

Effect of Individualized Guidance on Knowledge and Self-Care Practices of Psoriasis Patients

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Abstract:

Background: Psoriasis is a chronic, immune-multisystem, inflammatory disease that affects the skin and joints and there is a necessity for monitoring and educating patients about benefits as well as risks that may be correlated. **Aim:** Evaluate the effect of individualized guidance on knowledge and self-care practices of psoriasis patients. **Subjects and methods:Design:** A quasi-experimental design was utilized. **Setting:** The study was conducted at the Dermatology outpatient clinic at El-Mansoura University Hospitals. **Sample:** Purposive sample of 100 adult patients diagnosed with psoriasis from both sexes and they equally divided into study & control groups, (50) patients for each one. **Tools:** Two tools were used for data collection; the first tool was a structured interviewing questionnaire, and the second tool was the psoriasis disability index. **Results:** Mean age of the studied psoriasis patients in the study and control group were 44 ± 8.6 and 42 ± 7.9 respectively. There was a highly statistically significant difference between the study and the control group in all items of psoriasis knowledge (p -value > 0.001). As well there were highly statistically significant differences between both groups post individualized guidance implementation regarding reported skincare and psoriasis affected areas in all items with (p -value > 0.001). There was a significant difference between the study and control group in the total level of disability post individualized guidance ($P > 0.001$). **Conclusion:** Implementation of individualized guidance had a positive effect on patients' knowledge and overall reported self-care practices including skincare and self-esteem with a decrease of the level of psoriasis disability, additionally a positive correlation between total scores of knowledge and total scores of reported practices were found. **Recommendations:** Individualized guidance should be recommended as a nursing intervention protocol during the care of every patient with psoriasis.

Keywords: Individualized guidance, Psoriasis, and Self-care practice

Introduction:

Psoriasis is a chronic, immune-mediated disease that is equally prevalent in men and women, affecting 1%-3% of the population worldwide as well as affects approximately 7.4 million adults in the United States. It is a skin disorder that causes skin cells to multiply up to 10 times faster than normal ⁽¹⁾. This makes the skin build up into uncomfortable red patches covered with white scales. Psoriasis is associated with physical symptoms including red, scaly, itchy, and painful skin lesions, joint pain and many patients experience adverse psychological effects, including poor body image, stress, embarrassment, and depression ⁽²⁾.

Psoriasis can grow anywhere, but most appear on the scalp, elbows, knees, and lower back. Psoriasis cannot be transmitted from person to person. It sometimes happen in members of the same family. Psoriasis triggers differ from person to person but the commonest may include skin injury (cuts, scrapes or surgery, emotional stress, streptococcal or other infection that affects the immune system, certain prescription medications (such as lithium and beta-blockers), cold weather, or when people have less exposure to sunlight and humidity or exposure more to hot or dry indoor air. There are several

types of psoriasis, and the patient may have more than one type of psoriasis at the same time. It is also possible for one type of psoriasis to develop and become more severe ⁽³⁾.

Psoriasis types include plaque psoriasis which is the most common form of the disease, and it appears as raised, red patches (plaques) covered with silvery scales. These patches or plaques most often show up on the scalp, knees, elbows, and lower back, and they are often itchy and painful, and they can crack and bleed. Guttate psoriasis; this type primarily affects young adults and children. It is usually triggered by a bacterial infection (such as strep throat). It is characterized by small, water-drop-shaped, scaling lesions that appear on the trunk (back, chest and abdomen), as well as the arms, legs, and scalp ⁽⁴⁾. Guttate psoriasis can flare up on its own and it can improve on its own. Inverse psoriasis: causes large patches of red, inflamed skin to appear in body folds, (such as the armpits, behind the knees, between the thighs, and under the breasts), and it can affect some or all these areas at the same time. This condition worsens with friction and sweating. Other less common types of psoriasis include Pustular psoriasis is characterized by raised bumps (blisters) that are filled with

noninfectious pus. Pustular psoriasis can occur in any part of the body. Erythrodermic psoriasis can cover the entire body with a red, peeling rash that can itch or burn intensely. Individuals having an erythrodermic psoriasis flare should see a doctor immediately since this form of psoriasis can be life-threatening⁽⁵⁾. To successfully control psoriasis, patients and healthcare providers must work with each other to recognize how to manage psoriasis considering psoriasis severity, comorbidities, and potential side effects of medications, treatment costs, and patient preferences. So, nurses might improve patients' disease conditions and can assist with these changes by providing educational opportunities and strategies that increase self-care practices, thus making a positive impact on patient's daily life. Additionally, the nurses spent the most time with patients and families, and they have many opportunities for educational activities. Patients experiencing psoriasis should know how to care for themselves to manage the symptoms⁽⁶⁾.

As well as the steps of psoriasis self-care practices which include avoidance of all factors which may aggravate psoriasis, avoidance of picking at or scratching the affected area. Ways to prevent dry skin are encouraged because dry skin worsens

psoriasis. Water used in the care of the patient's skin should be warm, avoid too hot, and the skin should be dried by patting with a towel rather than rubbing. Oil bath or emollient cleansing has a moisturizing effect, avoid using soap or other irritating cleansing substances, wearing cotton clothes, and avoid wearing synthetic fabrics, or using too much salty, sour, or acidic foods⁽⁷⁾.

Individualized guidance provides an opportunity for the patient to be fully aware of his/ herself and how the patient is responding to the influence of his/her environment and allows the patient to talk about their feelings, thoughts, and behaviors, or things that are troubling him. The nurse should work with the patient to set goals or identifying the things he would like to accomplish together. Individualized guidance promotes the individual's recognition of the disease, increases his/her incentive to make behavioral changes, and consequently improves clinical outcomes. On the other hand, training self-care practices for patients could improve the patients' knowledge and promote self-care practices about psoriasis. Furthermore, it could increase the patients' feeling of self-control over the disease and lead to better skincare procedures⁽⁸⁾.

Significance:

Psoriasis is a common disorder worldwide and is considered a frustrating disease for both patients and caregivers. The prevalence of psoriasis in Egypt varies from 0.19% to 3%. This means that it affects approximately 2 million Egyptian citizens⁽⁹⁾. A study done by Parisi et al.⁽¹⁰⁾ reported that registration of psoriasis cases is not compulsory, therefore reliable data are difficult to be found. As the patient may suffer from psoriasis because of social stigmatization or delayed diagnosis and inadequate treatment options.

Psoriasis is an autoimmune disease that can lead to other comorbidities as psoriatic arthritis (PSA), eye diseases, Parkinson's disease, high blood pressure, metabolic syndrome, cardiovascular disease, type 2 diabetes, kidney disease, anxiety, and depression⁽¹¹⁾.

Psoriasis has been considered as a complex long-term condition involving physical, psychological, and social challenges, including a significant impact on daily living. Patients with lack knowledge about the disease and its self-care practices, as well as scientific evidence for these self-care practices are still limited patients with psoriasis. Just a few studies have been performed, while only a few nursing types of research were found, despite several

searches in the literature. So, patient education and self-care practices seem to be essential assistance tools for helping those patients to increase their general knowledge about the disease and consequently their self-care practice skills, which could lead to higher therapy adherence and decrease disease severity⁽¹²⁾. Therefore, it is important to train patients with psoriasis on self-care practices and establish self-care interventions.

