

Assessment of the Knowledge and Beliefs Regarding Acne Vulgaris among Governmental Secondary School Students in Makkah Almukarramah, 2021

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Abstract:

Background:

Acne vulgaris is a common skin disease primarily affecting young adults. Given that the internet has become a major source of health information, especially among the young, the internet is a powerful tool of communication and has a significant influence on patients, also acne vulgaris is a chronic inflammatory condition marked by elevated sebum production, comedones, erythematous papules, and superficial pustules of the pilosebaceous groups. Nodules, dense pustules, or pseudo cysts also occur less frequently. Acne risks include hyperpigmentation post-inflammatory, scarring (pitted scars), and keloids. According to the study of the Global Burden of Disease (GBD), acne vulgaris affects approximately 85 per. 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 affects 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. Proper dermatological care should be offered in secondary schools. **Aim of the study:** Assessment of the knowledge and beliefs regarding acne vulgaris among governmental secondary school students in Makkah Almukarramah, 2021. **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 **300** students. Female and male. **Results:** show that knowledge the most of participant weak knowledge were (85.0%) while a statistically significant P-value (0.001) , X^2 (364.020) regarding belief the most of participant Positive belief were (88.0%) while a statistically significant P-value (0.001) , X^2 (171.763)

Conclusion: In this study found that misconception of acne is widespread among Saudi youth the incidence of facial acne was higher in high school students aged 16-18 years, males had a higher rate of incidence than females. Ultimately, family background is a contributing factor for acne vulgaris. A health education program is needed to improve the understanding of the condition.

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

Introduction

Background

Acne regularly constitutes the top three most severe skin disorders in the general population, as seen in broad surveys within the KSA and the United States.[1] Across the globe, comparable figures are recorded for young adults in various countries.[2] The release of androgens during adolescence illustrates, in part, why in this community acne vulgaris is so widespread irrespective of socioeconomic background, ethnicity, or age. Acne vulgaris has major psychological consequences, with a low quality of life among acne-stricken patients.[4] Furthermore, acne problems such as post-inflammatory hyperpigmentation are growing in our community.[5]

Acne vulgaris is a very common disorder. Prevalence of acne varies among different populations in several studies from 50% to 80%. There's general recognition that there are several factors within the etiology of acne. Causes may well be attributed to each genetic and environmental factor. There's familial predisposition of severe sorts of acne that support a genetic part[6]

Acne vulgaris is a very common dermatological disease and the 8th most common disease worldwide; it is estimated to affect 633 million people globally [7,4]. It primarily affects young adults, mostly in their teens, 20s, and 30s [8]. Four mechanisms are considered important in the pathogenesis of acne vulgaris:[9] sebaceous hypersecretion, [10] hair follicle hyperkeratosis, [11] colonization of *Cutibacterium acnes*, and[12] inflammatory reactions [13]. External factors such as the environment are also known as important risk factors. Mechanical stimulation like friction, psychological stress [14], and excessive sweating have also been suggested as causes of acne vulgaris. Food is also a possible cause, but the relationship is still unclear, even though there are studies that show a relationship between acne vulgaris and food. The most commonly involved site of acne vulgaris is the face, followed by the neck, back, and chest. Clinically, various kinds of skin lesions are possible: comedon, papule, pustule, and nodule. Deep skin lesions can result in scars, and it is estimated that 95% of acne vulgaris patients have acne scars [15], which can induce serious psychosocial problems [16]

Acne vulgaris is that the commonest connective tissue disorder poignant adolescents and young adults. Patients with acne will endure vital psychological morbidity and, rarely, mortality because of suicide. The emotional effects of shame and anxiety will have an effect on the social lives and profession of affected individuals. Scars are disfiguring and permanent. In one prospective study of 90 cases with skin disease, a notable improvement in self-esteem was determined with treatment of the acne. Thus, it's essential that the lychee students to be accustomed to acne and its treatment.[17] Acne vulgaris may be a skin problem touching the oil gland unit. it's characterized by comedones, papules, pustules, nodules, cysts, and scarring, totally on the face and trunk. Clinical manifestations vary from gentle to severe to general symptoms. [18]

Much epidemiological research on acne was performed in the United States and the United Kingdom from the mid to the late 20th century.[19] The biggest of which was a population-based survey involving more than 20,000 Americans, whose acne was measured by dermatologists or residents.[20] Related: Smaller experiments have been carried out in the KSA. At around one-tenth of the sample size.[21,22] Studies from that period found that the age of the highest occurrence for acne was late adolescents, with a sharp decline in frequency as age rose. Male patients were affected more often, with more severe forms of acne particularly.[19,10]

