaire.

Four HRQOL questionnaires (DLQI, Skindex 16, Skindex 29, WHOQOL) were also given to the participants. Dermatology Quality of Life Index (DLQI) was chosen as our outcome measure.

DLQI questionnaire was consists of 10 items measuring how much the skin problem has affected several aspects of life over the past week, with each item rating from 0 to 3. The questions can be categorized in six domains: symptoms and feelings (Question 1 and 2), daily activities (Question 3 and 4), leisure (Question 5 and 6), work and school (Question 7), personal relationship (Question 8 and 9), treatment-caused burdens. (Question 10) Appendix A shows the template of DLQI questionnaire in English. Appendix B has the scoring guideline and instruction of use for DLQI.

Question formats are “Over the last week, how bothering (itchy, painful, stinging) has your skin been?” or “over the last week, how much has the skin problem made it difficult for a certain activity (e.g., home, school, sports, sexual activity)?” Possible answers are: 0 (“not at all”) or (“non-relevant”), 1 (“a little”), 2 (“a lot”), 3 (“very much”). The total score was calculated by summing up score of each question, generating a range of possible values from 0 to 30. The total score could also be expressed by percentage out of 30. Higher the total score, the poorer the quality of life. Besides, each domain has subscale that can be scored separately. In the incomplete questionnaires, if there is only one unanswered item, it was replaced as 0 and included in the sum-up. Question number 7 has two parts. First the patients were asked whether the disease has prevented them to go to work or school. If yes, it is scored as 3. If no, patients are then asked how much the skin problems affects work or school. “A little” is scored as 1 and “a lot” is scored as 2. If two or more questions are left unanswered, the questionnaires were considered invalid.

The questionnaires were administered by the principal investigator through face-to-face interview with the participants.

3.9.3 Validity and Reliability of Measurement Tools

3.9.3.1 Validity

Prior to data collection, the data collection tool was reviewed by the supervisors and three the subject content experts to ensure that the tool was accurate, appropriate and measured what it expected to measure.

3.9.3.2 Reliability

For the reliability of this study instrument:

The questions were adopted from existing questions in multiple studies) that assessed the health- related quality of life and its associated factors among psoriasis patients, Similar conditions for data collection was ensured for each participant. The nature and purpose of the research was regularly communicated, Participants was selected that was similar with regard to extraneous factors, A pilot study was conducted on patients with similar characteristics but at a different setting to clarify any misunderstanding in the questionnaire.

3.9.4 Pilot study

A pilot study was conducted at Al-Gomhory hospital at the dermatology clinic. The purpose of the pilot study was to check the instruments' usability thus, time taken, clarity of terms and logical flow of questions. Al-Gomhory hospital dermatology clinic was chosen because it is also a referral hospital in the Sana'a capital city and therefore was provided required respondents with similar characteristics as those at the actual setting at psoriasis patients at dermatology outpatient clinic in AL-Thawra hospital, Sana'a City. The recommended pilot size was approximately 10% of the final sample size (Hertzog, 2008). Hence 7.3 psoriasis patients were recruited to participate in the pilot study as the study sample size was 73.

After permission was granted by the hospital director and consent obtained from each respondent the questionnaire was administered to 7 psoriasis patients. An explanation was given on the purpose of the study, and a written consent was obtained from the respondents. Interviews was conducted in the private room. The interviews was conducted in Arabic language. It was taking 30 minutes to complete the

interview. After the pilot study, some questions which was not clear was rephrased and those which were repeated were removed.

3.10 Participant selection

The study was used the random selection sampling techniques for selection of participants. Ten medical students were distributed to four centers, in order to take information about Socio-demographic, clinical profile characteristics, and Life style among psoriasis patients in dermatology outpatient clinic in AL-Thawra hospital, Sana'a City, Yemen.

All psoriasis patients aged ≥16 years old at AL-Thawra hospital in the study area during 15th May 2022 to 15th November 2022 in Capital Sana'a City was included in this study.

3.11 Data analysis

Statistical analyses were performed using the IBM Statistical Program for Social Sciences (SPSS) version 26.

Descriptive statistics was performed: mean, standard deviation and median was used for summarizing numerical variables, and frequencies and percentages for the categorical variables. Histogram, Q-Q plot and Kolmogorov-Smirnov test was used to examine the normality of DLQI scores distribution. DLQI scores was then dichotomized as above 10 and below 10 to represent largely affected quality of life and less affected quality of life. Chi-square test was used to compare the distributionof categorical variables among people with DLQI above 10 or below 10. Mann Whitney test was used to determine the difference for non-normal distributed

continuous variables in two groups. Univariate and multivariable binary logistic regression was used with 95% confidence interval to determine the association between risk factors and DLQI above 10. Crude and adjusted odds ratios was calculated. Variables with p-value smaller or equal to 0.25 in univariate logistic regression was candidates to be included in multivariable logistic regression. Enter, backward, forward methods in multivariate regression were all used and only results from backward selection method was presented. Cluster effect within each hospital was taken into account and included in the final multivariable regression analysis. Missing data in the final model was handled with listwise deletion method: participants with any missing value in any variable was excluded in multivariable regression (n=1,121). Final model only was included statistically significant variables. P-values less than 0.05 was considered significant.

3.12 Ethical consideration

The approval was obtained from the Ethics committee of the 21 September university of medical and applied Sciences, Dermatology outpatient clinic in AL-Thawra hospital, Sana'a city, Yemen, the purpose and benefits of the study was explained to patients' participants, all patients participating have the right to refuse to participate or to withdraw from the study finally, all data obtained was confidential and was not be used for purposes other than scientific research.

CHAPTER 4

Results

4.1 Distribution of Socio-Demographic Variables Among Psoriasis Patients

Figure 4.1 shows the distribution of the sample by gender, where it was found that most of the respondents were females, at a rate of 66.1%, compared to 33.9% of males

Table 4.1Distribution the gender among psoriasis patients

Gender	**N**	**%**
Male	19	33.9
Female	37	66.1
Total	56	100

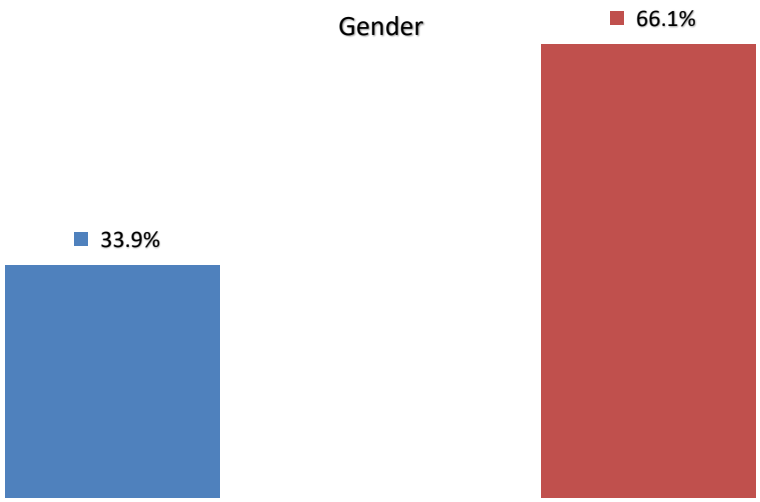

Figure 4.1: Distribution of sample according to gender

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4.2 Distribution the age among psoriasis patients

Table 4.2Distribution the age among psoriasis patients

Age group	N	%	Mean
less than 25	9	16.1	38.6
25-50	35	62.5	
More than 50	12	21.4	
Total	**56**	**100**	

Table 4.2shows distribution of sample according to age, most of the respondents 35 (62.5%), were between 25-50 years old, 12 (21.4%) were over 50 years old, and 9 (16.1%) were less than 25 years old. The mean age was (38.6) years.

