RESEARCH ARTICLE

Assessment of Level of Knowledge and Beliefs Toward Psoriasis Among Community In Almadina Almonawara City, 2016.

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Manuscript Info	Abstract
	Objective: To explore the patients' knowledge about psoriasis and the association of knowledge score with the socio-demographic variables among community population in Almadina Almonawara City. **Method:** This study (2016) was carried out among a sample of 461 subjects. The mean age of citizens was 28,82. To assess citizens' demographic factors and beliefs about Psoriasis, consenting citizens completed an anonymous online questionnaire. The data was entered and analyzed using SPSS version 20. **Results:** The sample is consisted of 65,8% women and 34,2% men. Among the respondents 7,7% reported suffering from psoriasis and 13,6% confirmed having a history of Psoriasis illness in their family. The results of the study showed that 153 (34,8%) subjects had weak knowledge related to the disease, 260 (59,1%) subjects had average level of knowledge while only 27 (6,1%) subjects had good knowledge regarding Psoriasis. There was a statistical significant association between gender, educational level and the level of awareness about Psoriasis. **Conclusion:** Psoriasis is a chronic disease that is potentially controllable but that cannot be cured. Education still be important overall the treatment of the patients.

Background:-
Psoriasis is a chronic, non-communicable, painful, disfiguring and disabling disease for which there is no cure and with great negative impact on patients quality of life. it can occur at any age, and is most common in the age group 50–69 [1]. The reported prevalence of psoriasis in countries ranges between 0.09% [2] and 11.4% [3], making psoriasis a serious global problem. The etiology of psoriasis remains unclear, although there is evidence for genetic predisposition [4]. The role of the immune system in psoriasis causation is also a major topic of research. Although there is a suggestion that psoriasis could be an autoimmune disease, no auto-antigen that could be responsible has been defined yet. Psoriasis can also be provoked by external and internal triggers, including mild trauma, sunburn, infections, systemic drugs and stress [5]. Psoriasis involves the skin and nails, and is associated with a number of co-morbidities. Skin lesions are localized or generalized, mostly symmetrical, sharply demarcated, red papules and plaques, and usually covered with white or silver scales. Lesions cause itching, stinging and pain. Between 1.3% [6] and 34.7% [7] of individuals with psoriasis develop chronic, inflammatory arthritis (psoriatic arthritis) that leads to

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joint deformations and disability. Between 4.2% and 69% of all patients suffering from psoriasis develop nail changes [8–10]. Individuals with psoriasis are reported to be at increased risk of developing other serious clinical conditions such as cardiovascular and other noncommunicable diseases [11,12]. Disfiguration, disability and marked loss of productivity are common challenges for people with psoriasis. There is also a significant cost to mental well-being, such as higher rates of depression ,leading to negative impact for individuals and society [13,14].

Our Study Was Designed To Examine Health Beliefs And Assessment Level Of Knowledge Toward Psoriasis Among Community In Almadina Almonawara City And Applies The Health Belief Model To Determine Barriers.

Rationale:
There are very few studies on the psoriasis. psoriasis a serious global problem, it can occur at any age. Psoriasis has been associated other serious clinical conditions such as cardiovascular and other non communicable diseases and several other cardiovascular and metabolic disturbances. Psoriasis is not only a disease that causes painful, debilitating, highly visible physical symptoms. It is also associated with a multitude of psychological impairments. For many reasons, psoriasis can be psychologically devastating. Patients' lives become especially difficult when psoriasis is present in highly visible areas of the skin such as the face and hands.

Objectives:
General objectives:-
To assessment level of awareness toward Psoriasis Among Community In Almadina Almonawara City and to identify barriers of health beliefs.

Specific objective:-
The goal of this study was to examine community health beliefs regarding Psoriasis and their perceptions related to it, and evaluate the role of demographic factors in shaping beliefs about Psoriasis and assess possible associations between demographic characteristics with the preventive behavior of interest.

Method:-
Setting and data collection:-
We perform this survey analysis among community in Almadina Almonawara city. A pre-formed self-administered questionnaire will be distributed to Parents.