Literature Review

Studies in American schoolchildren reported have included seminal studies of adolescent maturation and acne. They found that with pubertal maturation, the incidence and frequency of acne increased and that comedonal acne predominated in pre-teens, with rising inflammatory acne emerging during teen years.[23,24] Larger studies regarding sex variations have found that acne is more common in younger-age children, with a decreased incidence in boys when they reach puberty.[25] Male participants appear to get even more serious acne.[26] Following the teenage years, the prevalence in women again tends to be higher than in men.[24]

Al Natour S[10] in the 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, two Results of this find out about point out that misconceptions of pimples are good sized among Saudi youth. A health schooling software is wanted to improve the appreciation of the circumstance . [10]

Nazarian et al (2019)[28] found that acne vulgaris could be a common inflammatory pilosebaceous disease defined by comedones; papules; pustules; inflamed nodules; superficial pus-filled cysts; and (in extreme cases) canalizing and deep, inflamed, typically infected sacs. Lesions are most typical on the face, however the neck, chest, upper back, and shoulders may additionally be affected. inflammatory disease will cause scarring and extended psychological distress. it's classified as gentle, moderate, or severe. [27]One study did evaluate variations in acne prevalence in almost 3000 women of different ethnicities. Recruiting from the general population of four large cosmopolitan cities the prevalence of clinical acne varied with ethnicity: African American, 37%; Hispanic, 32%; Asian, 30%; Caucasian 24%; and Continental Indian women, 23%.³⁰ Nevertheless, other environmental factors may account for these differences, as within these groups variation in acne prevalence was observed based on the city of recruitment.[16]

Rational:

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. The majority of general practitioners had a negative attitude toward Acne vulgaris, also their knowledge and practice need improvement. Acne vulgaris are common preventable diseases. Moreover, up to there are no a previous studies according to the acne vulgaris family background is a contributing factor for acne vulgaris. A health education program is needed to improve the understanding of the condition.

Ami of the study:

Assessment of the knowledge and beliefs regarding acne vulgaris among governmental secondary school students in Makkah Almukarramah, 2021

Objectives

➤ To assess the level of knowledge of governmental secondary school students regarding acne vulgaris in Makkah Almukarramah, 2021.

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 360 secondary schools (private and governmental) .190 secondary schools for girls and 170 secondary schools for boys.

Study Population

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

Inclusion criteria

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

Sample size

The total number of students attending governmental secondary schools in Makkah Almukarramah is 42507 students (25073 girls and 17434 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 300 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 schools numbers from 1 to 116, number 11 was selected. Boys governmental secondary schools numbers from 1 to 103, number 87 was selected.

Data collection tool

The structured self-administered questionnaire will be utilized for data collection in the Arabic language. It has been previously used in a study conducted by Al-Hoqail in Riyadh. The questionnaire will consists of two main parts:

- Socio-demographic data.
- Several questions that will measure the different areas of the student's

Data Collection technique

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

Data entry and analysis

Data has been entered and analyzed by Statistical Package for the Social Sciences(SPSS) version 24. 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 consideration

- 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 been self-funded.

Result

Table (1) the distribution of Socio-demographic data and students' beliefs of knowledge regarding acne in study group.

	N	%
Gender		
Female	195	65
Male	105	35
Age		
16-18	174	58
18-20	126	42
Student level		
First grade	87	29
Second grade	99	33
Third grade	114	38
Do you have pimples now, or in the last year?		
Yes	171	57
No	129	43
How long have you had the pimples for?		
less than 3 months	84	28
3-6 months	57	19
7-12 months	30	10
more than 1 year	129	43
Have you ever visited a clinic or hospital or chemist concerning your pimples		
Yes	117	39
No	183	61
What health worker has treated your pimples?		