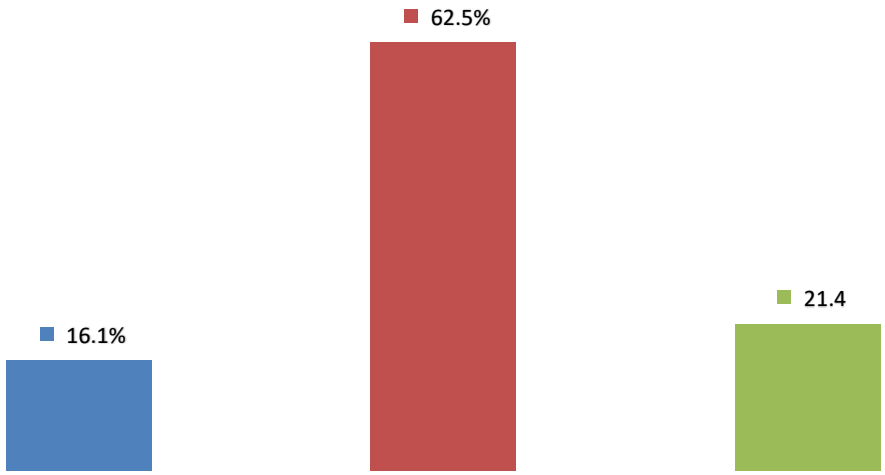

Figure 4.2:Distribution of age among psoriasis patients.

4.3 Distribution the place of residence among psoriasis patients

Table 4.3: Distribution the place of residence among psoriasis patients

Place of residence	N	%
Urban	47	83.9
Rural	9	16.1
Total	**56**	**100**

Table 4.3 shows the distribution of the sample by place of residence, as it was found that of the (56) psoriasis patients participating in the research, 47 (83.9%) lived in urban areas and 9 (16.1%) in rural areas.

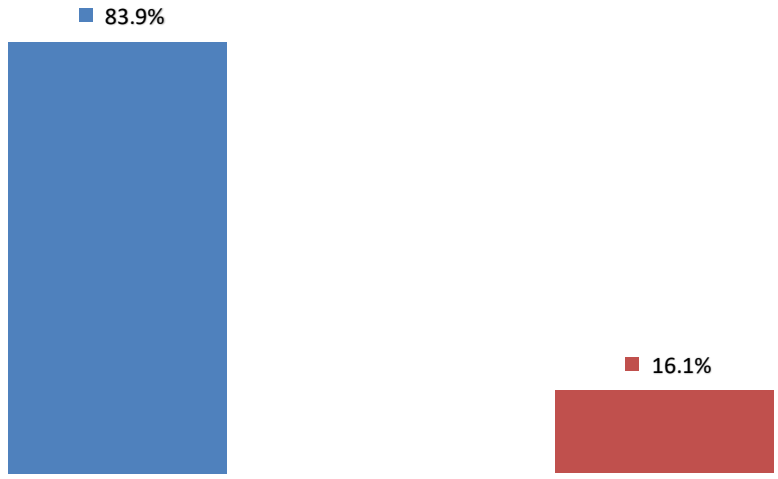

Figure 4.3:Distribution of place of residence among psoriasis patients.

4.4 Distribution the educational level among psoriasis patients

Table 4.4:Distribution the educational level among psoriasis patients

Educational level	N	%
Illiterate	7	12.5
Primary school	12	21.4
Secondary school	13	23.2
Diploma and above	24	42.9
Total	**56**	**100**

Table 4.4 shows the distribution of the sample by educational level, as it was found that of the (56) psoriasis patients participating in the research, of patients was 24 (42.9%) have diploma and above, 13(23.2%) secondary school,12 (21.4%) primary school and 7(12.5%) Illiterate.

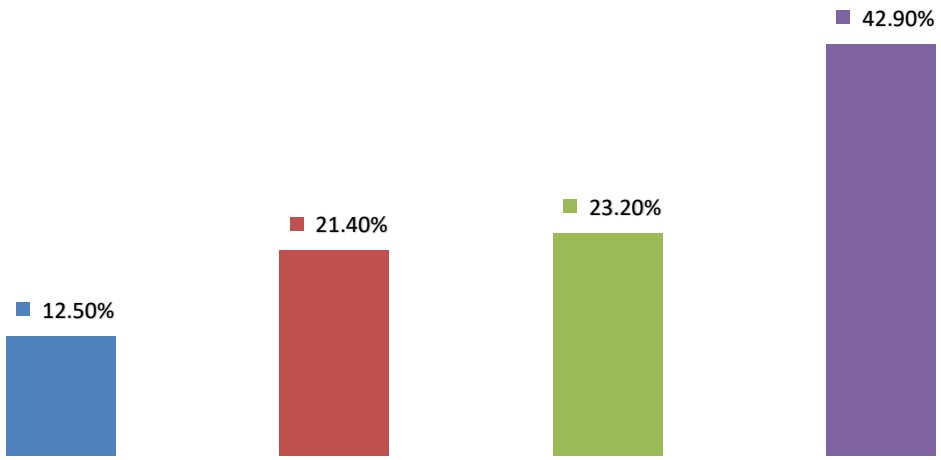

Figure 4.4: Distribution of the educational level among psoriasis patients

4.5 Distribution the husband/Wife educational level among psoriasis patients

Table 4.5:Distribution the Husband/Wife educational level among psoriasis patients

Educational level	**N**	**%**
Illiterate	8	14.3
primary school	13	23.2
secondary school	19	33.9
Diploma and above	16	28.6
Total	**56**	**100**

Table 4.5shows the distribution of the sample by Husband/Wife educational level, as it was found that of the (56) psoriasis patients participating in the research, of patients was19 (33.9%) have secondary school, 16 (28.6%) have Diploma and above, 13 (23.2%) primary school and 8(14.3%) Illiterate.

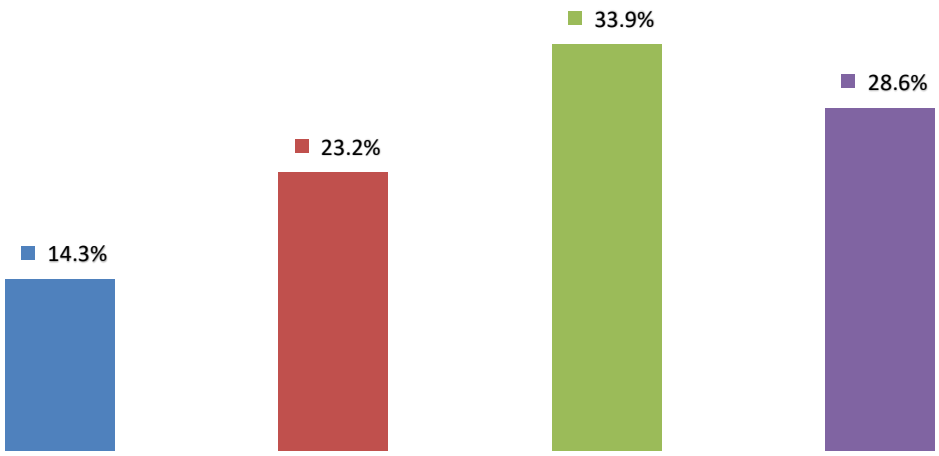

Figure 4.5: Distribution of sample according to Husband/Wife educational level.