Aim of the Study:

This study aimed to evaluate the effect of individualized guidance on knowledge and self-care practices of psoriasis patients through:

- Assessing of level of knowledge and self-care practice of patients with psoriasis.
- Assessing the severity and level of disability of patients with psoriasis.
- Developing Individualized guidance for knowledge and self-care practices about psoriasis based on the patient's assessed needs.
- Implementing the Individualized guidance for the study group
- Evaluating the effect of the individualized guidance on the patient's knowledge and self-care practices.

Research hypotheses

H1. Patients in the study group will have a statistically significant improvement of knowledge and reported self-care practices to post individualized guidance implementation as compared to the control group.

H2. There will be a significant improvement in the level of psoriasis disability index among the study group who will receive the individualized guidance as compared to the control group.

H3. There will be a positive direct correlation between psoriasis patients' total scores of knowledge and total scores of reported self-care practices among the study group.

Subjects and methods

Research design:

A quasi-experimental research design was utilized to conduct this study.

Technical design:

It included research setting, subjects, and tools for data collection.

Setting:

The study was conducted at the Dermatology outpatient clinic at El-Mansoura University Hospitals.

Subjects:

A purposive sample of **100** adult patients diagnosed with psoriasis then equally divided into study and control groups, (50)

patients for each one with the following criteria:

- The confirmation of the diagnosis of psoriasis by a dermatologist.
- Age over 18 years.
- Free from any other related medical condition that can interfere with their abilities to perform a daily living activity such as chronic cardiac or respiratory diseases as well as any other dermatology diseases.
- Willingness to participate in the study.

Sample size calculation:

Based on the flow rate obtained from the Dermatology outpatient clinic at El-Mansoura University Hospitals in the previous year 2019-2020 which was the year of the pandemic period of covid-19 the total population = 133 and according to Solvin's 1967 formula for sample size calculation the required sample was 100 patients were divided randomly and equally to be 50 psoriasis patients in each group⁽¹³⁾.

Where:

n= Corrected sample size.

N = Population size.

e = Margin of error, and e = 0.05 based on the research condition.

Tools of data collection:

Two tools were utilized to achieve the aim of the study

The tool I: Structured Interviewing Questionnaire. It was developed by researchers in Arabic language after reviewing recent related literature and research studies ^(14,1,15), it included four parts:

Part 1: Demographic characteristics: It included (age, sex, marital status, residence, level of education, occupation, and source of information about psoriasis).

Part 2: Medical History: It was composed of seven (7) items in the form of closed-ended questions, it included duration of disease, factors that aggravate and increase risk of psoriasis, history of other chronic diseases, sites affected with psoriasis, severity, clinical manifestations that appeared on patients, types of psoriasis.

Part 3: Patient's level of knowledge: It was used to assess the patient's level of knowledge about psoriasis as (meaning of the disease, causes, types, signs and symptoms, possible complications and its management, definition, and steps of self-care and methods of psoriasis care).

Scoring system:

Knowledge obtained from studied patients was checked with a model answer and scored as the following: Complete correct answer takes "three", while the incomplete answer takes "two" and a wrong answer or don't know takes "one". The patients'

knowledge total score 24 grades & converted into percentage and construed as follows:

- Good >80% with scores ranged from 19-24 grades.
- Fair 60 -80% with scores ranged from 14-18 grades.
- Poor < 60% with score ranged from 8-13 grades.

Part 4: The reported Self-care Practices and Self-esteem of Patients with Psoriasis: it included reported self-care practices regarding skincare, and care of affected areas as well as self-esteem of patients.

Scoring system:

This part was rated on a three-point rating scale of performance "always" three grades, "sometimes" two grades, "rarely one" grade. The total score of this part was 99 grades. The higher scores indicated higher practice levels. They were categorized as: scores equal to or more than 80 % were considered as satisfactory reported practice level and scores lower than 80 % were considered as unsatisfactory reported practice level.

Tool II: The Psoriasis Disability Index (PDI) which was adopted from ⁽¹⁶⁾, is a disease-specific questionnaire measuring disability induced by psoriasis and the burden of living with psoriasis. It included 15 questions underline the heading

concerned with daily activities, work / school, personal relationships, leisure, and treatment. It was filled by the patients or researchers in the case of the illiterate patient.

Scoring system:

The scoring of each question is answered on a series of 4 answers (not at all scored (0), a little scored (1), a lot scored (2), and very much scored (3). The Psoriasis Disability Index is calculated by summing the score of each of the 15 questions, resulting in a maximum of 45 and a minimum of zero. The higher scores indicating greater impairment in a patient's ability.

Operational design:

- **Preparatory phase:**

It included reviewing current and past available literature and theoretical knowledge of various aspects of the study using the booklet, articles, internet, periodicals, and magazines to develop the data collection tools.

Validity of tools

The study tools were tested for validity through the judgments of 5 juries; four experts in Community and Adult Health Nursing (two professors in Community Health Nursing & two professors in Adult Health Nursing), and one expertise from medical staff at the dermatology department.

Reliability of the tools

The reliability test for the present study tools was established by using Cronbach's alpha which showed good internal consistency and good reliability as shown in this table

Reliability of the tools	
0.723	Knowledge
0.866	Practice
0.848	Psoriasis disability index (PDI) questionnaire

Ethical consideration

An informed consent from each participant in the study was obtained. Each participant was conversant about the purpose of the study and its significance. The participants were also informed that their participation in the study was completely voluntary, and they have the right to withdraw from the study at any time without giving any reason. Additionally, all study patients were assured that anonymity and confidentiality were considered through coding the data. Moreover, all of them were informed that the data were not reused in another research without their permission.

Pilot Study:

A pilot study was done on 10% of the study sample about 10 patients to evaluate tools' clarity, applicability, and feasibility and to estimate the time needed for filling in the tools. The pilot study data were analyzed, and no modifications were done to the study tools. So, those who participated in the pilot study were included in the main study sample.

Fieldwork (Procedure)

- Data collection was started and completed within 6 months in the period from beginning March 2021 till the end of August 2021.

- The purpose of the study was explained by the researchers to patients who agreed to participate in the study before any data collection; the study patients were divided into study and control groups. The study tools were filled in and completed by the researchers in 2 stages (pre-individualized guidance and post one month after the implementation of individual guidance).
- Researchers were available at the Dermatology Outpatient Clinic at El-Mansoura University Hospitals two days per week (Monday & Thursday) from 9 am to 1 Pm.

Data were collected through four phases:

Phase I: Assessment phase: In this phase, the researchers collected data from both groups (study & control). It was begun by the patient structured interview questionnaire which includes the patient's demographic characteristics, level of knowledge, and reported self-care activities, and PDI. The tools took about (20-30) minutes for each patient to fulfill. The data that was obtained during this phase was considered the basis for the individualized guidance (pre-test).

Phase II: Planning phase: After identifying the needs of the psoriasis patients in the assessment phase, an

individualized guidance program was designed and developed by the researchers, based on the assessment phase results. It was designed to improve patient's knowledge and self-care practices regarding psoriasis disease.

Proposed Individualized guidance

Individualized guidance was designed by the researchers based on patients assessed needs and related literature to enrich the patients with information regarding psoriasis aiming to improve their knowledge and promote self-care practices. It was written in a simple Arabic language. It covered the following items: meaning, types, causes, risk factors, signs and symptoms, diagnosis, management, complications of the disease, health guidance about self-care practices.

