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ASSESSMENT OF KNOWLEDGE REGARDING ACNE VULGARIS AMONG SECONDARY SCHOOL STUDENTS IN MAKKAH ALMUKARRAMAH, 2019

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Abstract:

Background: Acne, also known as acne vulgaris, is a long-term skin disease that occurs when hair follicles are clogged with dead skin cells and oil from the skin. It is characterized by blackheads or whiteheads, pimples, oily skin, and possible scarring. It primarily a Acne vulgaris is one of the commonest skin disorders which dermatologists have to treat, mainly affect adolescents, though it may present at any age. Acne is definite as multifactorial chronic inflammatory disease of pilosebaceous skin diseases are common, especially in the developing countries. Mental health disorders are prevalent among those with skin diseases and affect their life and their treatment. Anxiety is one of the psychiatric disorders, and its symptoms were found among the patients with skin diseases. effects areas of the skin with a relatively high number of oil glands, including the face, upper part of the chest, and back. The resulting appearance can lead to anxiety, reduced self-esteem and, in extreme cases, depression or thoughts of suicide.Acne vulgaris is a common condition extremely prevalent among teenagers and young adults under the age of 24 years. Nearly 85% of adolescents in this age group experience some degree of acneAcne vulgaris is a skin disease of chronic inflammatory nature. Although acne is not a life threatening, it has a deleterious impact on patients' social and psychological health.

Aim of the study:to assessment of Knowledge regarding acne vulgaris among secondary school students in Makkah.

Method:A cross-sectional study design. The current study was conducted Male and female secondary school students from selected governmental schools in Makkah. The total the sample size calculation will be 200 students. Female and male.

Results:Conclusion:Patients with dermatological diseases have a high level of anxiety and worry, especially with acne and skin disease affecting visible areas like the face. Further studies are required in Saudi Arabia to explore the true estimates of this problem.

Key words: Knowledge, Acne vulgaris, Saudi, Makkah, secondary school students.

1. INTRODUCTION

1.1 Background

Skin diseases are among the most common skin problems that are faced by primary health care physicians [1]. The prevalence of skin diseases in any country is dependent on several factors, including race, genetics, and nutrition status, costumes, and climate conditions, social and hygienic standards [2]. Acne vulgaris is a skin disease of chronic inflammatory nature. Although acne is not a life threatening, it has a deleterious impact on patients' social and psychological health.The prevalence of skin diseases in any community is influenced by various risk factors. These include genetic, racial constitution, social and hygienic standards, customs and occupations. They also include the nutritional status, age structure of the community, climatic factors, state of industrialization and quality and quantity of medical care. [3]Age is the most important factor that alters the prevalence and pattern of dermatologic disease. [4]

Acne vulgaris is one of the commonest skin disorders which dermatologists have to treat, mainly affect adolescents, though it may present at any age. Acne is definitude as multifactorial chronic inflammatory disease of pilosebaceous skin diseases are common, especially in the developing countries. Mental health disorders are prevalent among those with skin diseases and affect their life and their treatment. Anxiety is one of the psychiatric disorders, and its symptoms were found among the patients with skin diseases .[5]

The prevalence of Acne vulgaris among female secondary school students in Arar city, KSA, during the second semester of the academic year 2017–2018 was 14.3%. It had a considerable impact on their quality of life. Proper

dermatological care should be offered in secondary schools. [6] Acne lasts for several years and thus may significantly influence in many ways the lives of those affected. Therefore, early and effective treatment is needed to save these patients from all the possible complications. Successful treatment of acne is significantly affected the present study was conducted to know the level of Knowledge and beliefs regarding acne vulgaris among governmental secondary school students in Makkah [7]

Acne is a multi-factorial condition, unremarkably seen in adolescents all over the world. Accumulated sebum excretion, constitution of the pilosebaceous duct with Propionibacterium acnes and resultant inflammation play a crucial role in pathologic process. Plenty of misconceptions surround acne.[8]The information regarding acne continues to be lacking with unfavorable perspective and wrong practices. It becomes essential to understand the patient's information regarding acne because it plays a very important half within the management and higher compliance. [9]