4.6 Distribution of the occupational status among psoriasis patients

Table 4.6: Distribution of the occupational status among psoriasis patients.

Educational level	**N**	**%**
Not working/ Housewife	25	44.6
government working	5	8.9
private working	15	26.8
Student	11	19.6
Total	**56**	**100**

Table 4.6 shows the distribution of the sample by Occupational status, as it was found that of the (56) psoriasis patients participating in the research, of patients was25 (44.6%) Not working/ Housewife, 15(26.8%) have private working, 11(19.6%) Student and5(8.9%) have government working.

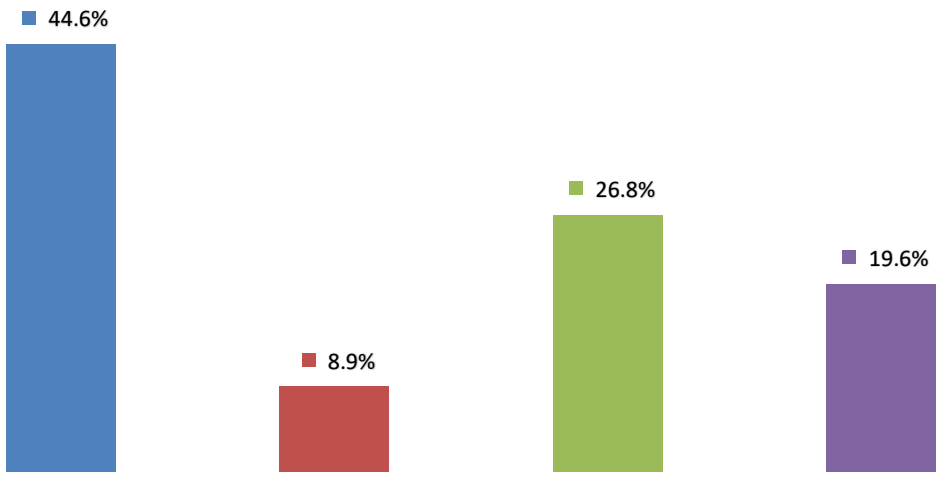

Figure 4.6: Distribution of sample according to occupational status among psoriasis patients

4.7 Distribution of the husband/wife occupational status among psoriasis patients

Table 4.7: Distribution of the husband/wife occupational status among psoriasis patients

Husband/Wife occupational status	N	%
Not working/ Housewife	23	41
government working	14	25
private working	17	30.4
Student	2	3.6
Total	**56**	**100**

Table 4.7shows the distribution of the sample by Husband/Wife occupational status, as it was found that of the (56) psoriasis patients participating in the research, of patients was 23(41.0%) Not working/ Housewife, 17(30.4%) have private working, 14(25.0%) have government working and 2(3.6%)Student.

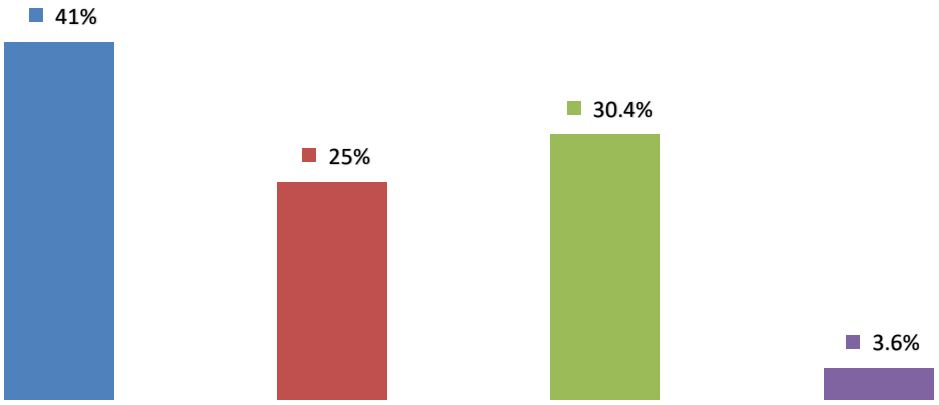

Figure 4.7: Distribution of husband/wife occupational statu samong psoriasis patients

4.8 Distribution of the marital status among psoriasis patients

Table 4.8: Distribution of the marital status among psoriasis patients

Marital status	N	%
Single	15	26.8
Married	37	66.1
Divorced/separated	1	1.8
Widowed	2	3.6
Not answer	1	1.8
Total	**56**	**100**

Table 4.8shows the distribution of the sample by Marital status, as it was found that of the (56) psoriasis patients participating in the research, of most patients were Married (66.1%), (26.8%) Single, (3.6%) Widowed, (1.8%) Divorced/separated, (1.8%) Not answer.

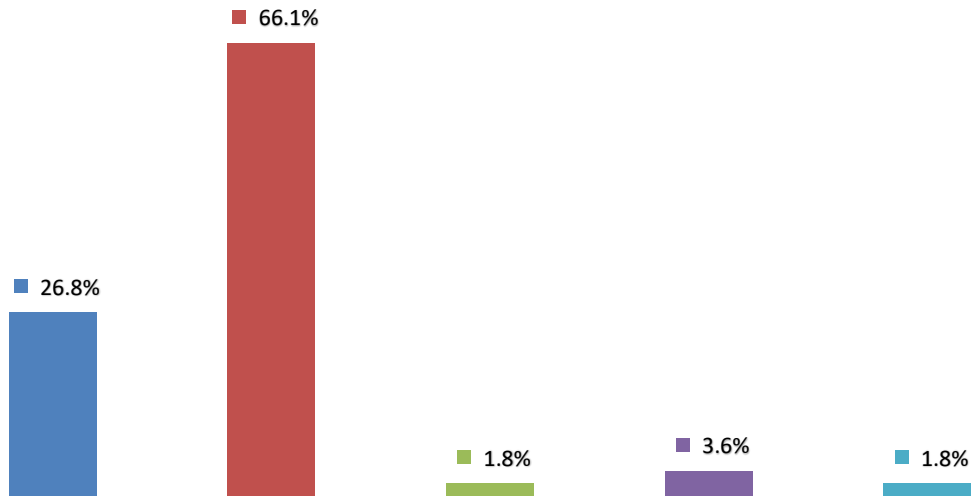

Figure 4.8: Distribution of husband/wife occupational status among psoriasis patients

4.9 Distribution of the economic level of the family among psoriasis patients

Table 4.9: Distribution of the economic level of the family among psoriasis patients

Family economic level	**Mean**
Per capita family income (YR)	43087
Total family income per month (YR)	193043
Total expenditure (YR)	**177174**

Table 4.9shows the distribution of the sample according to the economic level of the family, as it was found that of The mean of Per capita family income (YR) was (43087) YR and mean of Total family income per month (YR) was (193043) YR, will the mean of Total expenditure (YR) was (177174) YR.