Phase III: Implementation phase: during this phase, the study group was individually interviewed by the researchers, and the aim of the study was explained for each patient. The researchers distributed hand-outs in the Arabic language to the study group; the study group received an Individualized guidance program through individual interviews by the researchers. It took about (45-60 min) to accomplish all booklet contents as well as explaining all instructions and self-care practices and answers all patient questions. While the

patients in the control group received only pharmacological treatment.

Phase IV: Evaluation phase: Evaluation for both groups was conducted through interviewing patients at the outpatients' clinic one-month post individualized guidance implementation (post-test) using the same pretest tools to evaluate the effect of the implemented individualized guidance on improving patients' knowledge and reported self-care practice.

Administrative design:

Before carrying out the study, the necessary approvals were obtained from the hospital director and nursing director of El-Mansoura University Hospitals. An official letter was issued to them from the Faculty of Nursing, Helwan University explaining the aim of the study to obtain permission for the collection of data.

Statistical Design:

Data entry and statistical analysis were performed using personal computer software, the statistical package for social sciences (SPSS), version 20. Suitable descriptive statistics were used such as frequency, percentage, mean and standard deviation. A Chi-square test was used to detect the relation between the variables. Also, the correlation coefficient (r) test was used to estimate the closeness association between variables. Independent ANOVA (F) test was used to compare

more than two means scores of both studied variables. The p-value is the probability that an observed difference is due to chance and not a true difference. A significant level value was considered when the p-value < 0.05 and a highly significant level value was considered when p-value < 0.001, while p-value > 0.05 indicates non-significant results.

Results:

Table (1) presents that the mean age of the psoriasis patients in the study and control group were 44 ± 8.6 and 42 ± 7.9 respectively. Regarding their sex 62%, 58% were males in both study and control groups respectively. As well regarding marital status in the study and control groups, 62% of both groups were married. Additionally, regarding their place of residence 60% of both groups were from rural areas. 52% and 38% respectively of the study and control group were secondary educated. Also, 28% and 32% respectively of both studied groups were housewives. As well, 48% and 38 % respectively of both study and control group did not hear before about psoriasis. No statistically significant difference was noticed among the study and control groups in all demographic characteristics. Table (2) Reflects that the mean \pm SD of disease duration was 6.5 ± 3.2 among the study group and was 7.6 ± 6.1 among the

control group. Regarding the risk factors, the highest risk factor was new sore throat or URTI it was 54% in the study group and 38% in the control group. Regarding psoriasis, sites 72% of the study group referred to the knee while the control group 78% referred to the elbow. Regarding the severity of psoriasis, the study and control group reported moderate severity it was 40 % & 46% respectively. Additionally, the signs and symptoms of psoriasis both groups reported red spots on the surface of the skin covered with thick silvery areas 88% & 82% respectively. While 80% & 66% respectively of the study and control group reported that they had plaque type of psoriasis

Table (3): Explains that there was a highly statistically significant difference between study and control group patients in all items of psoriasis knowledge pre and post-individualized guidance (p-value < 0.001). It is obvious that the total mean scores of psoriasis knowledge among the pre-study group and control group (11.12 ± 3.23 & 11.76 ± 3.64 respectively) confirmed poor knowledge; it was improved to be 19.90 ± 3.72 among the study group post individualized guidance while there was no improvement among the control group (12.78 ± 4.35).

Figure (1) Introduces that there was noticeable progress among study group's total score of knowledge pre and post-individualized guidance rather than the control group. As well as the figure shows that 80% of the control group, as well as 86% of the study group, had poor knowledge of pre-individual guidance, while 76.0% of the study group had good knowledge rather than the control group 18% after the individual guidance.

Table (4) Demonstrates that pre-individualized guidance both groups study and control reported that they rarely conducted the skincare practices with no statistically significant differences ($p > 0.05$) except in seven items like avoiding prolonged exposure to the sun to avoid dryness and irritation of the skin, wear light, soft, cotton clothes and apply psoriasis ointments and creams they conducted these items sometimes with significant differences between them related to those items.

Table (5) Demonstrates the highly statistically significant differences between study and control groups' post individualized guidance implementation regarding reported skincare and psoriasis affected areas in all items with (p -value < 0.001).

Figure (2): Poses that, there was a radical satisfactory improvement in the study group' total score of reported practices post implementing the individualized guidance to be 82% in the post-test rather than of 12% in the pre-test among the study group and while no satisfactory improvement among control group post the individualized guidance implementation (16%).

Table (6) Demonstrates that there was no statistically significant differences between study and control groups' pre-individualized guidance regarding self-esteem of psoriasis patients reported in all items except with three items (satisfied with myself, can face life's challenges & get loved in my family) with (p -value > 0.05).

Table (7) Demonstrates the highly statistically significant differences between study and control groups' post individualized guidance regarding self-esteem of psoriasis patients reported in all items with (p -value < 0.001) except in only three items (think about myself, get loved in my family and have reliable friends) there was no significant difference with p -value > 0.05 .

Table (8) Illustrates statistically significant improvement in patient's total level of disability and appeared through patients' daily activities, studying/ working,

personal relationship, leisure time, and regular treatment with (p-value < 0.001) with totally highly significant differences between study and control group at (p-value < 0.001) post individualized guidance implementation. It is evident that the total psoriasis disability mean scores among the study group and control group pre-individualized guidance implementation were (32.22±7.23& 34.30±5.02) respectively which confirmed severe disability; it was dropped to 17.82±4.57 post-implementation period among the study group with no change in the control group.

Table (9) Reveals that there were detected statistically significant strong direct correlation between total scores of pre-knowledge and total scores of pre reported practices before individualized guidance with (p-value < 0.001), While a statistical significant week direct correlation of post-study group which was 0.021 and no statistical significant difference that was 0.938 among control group post individualized guidance with p-value > 0.05

Table (1): Demographic Characteristics of Psoriasis Patients Study and Control Group (n = 100)

Variables	Study Group (no.= 50)		Control Group (no.=50)		X ²	P- value
	N	%	N	%		
Age Group/ years					16.6	0.940
- 30 to less than 40	19	38	21	42		
- 40 to less than 50	18	36	20	40		
- 50 and more	13	26	9	18		
Mean± SD	44±8.6		42± 7.9			
Sex					0.167	0.419
- Male	31	62	29	58		
- Female	19	38	21	42		
Marital status					1.57	0.665
- Single	9	18	11	22		
- Married	31	62	31	62		
- Divorced	5	10	2	4		
- Widow	5	10	6	12		
Place of residence					0.386	0.534
- Rural	33	66	30	60		
- Urban	17	34	20	40		
Educational level					3.192	0.670
- Primary	12	24	17	34		
- Preparatory	7	14	9	18		
- Secondary	26	52	19	38		
- University	5	10	5	10		
Occupation					1.296	0.935
- Not work	9	18	7	14		
- Housewife	14	28	16	32		
- Worker	7	14	6	12		
- Free working	8	16	7	14		
- Professional work	7	14	6	12		
- Employee	5	10	8	16		
Source of information					8.573	0.199
- Not hear before	24	48	19	38		
- Internet	7	14	5	10		
- Mass media	0	0.0	5	10		
- Family/ Friends	3	6	5	10		
- Doctors/ Nurses	11	22	10	20		
- Other psoriasis patient	5	10	6	12		

P > 0.05= not significant

Table (2): Medical History Characteristics of Psoriasis Patients Study and Control Group (n = 100)