Although there's no relation between diet of any kind and skin disease, majority of the respondents in our study were lacking such info and believed that intense chocolates/spicy foods (63%) and oily foods (70%) cause acne. this can be higher than the results found in a very study done by Darwish MA wherever nearly eighty and thirty % opined that intense chocolates or spicy foods caused acne.[10]

found that the most typical foods associated with acne were spicy or deep-fried foods whereas chocolate wasn't found to be the cause by many of people. [11]

Research has shown that 85% of youngsters between the ages of twelve and twenty four years have acne , and whereas it's most typical in teenagers, acne affects 8% of adults aged twenty five to thirty four years and three of adults aged thirty five to forty four years. Acne is additional common in males than females in adolescence, however the incidence is higher in girls throughout adulthood. Nodulocystic acne has an augmented prevalence in White people compared with black people.[12]

These factors will trigger or worsen acne: Hormones. Androgens are hormones that increase in boys and ladies throughout time of life and cause the greasy glands to enlarge and build additional secretion. Hormonal changes related to pregnancy and the use of oral contraceptives also can affect sebum production.[13]

LITERATURE REVIEW.

Al-Hoqail study 79% of acne patients sample believed that acne is related to diet [14]. Tension was believed to be related to acne by 65.6%of our patients. Almost the same result was found in Tallab study (65% of his sample) [15]. In Al-Hoqail study and Amado et al. study 80% and 71% of acne patients, respectively, believed that acne is related to stress [14]. Tasoula et al found Acne vulgaris is one of the most frequent dermatological diseases that affect younger human beings. The etiology of pimples vulgaris is structured on genetic elements and environmental and psychological stressors [16]

Albuquerque et al found Other factors could also additionally contribute to improving the acne development as puberty, menstrual cycles, excessive carbohydrate diet, as properly as contamination.[17] Do et al report that the females are more health conscious and sensitive regarding their skin and their health seeking behavior to reflect this consciousness. The effect of acne on school performance was reported by 13.3% compared to only 6.4% of. study sample [18]

Kistowska et al reported that four key elements are related with the pathogenesis of acne like higher production of sebum, agitated cornification of the pilosebaceous unit, pathogenic microbial flora, and irritation. [19]

study posted in the Journal of Family and Community Medicine 2017, conducted to consider the perceptions and beliefs of Saudi youth on acne. Three hundred twenty-nine male students (aged 13-22 years) from 6 secondary schools in the Eastern Saudi Arabia performed a self-reported questionnaire on knowledge, causes, exacerbating and relieving factors of acne. Results of topics with acne, a family records of acne, and parents' instructional degrees had been compared. Differences between the analyzed agencies had been assessed. The study showed (58.9%) of the school's students considered pimples a transient condition now not requiring treatment. (13.1%) Knew that the therapy of zits ought to take a lengthy time. [20]

RATIONALE

Acne vulgaris is one of the most common dermatological problems in our society.It has a physical, psychological and social impact on people.Personal interest in this topic because of family history of acne vulgaris.

Aim of the study

To assessment of Knowledge regarding acne vulgaris among secondary school students in Makkah 2019.

OBJECTIVES

- To assess the level of knowledge of secondary school students regarding acne vulgaris in Makkah Almukarramah,2019.

METHODOLOGY

Study Design

A cross-sectional study design has been adopted.

Study Area

Makkah is the holiest spot on Earth. It is the birthplace of the Prophet Mohammad and the principal place of the pilgrims to perform Umrah and Hajj. It is located in the western area in Kingdom of Saudi Arabia and called the

Holy Capital. It contains 278 secondary schools (private and governmental) .142 secondary schools for girls and 136 secondary schools for boys.