4.10 Distribution of medical insurance among psoriasis patients

Table 4.10: Distribution of medical insurance among psoriasis patients

Medical insurance	N	%
No	41	73.2
Yes	15	26.8
Total	**56**	**100**

Table 4.10shows the distribution of the sample by medical insurance, as it was found that of the majority of the patients 41(73.2%) had no Medical insurance, while 15(26.8%) had a Medical insurance.

4.11 Distribution of the weight among psoriasis patients

Table 4.11: Distribution of the weight among psoriasis patients

Weight group	N	%	Mean
< 62 Kg	31	55.4	62
≥ 62 Kg	25	44.6	
Total	**56**	**100**	

Table 4.11shows the distribution of the sample by weight group, it found that of the majority of the patients 31(55.4%) were less than 62 Kg, while 25(44.6%) were greater than or equal to 62 Kg. The mean weight was (62) Kg.

4.12 Distribution of the height among psoriasis patients

Table 4.12: Distribution of the height among psoriasis patients

Height group	N	%	Mean
<157 cm	26	46.4	157
≥157 cm	30	53.6	
Total	**56**	**100**	

Table 4.12shows the distribution of the sample by Height group, it found that of the majority of the patients 26(46.4%) were less than 157 cm, while 30(53.6%) were greater than or equal to 157 cm. The mean Height was (157) cm.

4.13 Distribution of the height among psoriasis patients

Table 4.13: Describes of the age onset among psoriasis patients

Age onset	N	%
≤40 years old	47	83.9
>40 years old	9	16.1
Total	**56**	**100**

Table 4.13 shows the distribution of the sample by Age onset, it found that of the majority of the patients 47(83.9%) had Age onset less than 40 years old, while 9(16.1%) had Age onset greater than or equal to 40 years old.

4.14 Describes of the duration of the disease among psoriasis patients

Table 4.14: Describes of the duration of the disease among psoriasis patients

Duration of the disease	**N**	**%**
less than 10 years	26	46.4
10-20 years	23	41.1
More than 20 years	7	12.5
Total	**56**	**100**

Table 4.14shows the distribution of the sample by Duration of the disease, it found that of the majority of the patients26(46.4%) of them had duration less than 10 years,23(41.1%) had duration between 10-20 years, 7(12.5%) had duration More than 20 years.

4.15 Describes of the severity of the disease among psoriasis patients

Table 4.15: Describes of the severity of the disease among psoriasis patients

Severity	**N**	**%**
Slight	8	14.3
Mild	11	19.6
Moderate	25	44.6
Serious	3	5.4
Severe	9	16.1
Total	**56**	**100**

Table 4.15shows the distribution of the sample by Severity, it found that of (56) patients who participated in the research 25(44.6%) was Moderate Severity, 11(19.6%) Mild Severity, 9(16.1%) Severe Severity, 8(14.3%) Slight Severity and 3(5.4%) Serious Severity.

4.16 Describes of the clinical presentation of the disease among psoriasis patients

Table 4.16: Describes of the clinical presentation of the disease among psoriasis patients

Clinical presentation	N	%
Psoriasis vulgaris	10	17.9
Guttate psoriasis	5	8.9
Erythrodermic psoriasis	5	8.9
Total	**20**	**35.7**

Table 4.16shows the distribution of the sample by Clinical presentation, it found that of The most common Clinical presentation was Psoriasis vulgaris 10(17.9%), while Guttate psoriasis 5(8.9%) and Erythrodermic psoriasis 5(8.9%).

4.17 Describes of the clinical presentation of the diseaseamong psoriasis patients

Table 4.17: Describes of the study localization of the psoriasis among psoriasis patients

Localization of the psoriasis	**N**	**%**
Scalp	16	28.6
Nail	4	7.1
External Skin	34	60.7
Palmo-plantar	2	3.6
Total	**56**	**100**

Table 4.17 shows the distribution of the sample by Clinical presentation, it found that of The most common Localization of the psoriasis was External Skin34(60.7%), while Scalp 16(28.6%), Nail 14(7.1%) and Palmo-plantar 2(3.6%).

4.18 Describes of the body surface area involved among psoriasis patients

Table 4.18: Describes of the body surface area involved among psoriasis patients

Body surface area involved	N	%
≤ 30%	31	55.4
> 30%	25	44.6
Total	**56**	**100**

Table 4.18shows the distribution of the sample by Clinical presentation, it found that of The size of the Body surface area involved in Psoriasis patients was 31(55.4%) less than or equal to 30%, while 25(44.6%) was greater than 30%.

4.19 Distribution of Life style factors among Psoriasis Patients

Table 4.19: Distribution of Life style factors among Psoriasis Patients

Life style factors		N	%
Smoking	No	42	75
	Yes	14	25
Alcohol	No	55	98.2
	Yes	1	1.8
Exercise	No	50	89.3
	Yes	6	10.7

Table 4.19shows the distribution of the sample by Life style factors, it found that of The majority of the patients 42(75.0%) Non Smoking, while 14(25.0%) Smoking, All patients 55(98.2%) are non-alcoholics except one of them1(1.8%) who is given alcohol, The majority of the patients 50(89.3%) No Exercise, while 6(10.7%) have Exercise.

4.20 Describes of the DLQI among psoriasis patients

Table 4.20: Distribution of the DLQI Scores among psoriasis patients

Meaning of DLQI Scores	**N**	**%**
No effect at all on patient's life	4	7.1
Small effect on patient's life	12	21.4
Moderate effect on patient's life	15	26.8
Very large effect on patient's life	24	42.9
Extremely large effect on patient's life	1	1.8
Total	**56**	**100**

Table 4.20 shows the Dermatology Quality of Life Index (DLQI) for psoriasis patients, was (42.9%) Very large effect on patient's life, (26.8%) Moderate effect on patient's life, (21.4%) Small effect on patient's life, (7.1%) No effect at all on patient's life and (1.8%) Extremely large effect on patient's life.

4.21 Association Between Demographic Factors and DLQI by Chi-square Test among psoriasis patients

Table 4.21: Association Between Demographic Factors and DLQI by Chi-square Test among psoriasis patients