Medical history items	Study Group (No.= 50)		Control Group (No.=50)	
	N	%	N	%
Duration of disease (years)				
- ≤ 5	22	44	28	56
- 6-10	24	48	11	22
- ≥ 11	4	8	11	22
Mean± SD	6.5±3.2		7.6± 6.1	
Risk factors*				
- Family history	10	20	4	8
- New sore throat or URTI**	27	54	19	38
- Psychological stress	26	52	9	18
- Obesity	4	8	4	8
- Smoking/Coffee	20	40	15	30
- Ulcerative colitis	15	30	11	22
History of Chronic disease				
- Yes	16	32	25	50
- No	34	68	25	50
Psoriasis affected sites*				
- Elbow	32	64	39	78
- Knee	36	72	34	68
- Skin folds	17	34	17	34
- Hair scalp	33	66	26	58
- Palm	23	46	25	50
Severity				
- Mild	9	18	7	14
- Moderate	20	40	23	46
- Sever	21	42	20	40
Signs / Symptoms*				
- Red spots on the surface of the skin covered with thick silvery areas	44	88	41	82
- Small spots covered with scales	6	12	8	16
- There is dryness or cracks in the skin and there may also be bleeding in the affected area	22	44	26	52
- Itching or burning sensation in the affected area	35	70	27	54
- Nails may thicken or become wrinkled	22	44	16	32
- Swelling and stiffness of joints	13	26	11	22
Psoriasis type				
- Plaque	40	80	33	66
- Guttate	8	16	13	26
- Inverse	2	4	4	8
- Pustular	0	0.0	0	0.0

*Responses are not mutually exclusive **URTI: Upper respiratory tract infection

Table (3): Comparison between Study and Control Group Patients Scores of Knowledge Pre and post-Individualized Guidance (n=100)

Psoriasis Knowledge Items	Study Group (No.=50)		Control Group (No.=50)		F- test	P-value
	Pre-Individualized Guidance Mean±SD	Post-Individualized guidance Mean ±SD	Pre-Individualized Guidance Mean±SD	Post-Individualized guidance Mean ±SD		
-Meaning	1.40±0.57	2.70±0.53	1.83±0.63	1.54±0.78	50.619	0.000**
-Causes	1.42±0.64	2.50±0.64	1.30±0.54	1.34±0.51	48.882	0.000**
-Types	1.30±0.58	2.38±0.60	1.44±0.64	1.68±0.819	25.781	0.000**
-Signs and symptoms	1.54±0.45	2.64±0.66	1.74±0.59	1.90±0.73	28.182	0.000**
-Complication and problems	1.36±0.56	2.28±0.57	1.44±0.54	1.46±0.50	31.373	0.000**
-Concept of self-care	1.60±0.42	2.34±0.59	1.30±0.58	1.52±0.78	37.451	0.000**
-Steps of self-care practices	1.34±0.51	2.54±0.57	1.46±0.64	1.62±0.78	36.529	0.000**
-Methods of self-care practices	1.60±0.53	2.50±0.64	1.70±1.7	1.72±0.45	28.796	0.000**
Total Scores	11.12±3.23	19.90±3.72	11.76±3.64	12.78±4.35	58.166	0.000**

**** Highly statistically significant at p-value <0.001**

Figure (1): Comparison between Study and Control Group Patients Regarding Total Knowledge Scores Pre and Post Individualized Guidance (n = 100)

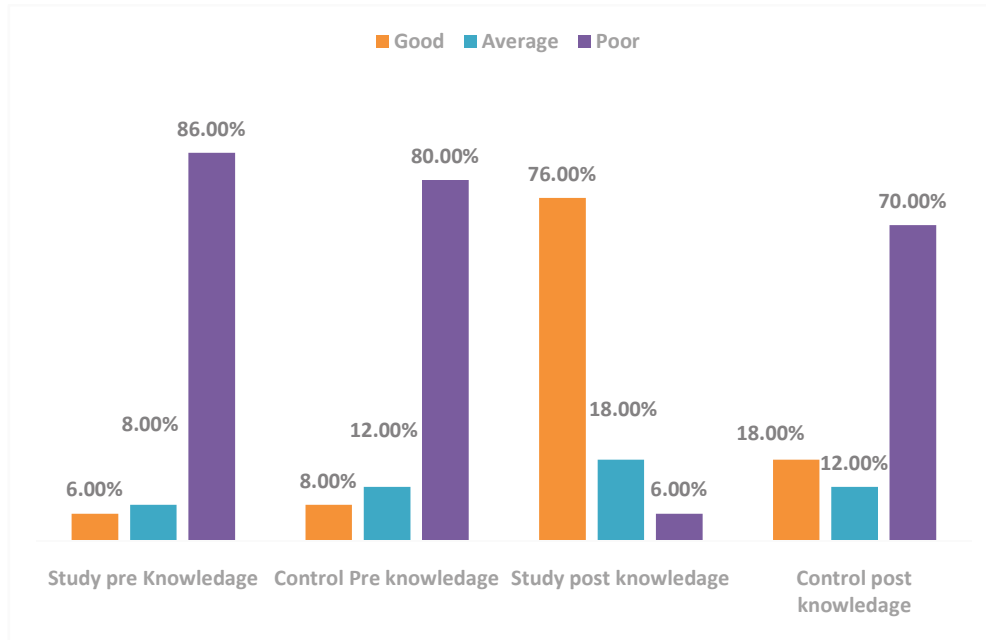


Table (4): Comparison between Study and Control Group Patients Regarding Reported Self Care Practices in relation to Skin Care and Psoriasis Affected Areas” Pre - Individualized Guidance (n = 100).

Items of skincare of psoriasis affected areas reported self care practices	Pre- Study Group No=50			Pre- Control Group No= 50			Chi ² - X ²	P-value
	Always %	Sometimes %	Rare %	Always %	Sometimes %	Rare %		
-Commit to showering with warm water daily, and the duration of the shower is 5-15 minutes	12.0	68.0	20.0	0.0	76.0	24.0	6.404	0.041*
-Use a soft towel to dry the skin	14.0	36.0	50.0	4.0	28.0	68.0	4.651	0.098
-Follow the tack method when drying the skin	10.0	46.0	44.0	0.0	34.0	66.0	8.100	0.017*
-Commit to daily moisturizing the skin 1-3 times a day	28.0	22.0	50.0	12.0	38.0	52.0	4.909	0.086
-Expose myself to the sun for 15-20 minutes to benefit from the ultraviolet rays	2.0	50.0	48.0	6.0	44.0	50.0	1.212	0.546
-Avoid prolonged exposure to sun to avoid dryness and irritation of the skin	18.0	56.0	26.0	0.0	38.0	62.0	18.087	0.000**
-Wear light, soft, cotton clothes	8.0	50.0	42.0	2.0	70.0	28.0	4.867	0.088
- Apply psoriasis ointments and creams under the supervision of a doctor	24.0	56.0	20.0	8.0	48.0	44.0	8.808	0.012*
-Avoid getting scratches or cuts on the skin	18.0	46.0	36.0	6.0	50.0	44.0	3.483	0.175
-Avoid using alcohol-containing products that may irritate the skin without	8.0		14.0	4.0		32.0		0.000**
-Consulting a doctor	4.0	78.0	14.0	4.0	64.0	32.0	4.879	0.087
-Get enough rest daily Walking / Deep Breathing	6.0	26.0	68.0	8.0	24.0	68.0	0.183	0.913
-Drink adequate amounts of water 6-8 glasses daily	28.0	32.0	40.0	8.0	40.0	52.0	6.783	0.034*
-Eat balanced meals rich in omega-3 fish (salmon) - olive oil / whole grains	12.0	38.0	50.0	6.0	32.0	62.0	1.900	0.387
-Eat vegetables like spinach and carrots, and fruits like berries and mangoes	10.0	30.0	60.0	4.0	56.0	40.0	7.216	0.027*
-Avoid eating red meat and dairy products in abundance	2.0	32.0	66.0	6.0	42.0	52.0	2.506	0.286
-Try to reduce/quit/exposure to smoking	0.0	36.0	64.0	4.0	48.0	48.0	4.000	0.135

** Highly statistically significant at p-value < 0.001

Table (5): Comparison between Study and Control Group Patients Regarding Reported Self Care Practices in relation to Skin Care and Psoriasis Affected Areas' Post - Individualized Guidance (n = 100).