Sample:-
Subjects will be chosen according to geographical and sex distribution. Sample size was calculated based on web-site calculator [15], taking the total size of Almadina Almonawara population (1180770)[16] , confidence level (95%) and margin error (5%) to be 385. Additional 20 % was added to cover the missing data. Number of refusals was 6. The total sample obtained was 461.

Study population:-
Subjects from Almadina Almonawara of both gender and who belonged to the age group of 8 to 71 years were included in the study.

Study tool:
Pre-formed Self-administered questionnaire that requires information about:
1. Socio-demographic data: age, nationality, gender, education level, income, marital status, and employment status.
2. Risk Factors Associated with psoriasis – clinical manifestation of prognosis - incidence and prognosis of psoriasis.
3. Beliefs about Psoriasis assessment including 8 questions. A score of 1 was given right answer and 0 otherwise. For each subject, a maximum score of 8 was calculated. A scoring system was applied to measure the respondents' beliefs about psoriasis. The awareness level was categorized into 3 levels indicated by weak (0–2), average (3-5) and good (6-8).
4. Knowledge about prevention behavior assessment including one question "Do you believe that psychological pressure is one of the psoriasis factors?". A score of 1 was given to yes and 0 otherwise. For each subject, a maximum score of 1 was calculated. The knowledge level score was categorized into 2 levels indicated by poor knowledge (0) and good knowledge (1).

Study limitations:-
The following limitations are expected:
- Cooperation of sample
- Recall bias

Ethical considerations:-
All participants will give their informed consent before filling the questionnaire.

Statistical analysis:-
Data were entered into the Statistical Package for Social Sciences (SPSS, version 20) and descriptive analysis conducted.
Association of respondents' characteristics with beliefs about Psoriasis and knowledge about prevention behavior of interest was evaluated using:
1. Frequencies and percentages.
2. Chi-squared test.
3. Independent Samples Test (T-test).
4. ANOVA oneway test.
Statistical significance was accepted at $p < 0.05$.

Results:-
I-Examine community health beliefs regarding Psoriasis and their perceptions related to it:-
1-Demographics of the studied subjects:-
The socio-demographic characteristics are shown in table (1)

Table 1:- socio-demographic characteristics.

	Frequency	Percentage (%)
Age (Years)		
Mean age: 28,82		
Gender		
Female	298	65,8
Male	155	34,2
Nationality		
Saudi	395	87,6
Non Saudi	56	12,4
Educational level		
Primary	6	1,3
Middle	15	3,3
Secondary	139	31,0
University	278	62,1
Master	6	1,3
PH.D.	4	0,9
Marital status		
Not married	233	51,5
Married	219	48,5
Income (RS)		
<3000	183	42,5
3000-5000	52	12,1
5000-7000	38	8,8
7000-10000	65	15,1
>10 000	93	21,6
Employment status		
Unemployed	277	61,7
Employed	172	38,3

By looking at table (1), related to the distribution of respondents according to demographic factors:
- The mean age of population was: 28,82 years.
- With respect to gender, a majority of the subjects (298)(65,8%) were Female.

➢ 395 (87,6%) subjects had Saudi nationality.
➢ We see that (278) of the respondents have a university degree with a percentage of 62,1%.
➢ We see that (219) of the respondents are married with percentage of 48,5%.
➢ We see that (183) of the respondents have an income (<3000 RS) with percentage of 42,5%.
➢ We see that (277) of the respondents are unemployed with percentage of 61,7%.

Knowledge regarding the diagnosis of Psoriasis:-
Table 2:- Do you suffer from psoriasis?