Demographic factors		Number of patients		DLQI ≤10 (n=31)		DLQI >10 (n=25)		X2	P
		N	%	N	%	N	%		
Gender	Male	19	33.9	12	63.2%	7	36.8%	0.708	0.400
	Female	37	66.1	19	51.4%	18	48.6%		
Age Group	less than 25	9	16.1	7	77.8%	2	22.2%	2.757	0.252
	25-50	35	62.5	19	54.3%	16	45.7%		
	More than 50	12	21.4	5	41.7%	7	58.3%		
Place Of Residence	Urban	47	83.9	28	59.6%	19	40.4%	2.105	0.147
	Rural	9	16.1	3	33.3%	6	66.7%		
Educational Level	Illiterate	7	12.5	4	57.1%	3	42.9%	0.532	0.912
	primary school	12	21.4	7	58.3%	5	41.7%		
	secondary school	13	23.2	8	61.5%	5	38.5%		
	Diploma and above	24	42.9	12	50.0%	12	50.0%		
Husband/Wife educational level	Illiterate	8	14.3	2	25.0%	6	75.0%	5.665	0.129
	primary school	13	23.2	10	76.9%	3	23.1%		
	secondary school	19	33.9	11	57.9%	8	42.1%		
	Diploma and above	16	28.6	8	50.0%	8	50.0%		
Occupational status	Not working/ Housewife	25	44.6	13	52.0%	12	48.0%	1.959	0.581
	government working	5	8.9	3	60.0%	2	40.0%		
	private working	15	26.8	7	46.7%	8	53.3%		
	Student	11	19.6	8	72.7%	3	27.3%		
Husband/Wife occupational status	Not working/ Housewife	23	41	12	52.2%	11	47.8%	0.881	0.830
	government working	14	25	7	50.0%	7	50.0%		
	private working	17	30.4	11	64.7%	6	35.3%		
	Student	2	3.6	1	50.0%	1	50.0%		
Marital status	Single	15	26.8	7	46.7%	8	53.3%	2.124	0.713
	Married	37	66.1	21	56.8%	16	43.2%		
	Divorced/separated	1	1.8	1	100.0%	0	0.0%		
	Widowed	2	3.6	1	50.0%	1	50.0%		
	Not answer	1	1.8	1	100.0%	0	0.0%		
family income level	≤Total family income per month	37	66.1	24	64.9%	13	35.1%	3.989	**0.046***
	>Total family income per month	19	33.9	7	36.8%	12	63.2%		
Medical insurance	No	41	73.2	23	56.1%	18	43.9%	0.034	0.854
	Yes	15	26.8	8	53.3%	7	46.7%		

Table 4.21shows that the level of significance for demographic variables (Gender, Age Group, Place of Residence, Educational Level, Husband/Wife educational level, Occupational status, Husband/Wife occupational status, Marital status, Medical insurance) was greater than (0.05), and this indicated that there was no relationship

between demographic variables and DLQI, was also found to be level of significance for family income level variable, was greater than (0.05), and this indicated that there was relationship between family income level variable and DLQI.

4.22 Association Between Clinical factors and DLQI by Chi-square Test among psoriasis patients

Table 4.22: Association Between Clinical factors and DLQI by Chi-square Test among psoriasis patients

Clinical related factor		Number of patients		DLQI ≤10 (n=31)		DLQI >10 (n=25)		X2	P
		N	%	N	%	N	%		
weight group	< 62 Kg	31	55.4	16	51.6%	15	48.4%	0.394	0.530
	≥ 62 Kg	25	44.6	15	60.0%	10	40.0%		
Height group	<157 cm	26	46.4	11	42.3%	15	57.7%	3.344	0.067
	≥157 cm	30	53.6	20	66.7%	10	33.3%		
Age onset	≤40 years old	47	83.9	27	57.4%	20	42.6%	0.517	0.472
	>40 years old	9	16.1	4	44.4%	5	55.6%		
Duration of the disease (year)	less than 10 years	26	46.4	14	53.8%	12	46.2%	0.046	0.977
	10-20 years	23	41.1	13	56.5%	10	43.5%		
	More than 20 years	7	12.5	4	57.1%	3	42.9%		
Severity	Slight	8	14.3	6	75.0%	2	25.0%	2.279	0.685
	Mild	11	19.6	6	54.5%	5	45.5%		
	Moderate	25	44.6	14	56.0%	11	44.0%		
	Serious	3	5.4	1	33.3%	2	66.7%		
	Severe	9	16.1	4	44.4%	5	55.6%		
Clinical presentation	Psoriasis vulgaris	10	17.9	5	50.0%	5	50.0%	3.736	0.154
	Guttate psoriasis	5	8.9	5	100.0%	0	0.0%		
	Erythrodermic psoriasis	5	8.9	3	60.0%	2	40.0%		
Localization of the psoriasis	Scalp	16	28.6	10	62.5%	6	37.5%	1.373	0.712
	Nail	4	7.1	3	75.0%	1	25.0%		
	Extensorsurface of skin	34	60.7	17	50.0%	17	50.0%		
	Palmo-plantar	2	3.6	1	50.0%	1	50.0%		
Body surface area involved	≤ 30%	31	55.4	18	58.1%	13	41.9%	0.206	0.650
	> 30%	25	44.6	13	52.0%	12	48.0%		

Table 4.22shows that the level of significance for Clinical related factor (weight group, Age onset, Duration of the disease (year), Severity, Localization of the psoriasis, Clinical presentation, Body surface area involved) was greater than (0.05), and this indicated that there was no relationship between Clinical related factors and the DLQI, was also found to be level of significance for Height group variable, was greater than (0.05) and this indicated that there was relationship between Height group variable and the DLQI.

4.23 Association Between Life Style Factors and DLQI by Chi-square Test among Psoriasis Patients

Table 4.23: Association Between Life Style Factors and DLQI by Chi-square Test among Psoriasis Patients

Life style factors		Number of patients		DLQI ≤10 (n=31)		DLQI >10 (n=25)		X2	P
		N	%	N	%	N	%		
Smoking	No	42	75	23	54.8%	19	45.2%	0.024	0.877
	Yes	14	25	8	57.1%	6	42.9%		
Alcohol	No	55	98.2	30	54.5%	25	45.5%	0.821	0.365
	Yes	1	1.8	1	100.0%	0	0.0%		
Exercise	No	50	89.3	29	58.0%	21	42.0%	1.319	0.251
	Yes	6	10.7	2	33.3%	4	66.7%		

Table 4.23shows that the level of significance for Life style factors (Smoking, Alcohol, Exercise) was greater than (0.05), and this indicated that there was no relationship between Life style factors and DLQI.

CHAPTER 5 Discussion

5.1 Discussion of socio-demographic variables among psoriasis patients

The results of the study showed that most of the respondents were females with a rate of 66.1% compared to 33.9% for males, this result is consistent with the results of most previous studies as a study SeifuMegersaKumsa and others, 2021, is found that (58.9%) were females(Kumsa, Tadesse, & Woldu, 2021).

The results of the study showed that most of them (62.5%) ranged between the ages of 25-50 years. mean age in psoriatic patients was (38.6), This result is consistent with the results of the study of Sunil Kumar et al., 2017, which showed that the average age of the respondents (38.55) years, and study SeifuMegersaKumsa and others, 2021which showed that mean age of the study population was 37.92years.

The results of the study found that (83.9%) of patients lived in urban areas, (42.9%) of them hold a diploma or above, (33.9%) of the respondents, the educational level of the husband / wife was high school, (44.6%) did not work /housewife, and the occupational status of the husband / husband for most of the sample (41.0%) was not working / housewife, 17 (30.4%), most of the patients were married (66.1%), the results of the study found that the average family income is (43087) riyals and the average monthly total family income was (193043) Riyals, so is the average total expenditure (Yemeni riyals) is (177174) Yemeni riyals, It was found that the majority of patients (73.2%) do not have medical insurance, This result is consistent with the results of the study of. (Sunil Kumar et al, 2017, SeifuMegersaKumsa and others, 2021, Wosen, Ketema, 2022)

5.2 Discussion of clinical characteristics among psoriasis patients

The results of the study showed that the majority of patients (55.4%) weighed less than 62 kg, and (53.6%) were greater than or equal to 157 cm. The results of the current study found that (83.9%) had an age onset of less than 40 years, (46.4%) the disease period was less than 10 years, (41.1%) were between 10-20 years, this study consistent with the results of (Kumsa et al., 2021).