Pharmacist	84	28
Nurse	33	11
Doctor	135	45
Traditional medicine	48	16
How long did you have pimples for before seeing a health worker?		
less than 3 months	114	38
3-6 months	54	18
7-12 months	33	11
More than 1 year	99	33
What treatments had you tried on your own before seeing a health worker?		
Cleansers	93	31
Facial scrubs	66	22
Medicated soap	87	29
Cosmetics	24	8
Retin A cream	48	16
Cortisone Cream	24	8
Herbs	48	16
Tablets	9	3
Roaccutan	15	5

In our study total 300 school students during the year 2021 in study group, Regarding gender the majority of gender were(65.0%) of students were female and male students were (35.0%), regarding the age majority of participants from 16-18 year were(58.0%) of students were age from students 18-20 were 42.0%) , regarding the student level of education the most of student in the third grade (38.0%) will the second grade (33.0 %). The (57.0%) majority of our study were answer YES have pimples now were present, About (43.0%) of students answer NO , represents (43 .0 %) How long have you had the pimples for, while less than 3 months were reported (28.0%) , for a visit to the clinic or hospital or chemist specializes in your pimples the most of participant answer No were (61.0%) but the study answer Yes were (39.0%). Regarding health worker has treated your pimples the most of participant answer doctor were (45.0%), While pharmacist advice ,(28.0%) percent followed by advice from traditional medicine (16.0%). Regarding the how long you have pimples for before seeing a health worker within less than 3 months were(38.0%). regarding what treatments had you tried on your own before seeing a health worker most of participant used Cleansers were(31.0%) followed by Medicated soap were (29.0%)

Table (3) Describe the treatment and practices done to prevent acne.

	N	%
Have you ever been completely cleared of pimples?		
Yes	192	64
No	108	36

What treatments have you used that cleared the pimples?		
Cleasers	114	38
Facial scrubs	33	11
Medicated soap (tetmosol, delta)	87	29
Cosmetics (e.g. shellely, clear essence, etc.)	18	6
Retin A cream	72	24
Dalacin T	63	21
c.cortisone.cream	24	8
Herbs	57	19
c.AB.tab	3	1
c.roaccutan	99	33
Which of the following makes your pimples worse?		
	N	%
Dirty skin	87	29
Eating too much fat or butter or margarine	66	22
Eating sweets and chocolate	90	30
Cosmetics	63	21
Hair products	15	5
Excessive heat and humidity	24	8
Rainy season	6	2
Exercise/excessive sweating	33	11
Stress	69	23
Drugs (state types)	12	4
NOTA. worse	36	12
How does your pimple make you feel?		
Very unhappy/sad	39	13
Frequently worried	33	11
Occasionally worried	87	29
Not worried at all	213	71
What makes you most unhappy or sad or worried about your pimples?		
Small painful lesions	93	31
Large painful lesions (cysts)	33	11
Dark spots	87	29
Scars	48	16
None of the above	105	35

Table 3 show Although there is no relation between diet of any kind and acne, majority of the respondents in our study were lacking such information and believed that eating sweets and chocolate (30.0%) and eating too much fat or butter or margarine (22.5%) .(29.0%) knew that dirty skin is prone for acne also showed that (29.8%) , (23.0%) knew that acne worsen by Stress , Regarding the feel when you have a pimple of your own The majority of our study proportions answer not worried at all (71.0%) , while occasionally worried were respectively (29.0%) regarding unhappy or sad or worried about your pimples

the majority of our study proportions answer none of the above at all (35.0%) ,while proportions dark spots (29.0%)

Table (7) described the effect of pimples on your relationships with others.

	N	%
Have your pimples affected your relationship with your friends?		
severely	12	4
moderately	24	8
only sometimes	48	16
never	216	72
Are pimples affecting your ability to make friends?		
severely	9	3
moderately	18	6
only sometimes	39	13
never	234	78
Have your pimples affected your relationship with your family?		
severely	21	7
moderately	18	6
only sometimes	36	12
never	225	75
Have your pimples affected your school work?		
severely	18	6
Moderately	15	5
Only sometimes	36	12
Never	231	77
How serious are your pimples?		
Mild	126	42
Moderate	90	30
Severe	84	28
Do you think pimples represent a condition that can be permanently cured (cleared never to return?)		
Yes	174	58
No	39	13
don't know	87	29
How long do you expect treatment for pimples to take?		
Days	39	13
2-4 weeks	63	21
1-6 months	54	18
More than 6 months	33	11
Don't know	111	37
What do you think causes pimples?		
Poor skin hygiene	93	31
Eating too much fat	87	29
Eating too much butter or margarine (Blue Band)	33	11
Eating too much sweets and chocolate	93	31
Obesity or too much body oil	54	18
Too many body hormones	87	29