Items of skincare of psoriasis affected areas reported self care practices	Post-Study Group No=50			Post- control No= 50			Chi2- X2	P-value
	Always %	Sometimes %	Rare %	Always %	Sometimes %	Rare %		
-Commit to showering with warm water daily, and the duration of the shower is 5-15 minutes	74.0	22.0	4.0	16.0	60.0	28.0	34.637	0.000**
-Use a soft towel to dry the skin	56.0	44.0	0.0	18.0	22.0	60.0	43.423	0.000**
-Follow the tack method when drying the skin	58.0	30.0	12.0	8.0	34.0	58.0	34.179	0.000**
-Commit to daily moisturizing the skin 1-3 times a day	48.0	34.0	18.0	12.0	36.0	52.0	19.0	0.000**
-Expose myself to the sun for 15-20 minutes to benefit from the ultraviolet rays	54.0	28.0	18.0	18.0	38.0	44.0	15.209	0.000**
-Avoid prolonged exposure to avoid dryness and irritation of the skin	70.0	30.0	0.0	0.0	38.0	62.0	66.471	0.000**
-Wear light, soft, cotton clothes	72.0	28.0	0.0	18.0	62.0	20.0	32.622	0.000**
-Apply psoriasis ointments and creams under the supervision of a doctor	62.0	38.0	0.0	16.0	48.0	36.0	32.145	0.000**
-Avoid getting scratches or cuts on the skin	56.0	44.0	0.0	16.0	42.0	42.0	32.134	0.000**
-Avoid using alcohol-containing products that may irritate the skin without	48.0	32.0	20.0	14.0	64.0	22.0	14.704	0.001**
-Consulting a doctor	64.0	36.0	0.0	22.0	28.0	50.0	35.756	0.001**
-Get enough rest daily Walking / Deep Breathing	54.0	26.0	20.0	12.0	24.0	64.0	24.927	0.000**
-Drink adequate amounts of water 6-8 glasses daily	64.0	38.0	0.0	12.0	38.0	50.0	42.817	0.000**
-Eat balanced meals rich in omega-3 fish (salmon) - olive oil / whole grains	60.0	40.0	0.0	10.0	30.0	60.0	48.571	0.000**
-Eat vegetables like spinach and carrots, and fruits like berries and mangoes	76.0	22.0	0.0	8.0	56.0	36.0	53.899	0.000**
-Avoid eating red meat and dairy products in abundance	30.0	52.0	18.0	8.0	40.0	52.0	15.408	0.000**
-Try to reduce/quit/exposure to smoking	44.0	38.0	18.0	18.0	46.0	36.0	8.833	0.012*

** Highly statistically significant at p-value < 0.001

Figure (2): Comparison between Study and Control Group of Psoriasis Patients 'Total Scores of Reported Self Care Practices Pre and Post Individualized Guidance (n = 100)

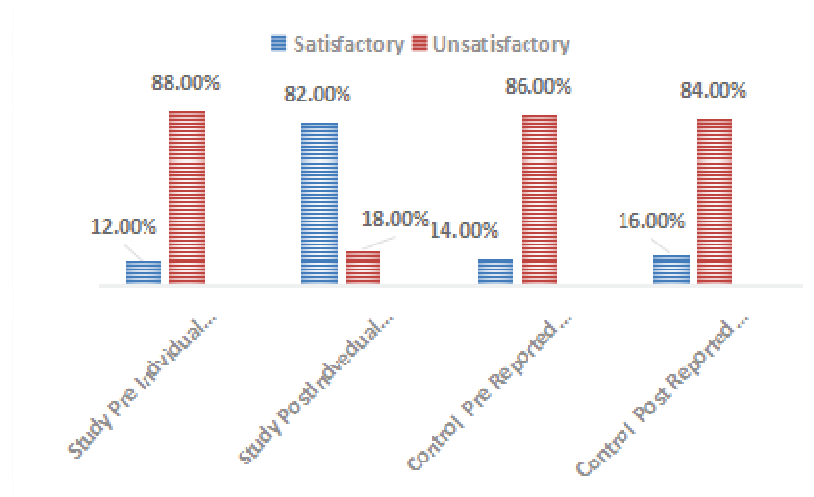


Table (6): Comparison between Study and Control Group Patients Regarding Reported Self Care Practices Concerning Self-Esteem of Pre -Individualized Guidance (n = 100).

Items of Self-esteem Reported Self Care Practice	Pre- Study Group No=50			Pre-Control Group No= 50			Chi ² - X ²	P- value
	Alwa ys %	Someti mes %	Rar e %	Always %	Someti mes %	Rare %		
-Satisfied with myself	42.0	58	0.0	24.0	62.0	14	9.521	0.009* *
-Think about myself that I'm a good person	30.0	65.0	14.0	34.0	50.0	16.0	0.361	0.835
-Face situations and problems with confidence	16.0	58.0	26.0	32.0	40.0	28.0	4.357	0.113
-Set goals that I want to achieve	10.0	58.0	32.0	22.0	40.0	38.0	4.160	0.125
-Can face life's challenges	8.0	76.0	16.0	28.0	50.0	22.0	8.712	0.013*
-Accept failure and change my plans	28.0	44.0	28.0	28.0	54.0	18.0	1.597	0.450
-Use the experiences of others to set my goals	28.0	56.0	16.0	40.0	34.0	26.0	4.938	0.085
-Find the ability to overcome difficult situations	34.0	48.0	18.0	36.0	46.0	18.0	0.050	0.975
-Accept fate and destiny	72.0	20.0	8.0	76.0	18.0	6.0	0.250	0.883
-Have reliable friends	44.0	26.0	30.0	38.0	42.0	20.0	3.102	0.212
-Get loved in my family	30.0	46.0	24.0	54.0	32.0	14.0	6.001	0.050*
-Keep my presence special among my friends	18.0	48.0	34.0	22.0	40.0	38.0	0.675	0.714
-Offer help whenever anyone need it	20.0	54.0	26.0	22.0	60.0	18.0	0.933	0.627
-Enjoy teamwork	16.0	54.0	30.0	18.0	54.0	28.0	0.093	0.954
-Ask for help when needed	38.0	48.0	34.0	38.0	52.0	10.0	0.413	0.813
-Have a good ability in building new relationship	26.0	46.0	28.0	42.0	28.0	30.0	4.106	0.128

** Highly statistically significant at p-value >0.001

Table (7): Comparison between Study and Control Group Patients Regarding Reported Self Care Practices Concerning Self-Esteem of Post Individualized Guidance (n = 100).