As for the distribution of the sample according to severity, the results of the study found that among (56) patients who participated in the study, there were (44.6%) moderate severity, (19.6%) mild severity, (16.1%) severe severity, (14.3%) mild severity and 3 (5.4%) severe severity, This result is consistent with the results of (Zandi, et al. , Milcic, et al. and Nabaei, et al, Wosen, Ketema, 2022), Which shows that the majority of the respondents participating in those studies had a medium level of severity, unlike the studies conducted in Africa, which showed that most of the respondents had a severe level of severity.

The results of the study found that the most common clinical symptoms were psoriasis vulgaris (17.9%), guttate psoriasis (8.9%) and psoriasis erythroderma (8.9%), and these results differ with the results of (Wosen, Ketema, 2022) that showed that (94%) of patients with Psoriasis reported that itching was the most prominent symptom they were experiencing.

The results of this study found that the most common localization of psoriasis was the skin surface (60.7%), while the scalp (28.6%) and the nails (7.1%). The results of study (Wosen, Ketema, 2022) showed that the body surface area affected by psoriasis patients was (55.4%) less than or equal to 30%, while (44.6%) was less than or equal

to 30%, and this result is close to the results of (Wosen, Ketema, 2022) which showed that (58.8%)of patients with psoriasis the incidence by body surface area was 10-30%.

5.3 Discussion of lifestyle factors among psoriasis patients

With regard to the results describing lifestyle factors, it was found that the majority of patients (75.0%) are non-smokers, (25.0%) are smokers, all 55 patients (98.2%) are non-alcoholics with the exception of one of them 1 (1.8%) given alcohol, and the majority of patients (89.3%) do not exercise.

This result differs with the results of a study (Wosen, Ketema, 2022), whose results showed that those who drink alcohol are about 4 times more likely to develop psoriasis than non-alcoholics.

5.4 Discussion of DLQI variables among psoriasis patients

The results of the study showed that the Dermatology Quality of Life Index (DLQI) for psoriasis patients had a very significant impact on the lives of approximately (42.9%) of the sample, with an average effect of approximately (26.8%), and a small one. (21.4%), (7.1%) there is no effect at all on the patient's life and (1.8%) a very significant effect on the patient's life. These results are close to the results of the study (Wosen, Ketema, 2022), which showed that (41.2%) of patients Psoriasis has a significant impact on their quality of life. And (29.4%) have a moderate effect and (29.4%) others have a slight effect on their quality of life. The mean DLQI was 9.82, These results differ with the results of the study (Min Moon Tang MD, 2013) which showed that the most important factor influencing quality of life is the clinical severity of psoriasis(49.6٪).

5.5 Discussion of the hypotheses of the study DLQI variables among psoriasis patients

The results of the study show that there is no relationship between the demographic variables (sex, age group, place of residence, educational level, educational level of the husband / wife, occupational status, occupational status of the husband / wife, marital status, medical insurance) and between DLQI, and it was found that there is A relationship between the family income level variable and the DLQI.In our study, there was no significant association between sex and QoL, similar to the reports by Zandi, et al.,Milcic, et al. and Nabaei, et al. In addition, age was not significantly associated with QoL in our patients, being consistent with the study conducted by Zandi et al.No significant relation was found between the levels of education and the QoL in our study, being consistent with the study conducted by Nabaei, et al. On the contrary, Milcic et al. showed that lower level of education decreased QoL.No significant relation was found between Occupational status related to QoL in patients in this study. On the contrary, HojatEftekhari, 2019 which found that Occupational status was significantly related to QoL in patients.

The prevalence of psoriasis among married couples was higher than that of unmarried adults in this study, due to marital stress. However, there was no statistically significant relationship between psoriasis and marital status. This result is consistent with the results of previous studies conducted by Ansar et al., Al-Nabai et al, HojjatEftekhari, 2019).There was no significant relationship between income status and QoL in our study, but Nabaei, et al. reported that psoriasis patients had a significantly lower income.

The results of the study show that there is no relationship between the factors associated with the clinical level (weight category, age onset, disease duration (years), severity, psoriasis localization, clinical presentation, concerned body surface area) and the DLQI, and it was found that there is a relationship between the height group variable and DLQI.The results of this study differed with the results of the study by Gaetano Marrone, Ze-Hui He, 2016, which found that the risk factors associated with a DLQI higher than 10 were: having medical insurance, a serious level of illness, a severe level of illness, and exercise.

The results of this study the duration of the disease was not significantly associated with QoL in our study, being consistent with the studies conducted by Zandi, et al. and Milcic, et al.

The results of the study show that there is no relationship between lifestyle factors (smoking, alcohol, exercise) and DLQI, this finding differs with the results of the study conducted by Ashkevari et al., which showed that there was a statistically significant difference in smoking amounts between the psoriasis group and the control group. Fortis et al. showed that the risk of developing severe psoriasis in people who smoked more than 20 cigarettes per day was more than double that of those who smoked 10 or less 9.

There was no significant relationship between drug abuse and DLQI in this study, this finding differs with the results of the previous studies, alcohol consumption may be associated with the risk of progression or worsening of the disease.

The results of this study are consistent with the results of a study conducted by Ying-Xiu Dai MD et al., 2018, whose results indicated that alcohol consumption was not significantly associated with psoriasis risk.

The results of this study are no consistent with the results of a study conducted by Ying-Xiu Dai MD et al., 2018, whose results indicated that the risk of developing psoriasis was higher for current smokers than for never smokers.

5.6 Results summary

The results of the study showed that the quality of life of approximately (42.9%) of psoriasis patients was affected to a very large extent, (1.8%) was affected very significantly, the quality of life of (26.8%) to a medium degree, (21.4%) quality of life was affected significantly and non-significantly, (7.1%) patients with psoriasis were not affected.

The results related to the demographic factors of psoriasis patients showed that most were females, average age 38.6 years, (83.9%) lived in urban, (42.9%) had a diploma, one third of them had a low educational level, two thirds of married, (73.2%) have not health insurance. average income (43,087) riyals, is low level.

The results related to Clinical factors of psoriasis patients, it found that the average weight (62) km, the average height (157) cm, (83.9%) have age onset of less than 40 y, (46.4%) had a duration of injury less than 10 y, (44.6%) the severity moderate, the guttate psoriasis was prominent symptom, the affected skin site was the external skin (60.7%), 55% had a skin surface lesion of less than 30%, Three quarters of the respondents do not smoke, (98.2%) non-alcoholic, (89.3%) non exercise.

The results of the study showed that There was no relationship between DLQI and demographic variables, except for the family income level variable, and no relationship between DLQI and clinically relevant factors, except for the height variable, as well as no relationship between DLQI and lifestyle factors.

CHAPTER 6

Conclusion

6.1 Conclusion

The results of the study showed that the quality of life for 44.7% out of 56 patients with psoriasis was affected to a very large extent, that psoriasis is a common disease that affects all groups, and that females are more affected than males. The level of clinical severity of psoriasis was moderate. Plaque psoriasis was a prominent symptom. The extensor surface was the most affected.

The level of family income and the length of patients are important indicators in affecting the quality of life in patients with psoriasis, and there is no relationship between DLQI and lifestyle factors.