Study Population

Male and female secondary school students from selected governmental schools in Makkah Al-mokarramahcity.

Inclusion criteria

Secondary school students (male and female) attending the selected governmental schools during the study period has be eligible for inclusion in the study.

Sample size

The total number of students attending governmental secondary schools in Makkah Almukarramah is 52507 students (23000 girls and 20434 boys), the knowledge of the students about acne vulgaris as average as 50%. Setting the confidence interval of 95% and sample error of 5%, Raosoft sample size calculator program was used, the sample size calculation will be 284 students.

Sampling technique

By simple random sampling technique. Each governmental secondary school in Makkah almokarramah given a random number by using random number generator site to select the sample. Girls governmental secondary school's numbers from 1 to 116, number 11 was selected. Boys governmental secondary school's numbers from 1 to 103, number 87 was selected.

Data collection tool(instrument)

A questionnaire from previous regional study has been utilized for data collection in the Arabic language. It has been previously used in a study conducted by Husain Yahya in Kaduna, Nigeria. Will be distributed to selected study sample in PHCCs. The questionnaire includes fifth main parts. the first part is concerned with the sociodemographic variables and characteristics, the second part involves knowledge students' regarding acne. Third part involves the beliefs and attitude towards acne, four part involves attitudes towards acne to prevent acne and fifth part is about the practice of treatment.

Socio –demographic variables:

The Socio –demograprding data includes questioner gender, age, student level of education

Knowledge of the students' regarding acne:

The second part involves knowledge of the students' regarding acne and third part involves the beliefs towards acne consisting of 5 questions about the knowledge of students regarding acne andbeliefs to ward acne

Self-care practices done to prevent acne:

Four parts involves attitudes towards acne to prevent acne consisting of 9 questions about self-care practices done to prevent acne.

Treatment and practices done to prevent acne:

Fifth part of questionnaire is consisting of 10 regarding practices treatment and prevent

Validity of questionnaires/ tools

content validity of the Arabic version of the questionnaire was assessed by a panel of experts in the field to evaluate the items

reliability, language simplicity and suitability and to evaluate the relationship of each item to the questionnaire. The panel composed of three consultants of community and family medicine, dermatology based on their comments changes were made .

Reliability analysis was carried out on the knowledge part of the questionnaire comprising 5 items.

Data Collection technique

The researcher will visit the selected governmental secondary schools on morning (Al-Fudail Ibn Eyadh school for boys and Al-Thamina school for girls) after getting approval from the Ministry of Education. Permission will be taken from the directors of the schools and will explain the purpose of the study to all students.

The questionnaires has be delivered to Al-Thamina school by the researcher herself and was be distributed to girls students by the school directors and teachers during their class. The questionnaires was be delivered to Al-Fudail Ibn Eyadh school by a well-trained male personnel and has be distributed to boys students by the school directors and teachers during their class.

The researcher has been in contact by mobile phone with the boys school director to answer any questions. Care was being taken not to disturb the students. After that, questionnaires has been collected in the same way either immediately or after a period with follow up through the phone to those who did not respond immediately.

STUDY VARIABLES

a. Dependent variables

Knowledge and beliefs of secondary school students regarding acne vulgaris.

b. Independent variables

Socio demographic variables (age, gender, nationality, education, source of information).

DATA ENTRY AND ANALYSIS

Statistical Package for the Social Sciences(SPSS) software version 24.0 has been used for data has been entered and analysis. Descriptive statistics (e,g . number, percentage) and analytic statistics using Ghi Square tests ($\mathbf{X^2}$) to test for the association and/or . Significance has been determined at P –value < 0.05. The statistical analysis has been done with the assistance of the statistical advisor.

PILOT STUDY

A pilot study has been conducted in one governmental secondary school to test the methodology of the study.