Items of Self-esteem Reported Self Care Practice	Post-Study Group No=50			Post-Control Group No= 50			Chi ² - X ²	P-value
	Always	Sometimes	Rare	Always	Sometimes	Rare		
	%	%	%	%	%	%		
-Satisfied with myself	98.0	2.0	0.0	26.0	62.0	12.0	55.028	0.000**
-Think about myself that I'm a good person	54.0	28.0	18.0	36.0	50.0	14.0	5.153	0.076
-Face situations and problems with confidence	70.0	30.0	0.0	32.0	40.0	28.0	21.793	0.000**
-Set goals that I want to achieve	58.0	42.0	6.0	24.0	40.0	36.0	22.721	0.000**
-Can face life's challenges	54.0	46.0	0.0	30.0	50.0	20.0	13.512	0.001**
-Accept failure and change my plans	78.0	22.0	0.0	30.0	54.0	16.0	25.404	0.000**
-Use the experiences of others to set my goals	92.0	8.0	0.0	42.0	34.0	24.0	29.376	0.000**
-Find the ability to overcome difficult situations	84.0	16.0	0.0	38.0	46.0	16.0	23.930	0.000**
-Accept fate and destiny	68.0	30.0	10.0	78.0	18.0	20.0	2.176	0.337
-Have reliable friends	84.0	10.0	6.0	42.0	40.0	18.0	19.000	0.000**
-Get loved in my family	74.0	24.0	2.0	58.0	30.0	12.0	4.874	0.087
-Keep my presence special among my friends	76.0	14.0	10.0	26.0	40.0	34.0	25.060	0.000**
-Offer help whenever anyone need it	94.0	4.0	2.0	26.0	58.0	16.0	48.227	0.000**
-Enjoy teamwork	80.0	20.0	0.0	22.0	54.0	24.0	36.301	0.000**
-Ask for help when needed	82.0	18.0	0.0	42.0	50.0	8.0	17.981	0.000**
-Have a good ability in building new relationship	92.0	8.0	0.0	46.0	26.0	28.0	26.431	0.000**

**** Highly statistically significant at p-value < 0.001 & No significant at p value > 0.05**

Table (8): Comparison of Psoriasis Disability Level between the Study and Control Group Patients Pre and Post Individualized Guidance (n = 100)

Psoriasis patient abilities	Study Group (No=50)		Control Group (No.=50)		F- test	P-value
	Pre- Individualized Guidance Mean ±SD	Post- Individualized guidance Mean ±SD	Pre- Mean± SD	Post- Mean± SD		
- Daily Activities	12.4±2.20	6.74± 1.35	11.66±2.22	11.2±2.12	74.749	0.000**
- Studying or working/ Not Working	7.04 ±1.35	3.98±1.20	7.46±1.16	7.36±1.10	88.909	0.000**
- Personal relationship	3.16±1.69	1.74±0.89	4.26±1.50	4.14±1.63	32.02 4	0.000**
- Leisure time	8.14±2.77	4.46±1.70	9.0±2.37	8.82±2.59	40.320	0.000**
- Regular treatment	1.48±0.76	0.90±0.46	1.92±0.63	1.88±0.65	27.506	0.000**
Total	32.22±7.23	17.82±4.57	34.30±5.02	33.48±5.65	129.095	0.000**

**** Highly statistically significant at p-value < 0.001**

Table (9): Correlation between Psoriasis Patients' Total Scores of Knowledge and Reported Self Care Practice Items Pre and Post Individualized Guidance (n = 100).

Total Scores of Reported Practice	Total Scores of Knowledge	
	r	p-value
Study Group Pre-Individual Guidance	0.904	0.000**
Study Group Post Individual Guidance	0.236	0.021*
Control Pre- Group	0.287	0.043*
Control Post Group	0.011	0.938

**** Highly statistically significant at p-value < 0.001 & * statistically significant at p < 0.05**

Discussion:

Psoriasis is a common chronic inflammatory skin condition. It is a complex immune-mediated inflammatory disease that occurs in genetically susceptible individuals. It has a chronic course with multiple evolving relapses and patients require long-term treatment and follow-up ⁽¹⁷⁾. Evidence showed that patients prefer an individualized approach to their treatment; patients want to be seen as a person, not as a psoriasis case. Some patients report that their complaints are not considered by doctors, which hinders their treatment. So, those patients report that doctors are not prepared to face the situation and minimize the problem, leaving them with feelings of rejection and with the gravity of their problems underestimated. Hence, there is a great need to support the individual issues of their lives beyond illness ⁽¹⁸⁾ as cited at ⁽¹⁹⁾.

Part I: Demographic Characteristics and Medical History of study patients

The results of the current study revealed that the mean age of the studied patients in the study and control group were 44 ± 8.6 and 42 ± 7.9 respectively, slightly more than two-thirds and more than half were males in both groups. Moreover, two-thirds of both groups were married.

Additionally, two-thirds of both groups were from rural areas. Slightly more than half and two-fifth of the study and control group respectively were secondary educated. Also, about one-third of both studied groups were housewives. The study findings revealed that no statistically significant difference was noticed among the study and control groups in all socio-demographic characteristics. This could be indicated that both the study and control group were homogeneous.

The study results were supported by Eid and Elweshahi ⁽²⁰⁾ in a study entitled "Quality of life of Egyptian patients with psoriasis" and mentioned that the mean age in the studied patients was 46.46 ± 13.78 years, more than two-thirds were male and the majority of the patients were married, on the other hand, the same study stated that half of the study sample were living in urban areas and were employed which in disagreement with the results of the present study. Furthermore, the result agreed with the study conducted by Megna et al. ⁽²¹⁾ who mentioned that the onset of disease in middle age. In the same context ⁽¹⁴⁾ in the study of "Effect of Self-Care Management Program on Quality of Life and Disease Severity among Patients with Psoriasis" reported that a high percentage of patients in the study and

control groups were married, unemployed, secondary educated and live-in rural area additionally, they illustrated that there were no statistically significant differences between the study and control groups in all demographic variables. Similar findings supported these results in a study carried out by Najafi Ghezalje et al. ⁽⁶⁾ about "The Effect of Self-management Education on the Quality of life and Severity of the Disease in Patients with Severe Psoriasis" and stated that the majority of the studied patients was in the age range of 30-44 years with a mean of the patients' age in the control and intervention groups were 39.387 and 42.26 years respectively as well patients were mostly male, married and had the academic degree less than diploma with no statistically significant difference between both groups in socio-demographic characteristics. The study finding in disagreement with El-Hanafy et al. ⁽²²⁾ in a study conducted in Kasr Al-Ainy Psoriasis Unit, Dermatology Department, and Cairo University to detect different demographic and clinical factors that affect the quality of life in Egyptian psoriatic patients and stated that the majority of their same lived in urban areas. Also, Sawicka et al. ⁽²³⁾ in a study of "Evaluation of Knowledge in the Field of Proper Skin Care and Exacerbating Factors in Patients with

Psoriasis" stated that many subjects were female, more than two-fifths had higher education.

Regarding the source of information

nearly half and more than one-third of study and control groups respectively were not here before about psoriasis and only one-fifth of both groups got information from doctor/ nurse. The study finding disagreed with Sawicka et al. ⁽²³⁾ who mentioned that the main source of information as reported by the patients related to the disease in their study was the internet (85%) and a dermatologist (60%). Mueller et al. ⁽²⁴⁾ noticed that patients should look for information related to the disease from proven sources such as books, magazines, or scientific websites. From the researchers' point of view this finding reflecting that psoriasis is a long-term disability disorder affecting the young patients during their productive years as well as the hospital serves the surrounding rural areas with minimal fees, finally; differences in results between researches could be due to differences of tools used for data collection and sitting at which the study was conducted.