Inheritance (genetics)	93	31
Blocked skin pores	63	21
Infection by germs	33	11
Drugs	24	8
Evil spirits	36	12
Don't know	57	19

Table 4 show Regarding the effect of pimples on your relationships your friends The majority of our study proportions (72.0%) answer never effect at all, regarding do you pimples affect your ability to make friends The majority of our study proportions (78.0 %) answer never effect at all , regarding do your pimples affected your school work The majority of our study proportions (72.0 %) answer never effect at all , Regarding serious your pimples the majority of our study proportions (51.8 %) answer Mild, were (42.0 %) , regarding the pimples represent a condition that can be permanently cured the majority of our study proportions answer YES (58.0%) , regarding the duration of treatment for pimples, less than half (37.0%) of the subjects don't know the duration of treatment . regarding the what do you think causes pimples the most of participant Eating too much sweets and chocolate, Eating too much fat and Inheritance (genetics) were (31.0%)

Table (5) Distribution of the knowledge and Belief regarding acne .

	N	%	Chi-square	
Knowledge			X ²	P-value
Weak	255	85	364.020	<0.001*
Average	36	12		
High	9	3		
Belief				
Positive belief	264	88	171.763	<0.001*
Negative belief	36	12		

Table 5 show that knowledge the most of participant weak knowledge were (85.0%) while a statistically significant P-value (0.001) , X² (364.020) regarding belief the most of participant Positive belief were (88.0%) while a statistically significant P-value (0.001) , X² (171.763)

Figure (1) Distribution of the knowledge regarding acne

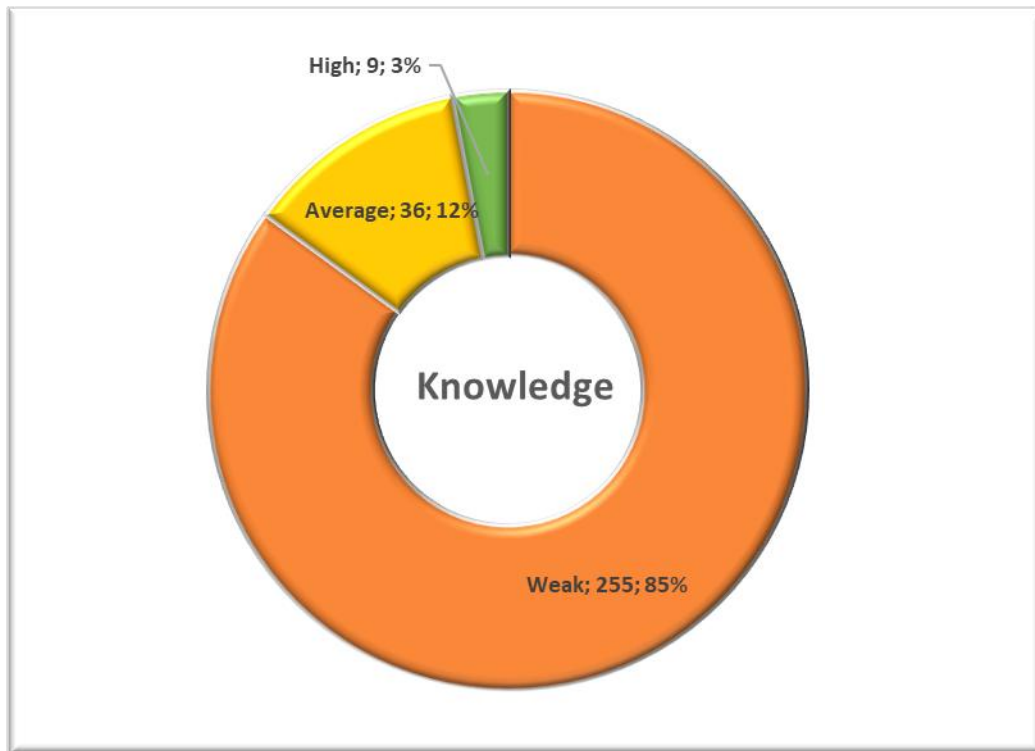
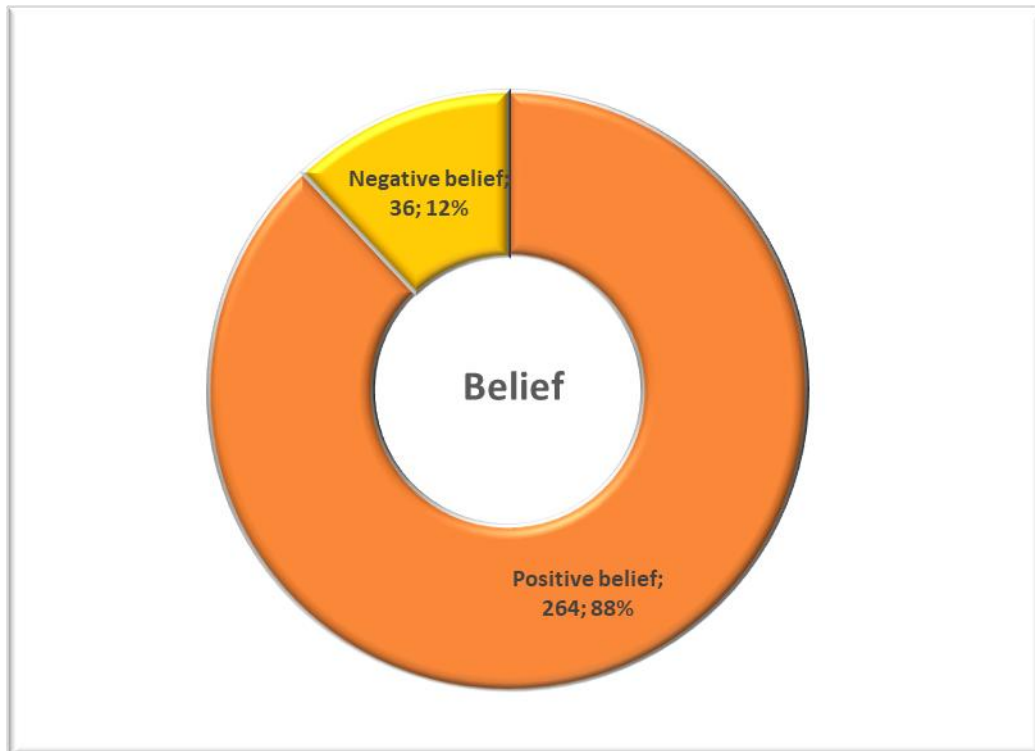