Do you suffer from psoriasis?		Frequency	Percent (%)
	No	360	79,3
	I dont know	59	13,0
	Yes	35	7,7
	Total	454	100,0

Out of 454 subjects, 360 (79,3%) subjects reported not being affected with Psoriasis, 13% did not knew if they are affected or not and 35 (7,7%) respondents reported that they suffer from Psoriasis, as it is shown in the figure below:
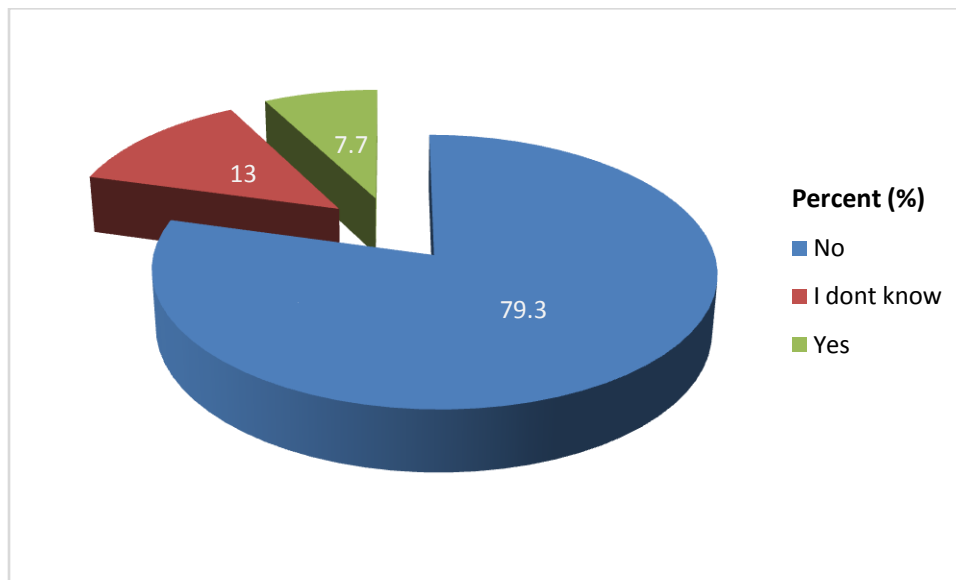

Figure 1:- Do you suffer from psoriasis?

Community health beliefs regarding Psoriasis and their perceptions related to it
Table 3:- Responses to questions on beliefs regarding Psoriasis (Green: correct answer)

	No	Yes	Don't Know
Do you suffer from psoriasis?	360 (79,3%)	35 (7,7%)	59 (13,0%)
Q1: Is there a history of Psoriasis illness in your family?	291 (64,0%)	62 (13,6%)	102 (22,4%)
Q2: you have or ever had any of the skin diseases?	246 (54,1%)	183 (40,2%)	26 (5,7%)
Q3: Do you think that psoriasis could be prevented?	59 (13,0%)	228 (50,2%)	167 (36,8%)
Q4: Do you think that heredity play a role in having psoriasis?	55 (12,1%)	273 (60,0%)	127 (27,9%)
Q5: Do you think that psychological pressure is one of the psoriasis factors?	75 (16,5%)	217 (47,7%)	163 (35,8%)
Q6: Do you think that psoriasis increases the risk of heart disease?	123 (27,1%)	65 (14,3%)	266 (58,6%)
Q7: Psoriasis may affect humans at any age category?	32 (7,0%)	250 (55,1%)	172 (37,9%)
Q8: If you have psoriasis, do you feel socially ashamed by being affected?	161 (36,3%)	101 (22,8%)	181 (40,9%)
Q9: Do you think that psoriasis can be cured?	47 (10,4%)	327 (72,0%)	80 (17,6%)
Q10: Do you think that psoriasis is contagious?	227 (49,9%)	88 (19,3%)	140 (30,8%)