Concerning the duration of disease, the current study results revealed that the mean duration of disease among the study and control group was 6.5 ± 3.2 & 7.6 ± 6.1

respectively. This finding was in the same line with Bulat et al. ⁽²⁵⁾ who study "The Impact of Psoriasis on Quality of Life: Psychological, Social and Financial Implications" and mentioned that duration of disease was between 6 and 10 years. However, this result was inconsistent with Najafi Ghezeljeh et al. ⁽⁶⁾ who mentioned that the mean (SD) duration of the disease in the intervention and control groups were 8.545 ± 8.2 and 14.463 ± 8.4 respectively. This result from the researchers' clinical experience confirmed the urgent need of those patients for continuous follow-up as along disease duration and multiple disease problems throughout their life. **As regards the type of psoriasis**, the majority of the study group and more than two-thirds of the control group had plaque type. This finding was supported by Alhammad et al. ⁽²⁶⁾ in a study on "A review on Updates in Management and Treatment of Psoriasis" who clarified that psoriasis Vulgaris (plaque) is the most prevalent type in around 90% of cases. Also, Yildizhan et al. ⁽²⁷⁾ in a study of "Epidemiological and Clinical Characteristics, Treatments, and Comorbidities in Elderly Patients with Psoriasis" reported that plaque-type psoriasis was the most common type, (88%). In the same context, this result is congruent with Rendon and Schäkel ⁽²⁸⁾ in

a review about "Psoriasis Pathogenesis and Treatment" which clarified that plaque-type psoriasis is the most prevalent type affecting 80% to 90% of patients with psoriasis. This result was in harmony with a study done in Malaysia by Affandi et al. ⁽¹⁵⁾ about "Epidemiology and Clinical Features of Adult Patients with Psoriasis" who stated that the most common type of psoriasis in their study was plaque psoriasis (85.1%), followed by guttate psoriasis (2.9%). **Regarding the risk factors**, both study and control groups stated more than one risk factor and it is noticed from the study results that more than half and near than two-fifth of the study and control group reported new sore throat or upper respiratory tract infection (URTI) followed by psychological stress and smoking/coffee. The study findings were consistent with Rademaker et al. ⁽²⁹⁾ in a review article about "Psoriasis and Infection, A clinical Practice Narrative" which stated that throat infection with streptococci has long been associated with both the initiation and acute exacerbation of psoriasis. Likewise ⁽³⁰⁾ in a study entitled "Prevalence and Possible Role of Candida Species in Patients with Psoriasis" supported the previous finding as they proved an association between psoriasis and streptococcal infection as psoriasis occurs after streptococcal infection.

Continuing talking about risk factors

regarding psychological stress and smoking/coffee the study result was supported by Snast et al. ⁽³¹⁾ in a study of "Psychological Stress and Psoriasis" who mentioned that stress is considered a commonly well-established trigger of psoriasis and many patients with psoriasis and physicians believe that stress exacerbates psoriasis. Another factor to be considered is smoking, which was supported by Lee et al. ⁽³²⁾ in a study of "Smoking and risk of psoriasis", which revealed that smoking is associated with an increased risk of developing psoriasis; in addition, smoking is strongly associated with Pustular lesions of psoriasis. This could be due to more than two-thirds of the study were male as well they reported current and /or ex-smoker.

In term of signs and symptoms of psoriasis

it is noticed that more than one sign and symptom were reported by studied patients, the results indicated that the majority of both groups reported red spots on the surface of the skin covered with thick silvery areas followed by itching or burning sensation in the affected area. These findings were in agreement with a recent study conducted at Banha city by Mohamed et al. ⁽³³⁾ about "Knowledge and Self-Care Practices

among Psoriatic Patients in Benha City" and showed that the chief complaints of the studied patients were scaling of the skin, itching, erythema, and fatigue. In the same line with the above-mentioned findings Alhammad et al. ⁽²⁶⁾ confirmed that classical clinical manifestations are sharply demarcated raised lesions covered in silvery scales. As well the finding was supported by Zhang ⁽³⁴⁾ in a study of "Guidelines for the Diagnosis and Treatment of Psoriasis in China" who stated that signs and symptoms of plaque psoriasis are dark red plaques with infiltrating erythema covered by white and silver-white scales; wax spot phenomenon and skin rashes with or without accompanying itching. The researchers' view could be due to the most type of psoriasis found in the present study was plaque type and its manifestations appear as red, thick, scaly, raised-up areas on the skin that are itchy, painful, and can flake and bleed.

Concerning psoriasis sites,

the results of the present study illustrated that the most common psoriasis sites reported in both groups were knee and elbow followed by the hair scalp. These findings were in accordance with Alhammad et al. ⁽²⁶⁾ who stated that the most common sites were on the extensor surfaces of the limbs.

Similarly, Dopytalska et al. ⁽³⁵⁾ in a study about "Psoriasis in special localizations" found that the incidence of scalp psoriasis among psoriatic patients is more than half (56%). While these findings were incongruent with Aldredge and Higham ⁽³⁶⁾ in a study of "Manifestations and Management of difficult-to-treat Psoriasis" who observed that the majority of the psoriatic patients (up to 90%) have the scalp affected by the disease. This could reflect that psoriasis had multiple and different sites of spread in the body.

Part II: Effect of individualized guidance on studied patients Knowledge

Regarding the total score of knowledge, the results of the current study revealed that the majority of both study and control group patients had poor knowledge pre-individualized guidance as there were no statistically significant differences between both groups pre- individualized guidance regarding total mean scores of knowledge and there was a noticeable progress among study group total score of knowledge post individualized guidance with a highly statistically significant difference was found between study and control group in all items of psoriasis knowledge post individualized guidance (p-value < 0.001). These results supported the research hypothesis (**H1**) which stated that the study

group will have a statistically significant improvement in the level of knowledge post individualized guidance as compared to the control group.

These results were in accordance with Omar and Ramadan ⁽³⁷⁾ in a study aimed to assess the self-care practices of patients with psoriasis and factors affecting them who found that most studied patients had a poor level of knowledge in their assessment before providing any intervention. In the same direction with Bubak et al. ⁽⁴⁾ in a study entitled "Analyzing the value of an educational program for Psoriasis Patients" who found that neither the intervention nor the control group reported significant improvement of knowledge before educational program implementation, while a statistically significant increase in the general knowledge about psoriasis was noted in the intervention group than the control group ((p-value < 0.001). According to researchers' point of view improvement post individualized guidance implementation might be due to the effectiveness health instructions given to each patient individually using different teaching strategies as lectures, and colored booklet according to his/ her level of education and understanding as well as delivery of valid, understandable, and reliable medical information is essential to

empower and motivate patients for self-management of their disease. As well as, these results agreed with Nagarajan and Thappa⁽³⁸⁾ study which entitled "Effect of an Educational and Psychological Intervention on Knowledge and Quality of Life among Patients with Psoriasis" reported that the knowledge was significantly increased in the experimental group post program from 9 ± 2.2 before intervention to 23.6 ± 1.5 after the intervention. Also, these results were consistent with Shehata et al.⁽³⁹⁾ who studied "The Effect of Self Care Instructional Guidelines on Quality of Life of Patients with Psoriasis" and reported that patients' level of knowledge about psoriasis was deficient before implementing the instruction guideline despite their different level of education while patients' level of knowledge showed significant improvement after implementation of the instruction guideline.