ETHICAL CONSIDERATIONS

- •Permission was been obtained from Makkah Joint Program of Family &Community medicine.
- •Approval was been received from concerned authority in Ministry of education.
- •Individual verbal consent for data collection has been obtained from each participant.
- •All information has been kept confidential.

Budget: It was being self-funded.

Result

Table (1) distribution of Socio-demographic data in study group.

Gender		
Female	**4**	
Male		
e		
Range	21.	
Mean+SD	214±1.42	
Student level		
First grade		
Second grade		
Third grade		

In our study total 200 school students during the year 2019 in study group. The majority of gender (62.%) of students were female and male students were (38.0%) , The Range of the age group was the (16-21) year's group Mean +SD (18.214±1.42) , The most common education level was Second grade (37.0%).

Table (2) Describe students' beliefs and knowledge regarding acne .

you have pimples now, or in the last year?		
Yes	4	
No		
w long have you had the pimples for?		
ess than 3 months		
3-6 months		
7-12 months		
more than 1 year		
ve you ever visited a clinic or hospital or chemist concerning your pimples		
Yes		
No	4	
hat health worker has treated your pimples?		
Pharmacist		
Nurse		
Doctor		
Traditional medicine		
w long did you have pimples for before seeing a health worker?		
ess than 3 months		
3-6 months		
7-12 months		
More than 1 year		
hat treatments had you tried on your own before seeing a health worker?		
Cleansers		
Facial scrubs		
Medicated soap		
Cosmetics		
Retin A cream		
Cortisone Cream		
Herbs		
Tablets		
Roaccutan		
ve you ever been completely cleared of pimples?		
Yes		
No	)	
hat treatments have you used that cleared the pimples?		
Cleansers		
Facial scrubs		
Medicated soap (tetmosol, delta)		
Cosmetics (e.g. shelley, clear essence, etc.)		
Retin A cream		
Dalacin T		
c.cortisone.cream		
Herbs		
c.AB.tab		
c.roaccutan		

Table 2 show The (77.0%) majority of our study were answer YES have pimples now were present,About (23.0%) of students answer NO , represents (39 .0 %)who had pimples more than a year , less than 3 months were reported (30.0%) , have the pimples since 3-6months were (18.0). For a visit to the clinic or hospital or chemist specializes in your pimples the answer YES were (28.6%) but the majority of our study answer NO were (72.0%).Regarding seeking medical advice, (46.0%) percent visited their doctors, While pharmacist advice, (28.0%) percent followed by advice from traditional medicine (14.0%) percent but nurse advice reported lees (12.0%) .Those you have pimples for before seeing a health worker within less than 3 months (33.0%) and patients waited more than 1 year (25.0%) medical attention for acne regarding treatments had you tried on your own before seeing a health worker

the majority had medicated soapwere (31.0%) flowed by Cleansers (30.0%) regarding the not you ever been completely cleared of pimples were (60.0%)

Table (3) Distribution of the factors and feeling that make pimples worse, described the effect of pimples on your relationships with others and causes pimples you think

ich of the following makes your pimples worse?		
irty skin		
ating too much fat or butter or margarine		
ating sweets and chocolate		
osmetics		
air products		
xcessive heat and humidity		
ainy season		
xercise/excessive sweating		
ress		
rugs (state types)		
OTA. worse		
w does your pimple make you feel?		
ery unhappy/sad		
equently worried		
ccasionally worried		
ot worried at all		
at makes you most unhappy or sad or worried about your pimples?		
mall painful lesions		
arge painful lesions (cysts)		
ark spots		
ars		
one of the above		
ve your pimples affected your relationship with your friends?		
verely		
oderately		
ly sometimes		
ver	3	
e pimples affecting your ability to make friends?		
verely		
oderately		
ly sometimes		
ver	)	
ve your pimples affected your relationship with your family?		
verely		
oderately		
ly sometimes		
ver	6	
ve your pimples affected your school work?		
verely		
oderately		
nly sometimes	8	
ever	7.6	8
w serious are your pimples?		
ild	3.6	8
oderate	6	3
vere	8	
w long do you expect treatment for pimples to take?		
ays	6	3
4 weeks	8	9
6 months	8	9
ore than 6 months	4	7
on't know	4	2