➤ Most of the respondents 228 (50,2%) answered that psoriasis could be prevented.
➤ 273 (60%) of the patients were aware that psoriasis was a genetically determined disease and 217 (47,7%) thought that psychological pressure is one of psoriasis factors.
➤ Only 65 (14,3%) subjects knew that psoriasis increases the risk of heart disease.
➤ Most of the subjects 250 (55,1%) knew that psoriasis may begin at any age.
➤ The majority of respondents 181 (40,9%) did not know if they will be ashamed or not, if they have psoriasis.
➤ The majority of respondents 327 (72%) think that psoriasis can be cured and only 10,4% of the subjects knew the fact that the disease is not curable.
➤ The results of the study suggested that 227 (49,9%) subjects were aware of the fact that psoriasis is not contagious.
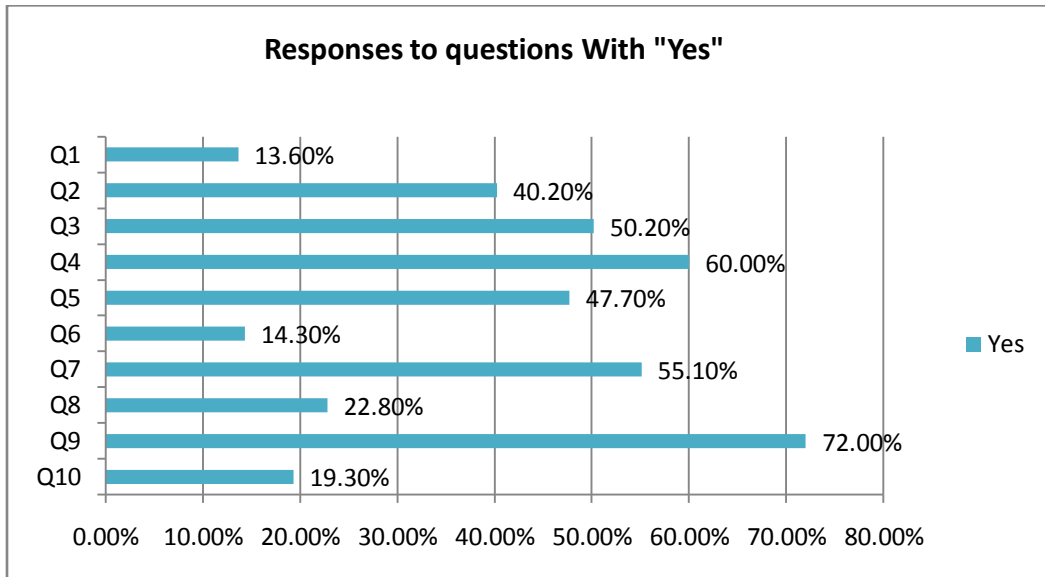
Figure 2:- Responses to questions With "Yes"

II-Evaluation of the role of demographic factors in shaping beliefs about Psoriasis
Level of awareness
Table 4:- Respondents' awareness evaluation for Psoriasis

Level of awareness		Frequency	Percent (%)
	0-2 : Weak	153	34,8
	3-5 : Average	260	59,1
	6-8 : Good	27	6,1
	Total	440	100,0

Table 4 shows that overall level of awareness on psoriasis among the study participants showed that out of 440 subjects, 153 (34,8%) subjects had weak knowledge about the disease, 260 (59,1%) subjects had average level of knowledge whereas only 27 (6,1%) subjects had a good knowledge regarding Psoriasis (Figure 3).

Figure 3:- Level of awareness

Association of the subjects' knowledge with socio-demographic variables
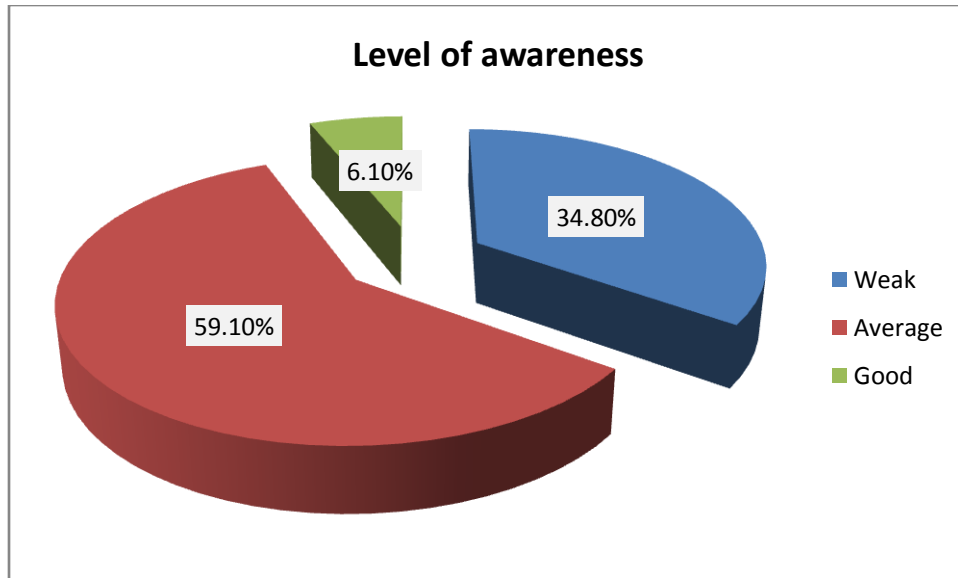**1-Age**