Part III: Effect of individualized guidance on studied Patients' self-care practices

Concerning self-care practices as regards skincare and psoriasis affected areas, the present study clarified that both groups study and control reported that they were rarely conducting the skincare

practices with no statistically significant differences ($p > 0.05$) pre-individualized guidance while there was highly statistically significant differences between both groups post individualized guidance implementation regarding reported skincare and psoriasis affected areas in all items with ($p\text{-value} < 0.001$). These results also supported the research hypothesis (**H1**) which stated that study group will have a statistically significant improvement in the level of reported self-care practices post individualized guidance as compared to the control group.

This might be due to that patients become exhausted from signs and symptoms of the disease especially itching and have the interested desire to overcome this problem by acquiring skills about skincare of affected area which demonstrates the effectiveness of education. On the same line Nabhan et al.⁽¹⁴⁾ stated that applying a proper self-care management program had a significant improvement on skincare, bathing, and diet as well modification and dealing with weather changes. Moreover, the program increased personal control, encouraging active coping strategies. Additionally, agreed with Omar and Ramadan⁽³⁷⁾ who found that most studied patients had a poor level of self-care practices pre-intervention phase. This results in the same line with Karimipour et

al. ⁽²⁾ in a study entitled "The Effects of a Self-Care Program on Promoting Self-Care Behaviours in Patients with Psoriasis" who indicated that skin self-care behavioural patterns were statistically improved post-program in all items as cotton clothing, bathing, and water temperature. **Regarding Self- Esteem**, the present study results demonstrated highly statistically significant differences between study and control groups post individualized guidance regarding self-esteem of psoriasis patients reported in almost all items with no statistically significant differences between study and control groups pre-individual guidance. The present study results agreed with the recent study by Aydin et al. ⁽⁴¹⁾ about "Psychological Impact of Skin Disorders on Patients' Self-esteem and Perceived Social Support" and mentioned that patients exhibiting the lowest overall self-esteem levels before the treatment phase. Furthermore, the overall self-esteem level also differed significantly between the groups' post-treatment phase ((p-value < 0.001).

From the researcher point of view psoriasis requires repeating treatment, leads to cosmetic problems, causes complaints like pain, itching all this have negative results in the daily life of patients and cause psychological embarrassment and

stigmatization in addition to low self-esteem and by proving guidance for each patient individually using different motivational techniques and listening carefully to patients when expressing their feelings help to improve their self-confidence and self-esteem. This explanation was supported by Aydin et al. ⁽⁴¹⁾ in a study titled "Identification of Anger and Self-esteem in Psoriasis Patients" who concluded that patients with psoriasis had lower self-esteem as well, healthy and normal-looking skin has a big significance in terms of physical and mental health and plays an important role in self-esteem and self -confidence improvement.

Part IV: Effect of individualized guidance on patient's level of disability

As regards psoriasis disability index, the current study illustrated that total psoriasis disability mean scores were dropped from 32.22 ± 7.23 to 17.82 ± 4.57 post-implementation period among the study group with no change in the control group with statistically significant improvement in patient's total level of disability and appeared through patients' daily activities, studying /work, personal relationship, leisure time and regular treatment with totally highly significant differences between study and control group at (p-

value < 0.001) post individualized guidance implementation. These results proved the second research hypothesis (**H2**) which stated significant improvement in the level of psoriasis disability index for study group who will receive individualized guidance as compared to the control group. From the researchers' view, that could be due to the patient's compliance to proper self-care practices and prevention of complications which resulted in improving the disability.

These results were supported by Nagarajan and Thappa⁽³⁸⁾ who mentioned that the mean score in the experimental group was significantly decreased from 15.6 (± 6.9) at baseline to 9.9 (± 5.1) after intervention with a significant decrease in the mean disability score related to daily activities, studying/ working, personal relations, leisure time activities and treatment (p-value < 0.001) after the intervention. In the same context Leino et al.⁽⁴²⁾ in a study of "Influence of Psoriasis on Household Chores and Time Spent on Skin Care at Home" reported the greatest impact of psoriasis on activities of daily living, especially affecting clothing choice, bathing routine, and sporting activities. Similarly, these results were in the same direction as the result of a study conducted by Brihan et al.⁽⁴³⁾ who concluded that

psoriasis negatively impacts school, jobs, and interpersonal relationships.

In addition, Shehata et al.⁽³⁹⁾ showed statistically significant improvement in patient's level of disability, daily activities, work, personal relationship, leisure, and treatment abilities (p-value < 0.05) with totally highly significant improvement at (p-value < 0.001) post instruction implementation. Also, Leino et al.⁽⁴²⁾ in another study about "Perceived Impact of Psoriasis on Leisure-time Activities" confirmed that there was a marked adverse impact of psoriasis on leisure-time activities as well most of the patients studied had either reduced or completely given up at least one leisure-time activity. According to researchers' point of view, it is commonly recognized that the stigma associated with psoriasis affects multiple aspects of a patient's life, including relationships, social activities, and work additionally psoriatic patients often feel nervous and great pressure because of their appearance. So, they are not willing to take daily physical activities or join in social activities. This results in disagreement with Najafi Ghezalje et al.⁽⁶⁾ that showed that both intervention and control groups had no significant differences in the score changes of personal relationships, leisure,

and daily activities before and after the program.

In addition, a study conducted in Malaysia by Tang et al. ⁽⁴⁴⁾ as cited in World Health Organization ⁽⁴⁵⁾ **about** "Quality of life and Cost of Illness in Patients with Psoriasis" and showed that half of the patients reported that their disability due to psoriasis had a modest impact on activities of daily living, disability also, influenced career, studying, and relationships with friends. Additionally, several daily activities were adversely affected by psoriasis, including clothing choice, the need for more baths. Washing/changing clothes more often, sports activities, sleep disorders, inhibiting work/studying activities, sexual difficulties, and social relations.

Finally, the present study confirmed that there was a statistically significant strong direct correlation between total scores of knowledge and total scores of reported self-care practices of both study and control groups at pre and post individualized guidance which supported the current study hypothesis (**H3**) which stated a correlation between psoriasis patients' total scores of knowledge and total scores of reported self-care practices among the studied patients. These findings were in agreement with a recent study

conducted at Banha city by Mohamed et al. ⁽³³⁾ who reported that there was a positive correlation between the studied group's total knowledge score and their total reported practices score. In the same line Wahl et al. ⁽⁴⁶⁾, who studied "Psoriasis Patients' Knowledge about the Disease and Treatments" found that there was a strong relationship between the participants' knowledge and their total reported self-care practices.

Conclusion

Based on results of the present study, it could be concluded that there was a positive effect of individualized guidance on patients' knowledge and overall self-care practice including self-esteem with a decrease of the level of psoriasis disability, additionally, a positive correlation between total scores of knowledge and total scores of reported practices were be found. So, the research hypotheses were supported.

Recommendations

Based on the current study findings the following recommendations can be suggested:

- Individualized guidance should be recommended as a nursing intervention protocol during the care of every patient with psoriasis.
- Proper screening about comorbidities for early detections.

- Replication of this study on a large probability sample to achieve more generalization.
- Integrate interdisciplinary care approach for care of patients with psoriasis.

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