there any family member (brother, sister, father, mother, uncle, aunt) who has or has l pimples?		
es	5	
o		
at do you think causes pimples?		
oor skin hygiene		
ating too much fat		
ating too much butter or margarine (Blue Band)		
ating too much sweets and chocolate		
besity or too much body oil		
oo many body hormones		
heritance (genetics)		
locked skin pores		
fection by germs		
rugs		
vil spirits		
on't know		

Table 2 show Although thereis norelation betweendiet ofany kind and acne, majority of the respondents in our study were lacking such information and believed that eating sweets and chocolate (33.0%) and eating too much fat or butter or margarine (29.0%) .(30.5%) knew that dirty skin is prone for acne also showed that (32.0%) knew that acne occurs in excessive heat and humidity . (31.0%)knew that acne worsen by Stress , (28.0%) told that acne is associated with use of cosmetics . on the other hand found the not a worse , exercise/excessive sweating. Regarding the effect of pimples on your relationships your friends The majority of our study proportions (79.0%) answer never effect atall , while sometimes effect proportions (13.%) , but moderately ,and severely their proportions were respectively (11.0 % , 6.0%)

Regarding the feel when you have a pimple of your own The majority of our study proportions answer not worried at all (48.%) , while occasionally worried , very unhappy/sad , frequently worried Their proportions were respectively (27.0% , 14.% , 11.0%). Although unhappy or sad or worried about your pimples the majority of our study proportions answer none of the above at all (30.0%), while proportions dark spots (30.0%) while proportions small painful lesions (24.0%) . Regarding do you pimples affect your ability to make friends The majority of our study proportions (79.0 %) answer never effect at all, while sometimes effect proportions (11.0%), regarding do your pimples affected your school work The majority of our study proportions (83.8 %) answer never effect at all , while sometimes effect proportions (9.9 %) , but moderately ,and severely their proportions were respectively (3.5 % , 2.8%) .

Regarding serious your pimples the majority of our study proportions (51.8 %) answer Mild, while moderate effect proportions (38.3 %) , but severely their proportions (9.9 %) .

Regarding the Is there any family member (brother, sister, father, mother, uncle, aunt) who has or has had pimples the majority of our study proportions answer YES (63.0%), but proportions answer NO(11.6%) .

Regarding the duration of treatment for pimples, less than half (35.2%) of the subjects don't know the duration of treatment but believed that the treatment was short-term 2-4 weeks proportions (23.9%) while the duration of treatment 1-6 months proportions (16.9%) .the proportions (12.7%) Only knew that the treatment of acne could take a long time more than 6 months ,Moreover, the belief that acne was could be treated on the days the proportions (11.3 %). Regarding thedo you think causes pimples were (40%) Poor skin

Table (4) Distribution of the knowledge regarding acne

owledge			ore	
			nge	an±SD
eak			7.	5±2.781
verage				
igh				
otal				
i-square		2.68		
	alue	001*		

Regarding knowledge these study results showed that weak knowledge proportions (85.0%), and many misconceptions are prevalent among acne patients on the other hand the Average proportions (12.0 %) will The Range (4 - 17) Mean +SD (6.15±2.781) statistically a significant were P-value (0.001)

