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Knowledge and practice of primary healthcare physicians for management of acne vulgaris in Sudair area, Saudi Arabia, 2017-2018

Abdullah Ayidh Alotaibi[1*], Rasheed Khalid Baradah[2], Anas Jarallah Alzahrani[3], Saad Abbas Aldawsari[4]
[1, 3, 4] Medical College, Majmaah University, Majmaah, Saudi Arabia
[2] Department of Dermatology, Majmaah University, Majmaah, Saudi Arabia

Abstract
Acne is a common skin condition that affects different areas in body including face and neck. Acne vulgaris is very prevalent among teenagers and it affects also adults but in lower percent. Acne is treatable condition, treatment of acne can be topical or systemic, however management of acne seems to be not good.
Aim: To assess knowledge and practice of primary healthcare physicians for management of Acne Vulgaris in Sudair area.
Method: This is a cross sectional study which was conducted in Sudair region, Saudi Arabia on physicians who work at primary health care centers. Pre-tested questionnaire was used to assess knowledge and practice as well as demographics of physicians.
Results: 49% of physicians had good knowledge, 44% had moderate knowledge and 7% had poor knowledge, while 72% of physicians and 28% had poor and good practice respectively. Practice was significantly associated with age (P-value=0.03).
Conclusion: There was a lack in knowledge and poor practice among physicians regarding management of acne vulgaris in Sudiar area.

Keywords: acne vulgaris, knowledge, practice, physicians, Sudiar area

1. Introduction

Acne is a common dermatological condition affecting the face, neck, chest and the back. The World Health organization defines acne as an inflammatory condition of the pilosebaceous unit of the skin. It is characterized by seborrhea (red scaly skin), comedons (black white heads) papules, nodules and pustules which sometimes heal with scarring [1]. Acne vulgaris is an extremely prevalent skin condition [1], affecting the majority of teenagers to a certain degree at some point [2]. It is amongst the common dermatological condition affecting up to 85% of teenagers [1]. Aged between 15 and 17 years [3]. Adults are also not spared, globally it is estimated that 12% of women and 5% of men are affected after the age of 25. The numbers of adults acne appears to be increased, although reasons for the increase are uncertain [1] The impact on the quality of life of young people is highly significant. It has a large negative effect on the psychosocial functioning of teenagers than diseases like asthma and epilepsy. It is often associated with anxiety, depression and unemployment [2]. This skin condition has a multifactorial pathology arising from integration of both genetic and environmental factors. Implicated risk factors include some foods rich in carbohydrates, chocolate and some drugs like steroids which may predispose to acne of varying severity [1]. It is basically a disease of the pilosebaceous follicles found in the face and upper trunk. At puberty, androgens increase the production of sebum from enlarged sebaceous glands, which get blocked and infected with Propionobacterium acnes causing an inflammatory reaction [3]. Acne is a treatable disease, but treatment varies according to severity and type of acne [3]. Topical treatment includes application of benzoyl peroxide, tretinoin, azelaic acid, and antibacterial ointments, whereas systemic treatment is based on administration oral retinoids and antibiotics as tetracycline, minocycline, clindamycin, or erythromycin [4]. Use of non-antibiotic therapies such as benzoyl peroxide helps to minimize the occurrence of resistance [1]. Early and effective treatment not only leads to remission of the disease but also prevents the development of post-acne scars and disfigurement and minimizes psychological implications. One of the local studies in Saudi Arabia revealed that acne constituted nearly one-fifth of all dermatological visits, with female predominance. Recent information on the pathogenesis of acne allows physicians to better understand the subject as well as the treatment modes as reported previously [3] Acne has been associated with high costs of treatment. In United Kingdom, it is estimated that about £100 million is spent on over the counter acne products yearly. Furthermore, patients who experience side effects from drugs are treated longer, hence incur more costs [1]. there were two studies discussed the same topic, The first one was cross-sectional survey was conducted on 142 physicians working at Primary Health Care centers of the Qassim province in 2012, the result was inadequate knowledge and practice for management of acne [3]. The Other study was cross-sectional study was conducted in 30 PHCs in Riyadh in 2000, it included 144 physicians (76 males, 68 females) about Knowledge, Attitude and Practice of physicians working in Primary Health Care centers towards Acne vulgaris. The result was inappropriate practice and lack of knowledge in selected sample [5].

2. Materials and methods

Cross-sectional study conducted in Sudair area which includes

"Al-Majmaah, Hawtah Sudair, Rawdat Sudair, Jalajil, Al_Artawiyah, Tumair, At tuwaim, al-Ghatt, Awdat sudair, and surrounding villages"; to study knowledge and practice of primary healthcare physicians for management of Acne Vulgaris. The study will include all the physicians who work at Primary Healthcare centers in Sudair area [6].

- **Inclusion criteria:** total enumeration of all present physicians in PHC centers in Sudair area (109).
- **Exclusion criteria:** Non-physcians who work in PHC centers, and absent physicians.

Data was collected based on pre-tested questionnaire which includes questions about personal data (age, gender, residency, and nationality), qualification, years of experience, Knowledge for management of Acne Vulgaris, and Practice for management of Acne Vulgaris.

Ethical approval was obtained from the ethical committee of the Basic Health Research Centre of Majmaah University. Informed consent will be obtained from the authorities.

3. Results

The present study included 109 physicians, most of them were Male 60(55.1%), while there were 49(44.9%) Female. 50(45.9%) of participants were ≥50 years old, while 39(35.8%) and 20(18.3%) were in age range of 35-44 & 25-34 years old respectively. Participants were of different nationalities and residence areas, the most common nationality was Sudanese 31(28.4%) and 53(48.6%) of participants were from different regions that weren't mentioned. The majority of physicians 67(61.5%) had bachelor degree, followed by those who have diploma or master 28(25.8%). Close percents of physicians regarding experience years after bachelor degree were found, there were 32(29.4%) had experience of more than 20 years, the detailed demographics of physicians are shown in table1.