Figure (2) Distribution of the Belief regarding acne



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, (320) questionnaires were distributed, (300)students completed the questionnaire about the acne , our study total 300 school students during the year 2021 in study group, Regarding gender the majority of gender were(65.0%) of students were female and male students were (35.0%), regarding the age majority of participants from 16-18 year were(58.0%) of students were age from students 18-20 were 42.0%) , regarding the student level of education the most of student in the third grade (38.0%) will the second grade (33.0 %) . The (57.0%) majority of our study were answer YES have pimples now were present, About (43.0%) of students answer NO , represents (43 .0 %) How long have you had the pimples for, while less than 3 months were reported (28.0%) , for a visit to the clinic or hospital or chemist specializes in your pimples the most of participant answer No were (61.0%) but the study answer Yes were (39.0%). see Table (1)

Regarding seeking medical advice, (45.0%) percent visited their doctors agreed that acne need to be treated by physicians, which is consistent with Tayel et al. 2020 study,[28] where 70.9% subjects in their study believed that acne should be treated by physicians.[28] Similar results were found in Tayel et al. study (2020), in contrast to [24] study (2018) different result was found in where the vast majority of his sample (76.2%) started more than one year[22].which is consistent with study (2017) in which 74% of patients waited more than 1 year before seeking medical attention for acne . [25]

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. [27]

The majority of our study answer about used the Cleansers, Medicated soap. A cream to treatment Their proportions self-care practices done to prevent acne. This is in contrast to

other study findings where frequent face washing was practiced to ameliorate acne [29] . Similar results were observed where most of them used medical creams as over the counter medication to treat acne . [29]

[30] 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. Among the notoriously reported exacerbating dietary factors reported, fatty foods were believed to be the most common followed by chocolates and the consumption of carbonated soft drinks , which is in agreement with the findings from other studies. [30]

CONCLUSION

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 .The prevalence of acne among feminine middle school students in these study results showed that poor data proportions It had a substantial impact on their quality of life. Correct medicine care should be offered in ,the Acne patients had poor observe and unfavorable angle in spite of excellent data. Several myths exist among patients. Despite being therefore common and extremely well aware of treatment, it's a significant reason for depression among patients. Acne is perceived as a big ill health by nearly one in seven adolescents.

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