Figure (1) Distribution of the knowledge regarding acne

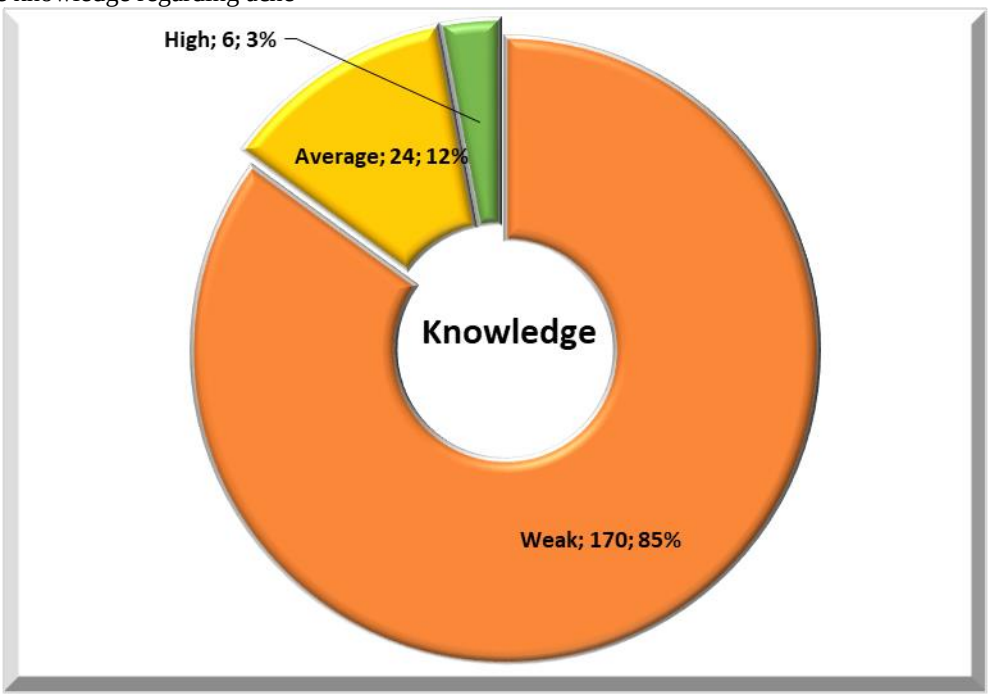


Table (5) Distribution of the Belief regarding acne

ief			ore	
			nge	an±SD
sitive belief			9.	541±4.119
egative belief				
otal				
i-square		.125		
	alue	001*		

Regarding belief these study results showed that Positive belief proportions (89.0%), and many Negative belief proportions (11.0%) will The Range (5-29) Mean +SD (13.541±4.119) statistically a significant were P-value (0.001)