6.2 Recommendations

Based on the results of the study, we recommend the following:

- Evaluation of the psychological and social aspects of patients when treating patients with psoriasis.
- Evaluation of patients' habits when treating patients with psoriasis, and providing medical care.
- The need to enhance the morale of patients and raise the level of their quality of life during treatment, because of the negative impact on their quality of life.
- The need to develop health policies and the necessary plans to reduce the pathological burden of psoriasis and limit its increase in order to raise the quality of life for patients at risk.
- The study recommends that future researchers further evaluate the extent and risk factors of psoriasis using large sample sizes and robust study designs.

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APPENDIX A 21UNIVERSITY ETHICAL APPROVAL

الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
جامعة ٢١ سبتمبر للعلوم الطبية والتطبيقية
رئاسة الجامعة

بسم الله الرحمن الرحيم

Republic of Yemen
Ministry of Higher Education and Scientific Research
21 SEPTEMBER UNIVERSITY
OF MEDICAL S & APPLIED SCIENCES
CHANCELLOR OFFICE

جامعة ٢١ سبتمبر للعلوم الطبية والتطبيقية
الإدارة العامة
السكرتارية
التاريخ ٥/١/٢٠٢٤
الرقم

الاستاذ الدكتور /مطهر مرشد
رئيس هيئة مستشفى الثورة العام
المحترم

الموضوع: تسهيل مهمة بحث

تهديكم رئاسة جامعة ٢١ سبتمبر للعلوم الطبية والتطبيقية أطيب تحياتها وتقديرها وإشارة إلى الموضوع أعلاه تكرموا مشكورين بالتوجيه الى من يلزم بتسهيل مهمة بحث طلاب كلية الطب للدفعة الاولى مستوى خامس قسم الجلدية لعدد(١٠) طلاب المجموعة (B4b) تحت اشراف الدكتور/ مطيع ابو عريج، والدكتور/ عماد الشميري، بحسب عنوان البحث الموضح قرين اسمائهم:-

م	الاسم	عنوان البحث
١	نوح محمد عبدالله العامري	Quality of life and its Associated factors Among Psoriasis Patients in AL-Thawra hospital, Sana'a City, Yemen: Across-Sectional study.
٢	هيثم صالح بغاشة	
٣	محمد قاسم احمد سعيد	
٤	محمد خالد قشاشة	
٥	هشام خالد الجوفي	
٦	مساعد عبدة النمير	
٧	نبيل عبداللطيف القاسم	
٨	جميلة حسين محمد الدعوس	
٩	هناء محمد ثابت الموشكي	
١٠	هدية علي علي سعيد الجماعي	

،،، تفضلوا بقبول خالص تحياتي وعميق احترامي ،،،

استاذ دكتور/
مجاهد علي معصار
رئيس الجامعة

Sana'a – Alswad – Taiz st. –Near 48 Midical Compound
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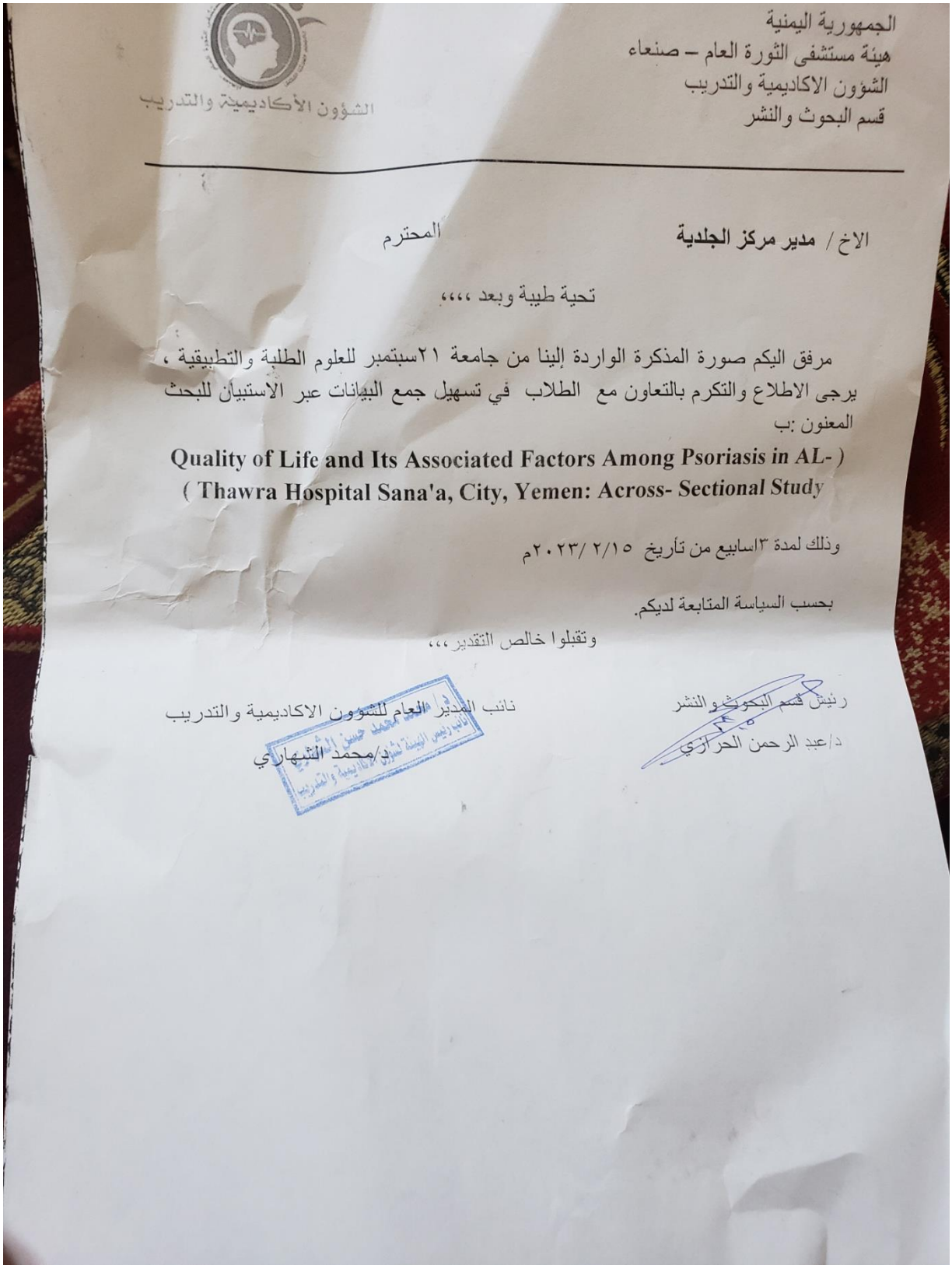
جسر من التعليم إلى التعلم

صنعاء – السواد – شارع تعز – جوار مجمع 48 الطبي
ص.ب(١٧٠٢١) تلفون:(٠١/٦٩٦٣٠٥) فاكس : (٠١/٦٩٦٥٨٥)
الإيميل: 21umas@yahoo.com

APPENDIX B AL-THAWRA ETHICAL APPROVAL



الجمهورية اليمنية
هيئة مستشفى الثورة العام – صنعاء
الشؤون الاكاديمية والتدريب
قسم البحوث والنشر

الشؤون الأكاديمية والتدريب

الاخ / **مدير مركز الجلدية** المحترم

تحية طيبة وبعد ،،،،

مرفق اليكم صورة المذكرة الواردة إلينا من جامعة ٢١سبتمبر للعلوم الطلبة والتطبيقية ، يرجى الاطلاع والتكرم بالتعاون مع الطلاب في تسهيل جمع البيانات عبر الاستبيان للبحث المعنون :ب

Quality of Life and Its Associated Factors Among *Psoriasis in AL-*)
(Thawra Hospital Sana'a, City, Yemen: Across- Sectional Study

وذلك لمدة ٣اسابيع من تأريخ ٢٠٢٣/٢/١٥م

بحسب السياسة المتابعة لديكم.