Descriptives								
Age								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-2 : Weak	128	28,23	10,243	,905	26,44	30,02	15	65
3-5 : Average	220	28,71	11,080	,747	27,24	30,18	8	71
6-8 : Good	24	28,67	11,239	2,294	23,92	33,41	15	60
Total	372	28,54	10,783	,559	27,44	29,64	8	71

ANOVA					
Age					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19,250	2	9,625	,082	,921
Within Groups	43117,145	369	116,849		
Total	43136,395	371			

Gender:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13,269[a]	2	,001
Likelihood Ratio	13,066	2	,001
Linear-by-Linear Association	11,568	1	,001
N of Valid Cases	440		
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,14.			

Nationality:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,873[a]	2	,646

Likelihood Ratio	,977	2	,614
Linear-by-Linear Association	,620	1	,431
N of Valid Cases	438		
a. 1 cells (16,7%) have expected count less than 5. The minimum expected count is 3,45.			

Educational level:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20,279[a]	10	,027
Likelihood Ratio	24,811	10	,006
Linear-by-Linear Association	2,759	1	,097
N of Valid Cases	434		
a. 11 cells (61,1%) have expected count less than 5. The minimum expected count is ,24.			

Marital status:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1,161[a]	2	,560
Likelihood Ratio	1,162	2	,559
Linear-by-Linear Association	,423	1	,516
N of Valid Cases	438		
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,82.			

Income:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5,251[a]	8	,730
Likelihood Ratio	5,752	8	,675
Linear-by-Linear Association	,355	1	,551
N of Valid Cases	419		
a. 3 cells (20,0%) have expected count less than 5. The minimum expected count is 2,45.			

Employment status:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,853[a]	2	,653
Likelihood Ratio	,881	2	,644
Linear-by-Linear Association	,198	1	,656
N of Valid Cases	435		
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,24.			

There is a statistical significant association between gender, educational level and the level of awareness about Psoriasis, respectively (p=0,01 < 0,05) and (p=0,027 < 0,05).

Assessment of possible associations between demographic characteristics with the preventive behavior of interest:-
Psychological pressure is one of the psoriasis factors, which is reported in the fifth question; that is why it is important to avoid stress as prevention of the disease.

Table 5:- Do you think that psychological pressure is one of the psoriasis factors?

Level of knowledge		Frequency	Percent (%)
	Poor knowledge	238	52,3
	Good knowledge	217	47,7
	Total	455	100,0

238 (52,3%) of the respondents have a poor knowledge about psychological pressure as a factor of psoriasis while 47,7% of the subjects have a good knowledge.

Age:-

Group Statistics					
	5-Do you think that psychological pressure is one of the psoriasis factors?	N	Mean	Std. Deviation	Std. Error Mean
Age	Poor knowledge	196	27,47	10,073	,719
	Good knowledge	187	30,13	11,679	,854

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Age	Equal variances assumed	2,327	,128	-2,389	381	,017	-2,659	1,113	-4,847	-,471
	Equal variances not assumed			-2,381	367,251	,018	-2,659	1,117	-4,855	-,463

Gender:-

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,128[a]	1	,042		
Continuity Correction[b]	3,735	1	,053		
Likelihood Ratio	4,145	1	,042		
Fisher's Exact Test				,048	,026
Linear-by-Linear Association	4,119	1	,042		
N of Valid Cases	453				
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 74,25.					
b. Computed only for a 2x2 table					

Nationality:-

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,466[a]	1	,019		
Continuity Correction[b]	4,818	1	,028		
Likelihood Ratio	5,497	1	,019		
Fisher's Exact Test				,022	,014
Linear-by-Linear Association	5,454	1	,020		

N of Valid Cases	451				
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 26,82.					
b. Computed only for a 2x2 table					

Education level:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5,397[a]	5	,369
Likelihood Ratio	5,576	5	,350
Linear-by-Linear Association	,365	1	,546
N of Valid Cases	448		
a. 6 cells (50,0%) have expected count less than 5. The minimum expected count is 1,91.			