Figure (2) Distribution of the Belief regarding acne

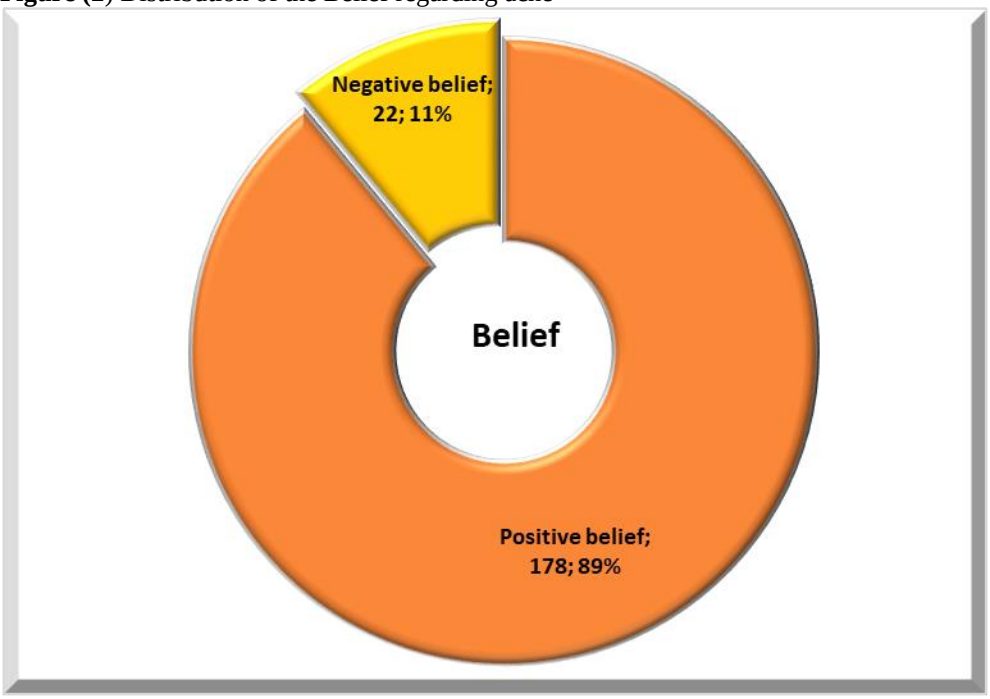
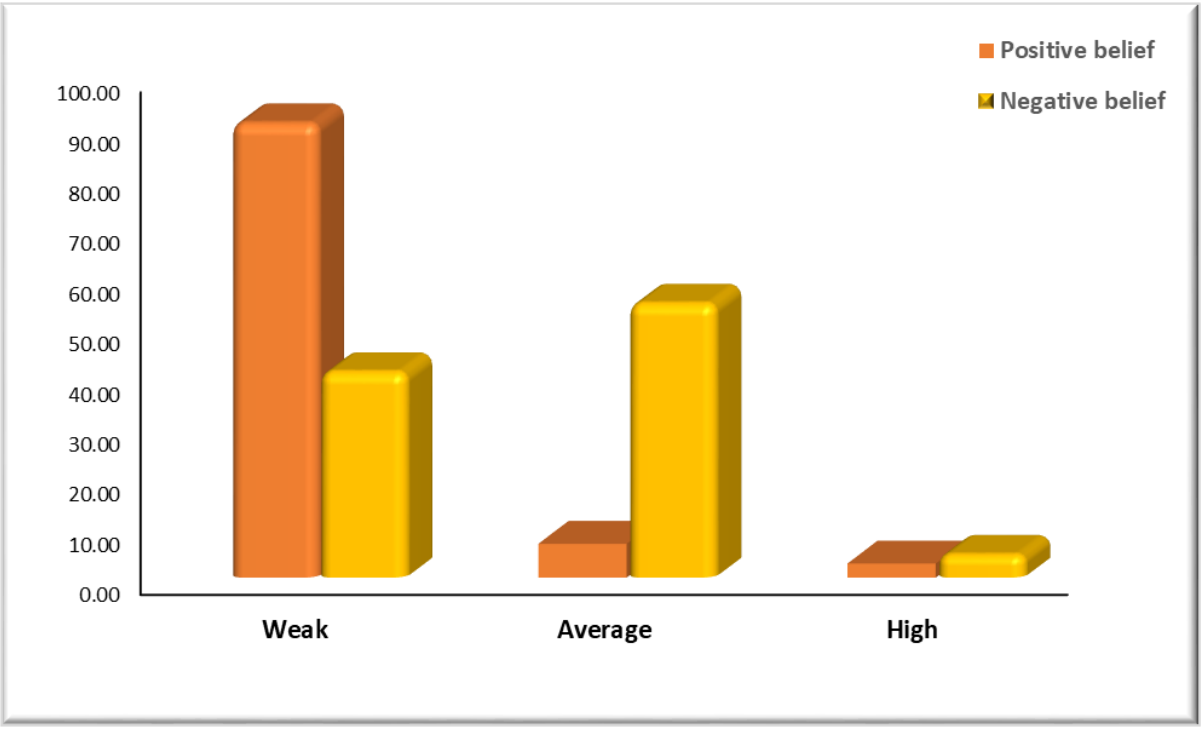


Table (6) Correlations analysis between the Belief and Knowledge

		lief			tal	
		sitive belief		gative belief		
owledge	eak	1	45		91	)	
	erage		4		55		
	gh		1		5		
	tal	3	.00		36	)	)
i-square		137				
	Value	001*				

Table 6 showed positive correlations between belief and knowledge in weak knowledge were (90.45) and statistically a significant were P-value ($p < 0.001$) and Chi-square43.137

Figure (3) Correlations analysis between the Belief and Knowledge .