وتقبلوا خالص التقدير ،،،

رئيس قسم البحوث والنشر
د/عبد الرحمن الحرازي

نائب المدير العام للشؤون الاكاديمية والتدريب
د/محمد الشهاري

Appendix C Questionnaire

QUESTIONNAIRE

No: ( ). **Date of interview: / /2023**

Dear mother,

This is a questionnaire on the *Quality of life and its associated factors among psoriasis patients in Al-Thawra Hospital, Sana'a City, Yemen.*

And your son/daughter was included in this study.

We ask and thank you for agreeing to fill out this questionnaire according to each question and a paragraph with the information available under each question, as this information will be dealt with in strict confidence and for the purpose of scientific research, and only researchers and the main supervisors of the research will see it.

Thank you for your cooperation

Researchers

Section I: Socio-demographic characteristics

1. **Name ofpatient: ----------**
2. **Place of residence**

   Urban ☐ Rural ☐
3. **Age: ---------- years.**
4. **Educational level**

   Illiterate ☐ primary school ☐ secondary school ☐ Diploma and above ☐
5. **Husband/Wife** educational **level**

   Illiterate ☐ primary school ☐ secondary school ☐ Diploma and above ☐
6. **Occupationalstatus**

   Not working/ Housewife ☐ government working ☐ private working ☐

   Student ☐
7. **Husband/Wifeoccupational status**

   Not working/ Housewife ☐ government working ☐ private working ☐
8. **Marital status**

   Single ☐ Married ☐ Divorced/separated ☐ Widowed ☐

   Not answer ☐
9. **Per capita family income (YR): …… YR.**
10. **Total family income per month (YR): …… YR.**
11. **Total expenditure (YR): …… YR.**
12. **Medical insurance yes ☐ no ☐**

SectionII: Clinical related factor

Weight in

First measure		Second measure		mean	
KILO	**Gram**	**KILO**	**Gram**	**KILO**	**Gram**

Height

First measure		Second measure		mean	
KILO	**Gram**	**KILO**	**Gram**	**KILO**	**Gram**

Age onset

≤40 years old ☐ >40 years old ☐

Duration of the disease (year): ---------- year/s

Severity

Slight ☐ Mild ☐ Moderate ☐ Serious ☐ Severe ☐

Comorbidity: ???

1-Clinical presentation?

Psoriasis vulgaris

Guttate psoriasis

Erythrodermic psoriasis

Pustular psoriasis

2-Localization of the psoriasis?

Scalp

Nail

Skin fold

Palmo-plantar

3-Body surface area involved?

≤ 30%

> 30%

SectionIII: Life style factors

Smoking	yes	☐	no	☐	previous smoking	☐
Alcohol	yes	☐	no	☐	previous smoking	☐
Exercise	yes	☐	no	☐		

SectionIV: The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK. Please tick one box for each question

N	Q	Very much	A lot	A little	Not at all	Not relevant
1	Over the last week, how itchy, sore, painful or stinging has your skin been?					
2	Over the last week, how embarrassed or self-conscious have you been because of your skin?					
3	Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?					
4	Over the last week, how much has your skin influenced the clothes you wear?					
5	Over the last week, how much has your skin affected any social or leisure activities?					
6	Over the last week, how much has your skin made it difficult for you to do any sport					
7	Over the last week, has your skin prevented you from working or studying?					
	If "No", over the last week how much has your skin been a problem at work or studying?					
8	Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?					
9	Over the last week, how much has your skin caused any sexual difficulties?					
10	Over the last week, how much of a problem has the treatment for your					

	skin been, for example by making your home messy, or by taking up time?					

Please check you have answered EVERY question. Thank you.

Instructions for use of Dermatology Quality of Life Index

Dermatology Life Quality Index (DLQI) The Dermatology Life Quality Index questionnaire is designed for use in adults, i.e., patients over the age of 16. It is self-explanatory and can be simply handed to the patient who is asked to fill it in without the need for detailed explanation. It is usually completed in one to two minutes.

Scoring

The scoring of each question is as follows:

Response	
Very much	scored 3
A lot	scored 2
A little	scored 1
Not at all	scored 0
Not relevant	scored 0
Question unanswered	**scored 0**
Question 7: "prevented work or studying"	**scored 3**

The DLQI is calculated by summing the score of each question resulting in a maximum of 30 and a minimum of 0. The higher the score, the more quality of life is impaired. The DLQI can also be expressed as a percentage of the maximum possible score of 30.

Please Note: That the scores associated with the different answers should not be printed on the DLQI itself, as this might cause bias

Meaning of DLQI Scores

1-1 = no effect at all on patient's life
2-5 = small effect on patient's life
6-10 = moderate effect on patient's life
11-20 = very large effect on patient's life
21-30 = extremely large effect on patient's life

Detailed analysis of the DLQI

The DLQI can be analyzed under six headings as follows:

Section	Questions	Score
Symptoms and feelings	Questions 1 and 2	Score maximum 6
Daily activities	Questions 3 and 4	Score maximum 6

Leisure	Questions 5 and 6	Score maximum 6
Work and School	Question 7	Score maximum 3
Personal relationships	Questions 8 and 9	Score maximum 6
Treatment	Question 10	Score maximum 3

The scores for each of these sections can also be expressed as a percentage of either 6 or 3.

(**Continued**)

Interpretation of incorrectly completed questionnaires

There is a very high success rate of accurate completion of the DLQI. However, sometimes subjects do make mistakes.

1. If one question is left unanswered this is scored 0 and the scores are summed and expressed as usual out of a maximum of 30.
2. If two or more questions are left unanswered the questionnaire is not scored. 3. If question 7 is answered 'yes' this is scored
3. If question 7 is answered 'no' but then either 'a lot' or 'a little' is ticked this is then scored 2 or 1. If "Not relevant" is ticked, the score for Question 7 is 0. If it is answered 'no', but the second half is left incomplete, the score will remain 0.
4. If two or more response options are ticked, the response option with the highest score should be recorded.
5. If there is a response between two tick boxes, the lower of the two score options should be recorded.
6. The DLQI can be analysed by calculating the score for each of its six sub-scales (see above). When using sub-scales, if the answer to one question in a sub-scale ismissing, that sub-scale should not be scored.

Minimal Clinically Important Difference of the DLQI

For general inflammatory skin conditions, a change in DLQI score of at least 4 points is considered clinically important (Basra et al, 2015, see below). This means that a patient's DLQI score has to either increase or decrease by at least 4 points in order to suggest that there

has actually been a meaningful change in that patient's quality of life since the previous measurement of his/her DLQI scores