Marital status:-

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,186[a]	1	,041		
Continuity Correction[b]	3,809	1	,051		
Likelihood Ratio	4,192	1	,041		
Fisher's Exact Test				,048	,025
Linear-by-Linear Association	4,177	1	,041		
N of Valid Cases	452				
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 105,14.					
b. Computed only for a 2x2 table					

Income:-

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5,331[a]	4	,255
Likelihood Ratio	5,363	4	,252
Linear-by-Linear Association	2,409	1	,121
N of Valid Cases	431		
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 18,34.			

Employment status:-

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,075[a]	1	,785		
Continuity Correction[b]	,031	1	,860		
Likelihood Ratio	,075	1	,785		
Fisher's Exact Test				,846	,430
Linear-by-Linear Association	,074	1	,785		
N of Valid Cases	449				
a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 81,59.					
b. Computed only for a 2x2 table					

There is a statistical significant association between age, gender, nationality, marital status and the level of knowledge about stress as factor of Psoriasis, respectively (p=0,17 < 0,05), (p=0,42 <0,05), (p=0,19 < 0,05) and (p=0,41 <0,05).

Discussion:-
Tham SN, Tay YK (17) and other studies (18) have reported in their work that many patients have a gap of knowledge about their disease and treatment aspects (17).

This study identified that:
➢ The majority of respondents have an average level of awareness toward Psoriasis.
➢ The majority of the studied subjects have a good knowledge about the fact that psychological stress is one of the factors of the pathology of Psoriasis.

Leovigildo et al. indicated that was an exacerbating factor of Psoriasis (19).
Our study showed that about half of respondents were not sure or were affirmative that psoriasis is contagious, respectively 30,8% and 19,3%.

Dika et al. have reported that physicians and dermatologists should be aware that their patients may have an inadequate understanding of their pathology (20).

Recommendations:-
➢ Therapeutic management is not limited to its molecular aspect by using drugs.
➢ Improving the health of a patient goes through many other aspects as essential as drugs: education, prevention, hygiene, listening, social solidarity...This change in vision has made it possible:
➢ To become aware of all the consequences of illness on the quality of life of the patient
➢ To identify the handicap and the resulting social exclusion
➢ To consider that psychological suffering is as important to take In charge as physical suffering, Indeed, the purpose of treatments is not only to eliminate the symptoms but, more generally, to improve the quality of life and, in the context of skin diseases, to return to the patient all his freedom in his relations with himself and with others (21).
➢ According to Jankowiak et al (22):
➢ Patients with psoriasis need to improve their knowledge of the disease and self-care methods to avoid exacerbation of disease.
➢ The disease requires systematic treatment and appropriate care.
➢ Health education is a main part of the management of psoriasis.

Conclusion:-
Our study showed that most of studied subjects had an inadequate level of knowledge about psoriasis. Efforts should be instaured to improve the knowledge of people about psoriasis in order to ensure better well being and a better care of patients.

Budget:-

Item	Price
Transportations	700 SR
Paper work	800 SR
Software programs	2000 SR
Books	1000SR
Stationaries	1000SR

Proposed workplan:-

No.	Work	Proposed time
1	Literature review	2 Months
2	Preparation for data collection	1 Months
3	Data collection	3 Months
4	Statistical analysis	1 Months
5	Discussion of results	2 months
6	Writing an abstract	2.2. months

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Appendix:-

A questionnaire:-

https://docs.google.com/forms/d/e/1FAIpQLScXr0W9htUXauahKDI3ZT5izpVr-aLx6I3AXHpYNnZCypIYNA/viewform