Discussion

Acne is a multi-factorial condition, normally seen in adolescents all over the world. multiplied secretion excretion, colonization of the Propionibacterium acnes and resultant inflammation play a vital role in pathological process. plenty of misconceptions surround acne condition. The information concerning skin condition remains lacking with unfavorable angle and wrong practices. It becomes essential to understand the students' information concerning skin condition because it plays a very important half within the management and higher compliance.

In this study, (200) questionnaires were distributed, (200) students completed the questionnaire about the acne the majority of gender (62. %) of students were female and male students were (38.0%), The Range of the age group was the (16-21) year's group Mean +SD (18.214±1.42), The most common education level was Second grade (37.0%)., see Table (1)

Regarding seeking medical advice, visited their doctors agreed that acne does need to be treated by physicians, which is consistent with Poli et al. study, where 70.9% subjects in their study believed that acne should be treated by physicians.[22]

Regarding seeking medical advice, before seeing within less than 3 months and after 1 year from symptoms appearance, in which (27.1%) of patients waited more than 1 year before seeking medical attention for acne . Similar results were found in Nazarian et al. study (2019), in contrast to **Tałasiewicz**study (2012) [24] in which, majority of his sample (40.3%) sought medical advice in the first three months.**Tałasiewicz**(2012). different result was found in Tallab study [15], where the vast majority of his sample (76.2%) started more than one year .Tallab TM. Beliefs, [15]. which is consistent with Tan et al. study (2001) in which 74% of patients waited more than 1 year before seeking medical attention for acne. Tan JKL, Vasey K, Fung KY. (2001);44(3) . see Table (2)

These study results showed majority of our study answer about the self-care practices done to prevent acne before seeing a health worker. of them told that their facial scrubs to prevent from acne .

That poor knowledge, false beliefs, and many misconceptions are prevalent among acne patients in a way comparable to previous studies in other populations which include acne patients and/or normal populations of different cultures. This may reflect deficient acne patient education during their follow-up in their dermatology clinics.in our study also regarding the completely cleared of pimples, study have shown over half of the student believed that NO completely cleared. [22]

The majority of our study answer about used the Cleansers, Medicated soap (tetmosol, delta) , Retin A cream to treatment Their proportions . This is in contrast to other study findings where frequent face washing was practiced to ameliorate acne. [25]. Similar results were observed by I where most of them used medical creams as over the counter medication to treat acne.[26]

knew that acne worsen byStress, toldthat acneis associated withuse ofcosmetics. In comparison to the previous studies conducted on Saudi youths, the author's proportions is akin to that of [7] Who also found diet (72.1%) the most frequently named cause or aggravating factor of acne by Saudi youth in the Central region, and that of [13]. Among students in Asir region. However, [27] study reported that only 19.4% of Saudi youths in Central Riyadh

mentioned the role of diet in acne [28]., on the other hand, indicated that in the study population in Jeddah, Saudi Arabia 28.4% cited diet as a cause and 34.1% as an aggravating factor. [29]. The higher percentages found in the majority of Saudi male youth could be explained by the proliferation of fast food chains in Saudi Arabia over the past decade and a half, with more and more teens changing to a more Westernized diet. which is in agreement with the findings from other studies. Yahya H. (2009)

CONCLUSION.

Acne critically impacts the social behavior, increased depression among patients. Lifestyle change-related stress, sensitive skin, conclusion of oral contraceptives and mistreatment full-coverage foundations increase severity of AA. Acne had massive impact on quality of life. Students should be recommended and educated on a way to handle this dermatological problem. Results of this study show that misconceptions of skin problem are widespread among Saudi youth. A health education program is required to boost the understanding of the condition.

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