Table 1: Demographic data of the study participants

Characteristics		N(109)	%
Age (years)	25-34	20	18.3
	35-44	39	35.8
	≥50 years	50	45.9
Sex	Male	60	55
	Female	49	45
Residence	Al-Majmaah	30	27.5
	Hawtah Sudir	11	10.1
	Rawdat Sudir	15	13.8
	Others	53	48.6
Nationality	Saudi	8	7.3
	Egyptian	29	26.6
	Syrian	11	10.1
	Sudanese	31	28.4
	Pakistani	14	12.8
	Indian	9	8.3
	Others	7	6.4
Qualifications	Bachelor	67	61.5
	Postgraduate diploma/ Master	28	25.8
	Board	7	6.4
	Others	7	6.4
Years of experience after bachelor degree	<5	4	3.7
	5-10	21	19.3
	11-15	27	24.8
	16-20	25	22.9
	>20	32	29.4

Regarding level of knowledge, good knowledge was found among 53(49%), moderate was present in 48(44%) and there were 8(7%) had poor knowledge, figure1.

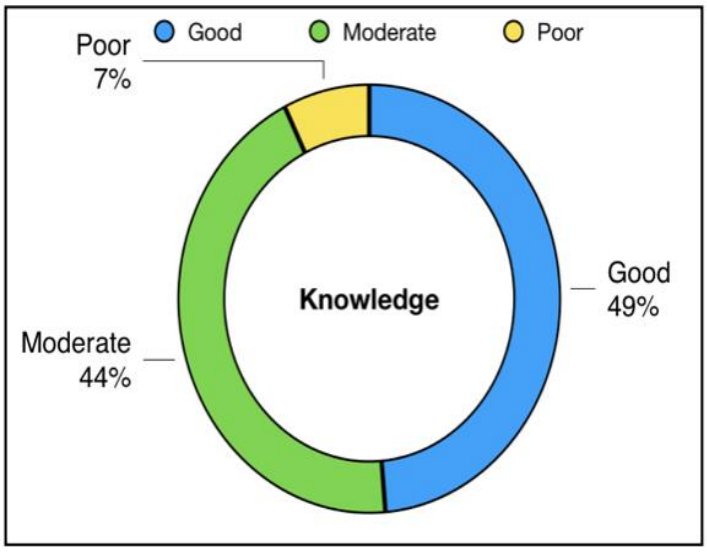

Fig 1: knowledge assessment among the participants

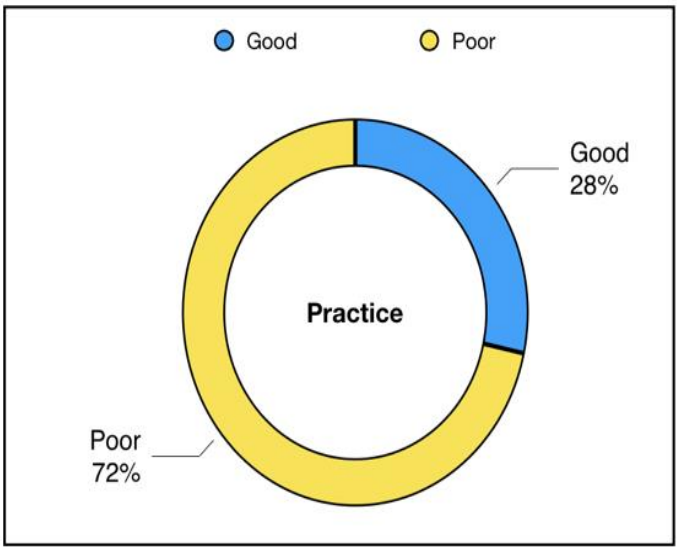

Fig 2: Practice assessment among the participants.

Regarding practice, the majority 78(72%) had poor practice, while 31(28%) had good practice, figure2. The correlations between demographics and knowledge as well as practice are shown in table 2. There was no influence of any of the participants demographic on knowledge, practice was associated significantly with age only (P-value=0.03), where poor practice was associated with older age, whereas good practice was associated with age group of 35-44 years old.

Table 2: Comparison between Knowledge and practice assesssment regarding the demographic data

Characteristics		Knowledge N (%)			Practice N (%)	
		Poor	Moderate	Good	Poor	Good
Age (years)	25-34	2(10%)	7(35%)	11(55%)	16(80%)	4(20%)
	35-44	3(7.7%)	19(48.7%)	17(43.6%)	22(56.4%)	17(43.6%)
	≥50 years	3(6%)	22(44%)	25(50%)	40(80%)	10(20%)
	P-value	0.8			0.03*	
Sex	Male	3(5%)	27(45%)	30(50%)	43(71.7%)	17(28.3%)
	Female	5(10.2%)	21(42.9%)	23(46.9%)	35(71.4%)	14(28.6%)
	P-value	0.6			1	
Residence	Al-Majmaah	4(13.3%)	11(36.7%)	15(50%)	21(70%)	9(30%)
	Hawtah Sudir	0(0%)	3(27.3%)	8(72.7%)	10(90.9%)	1(9.1%)
	Rawdat Sudir	0(0%)	7(46.7%)	8(53.3%)	9(60%)	6(40%)
	Others	4(7.5%)	27(50.9%)	22(41.5%)	38(71.7%)	15(28.3%)
	P-value	0.4			0.3	
Nationality	Saudi	0(0%)	3(37.5%)	5(62.5%)	3(37.5%)	5(62.5%)
	Egyptian	2(6.9%)	10(34.5%)	17(58.6%)	20(69%)	9(31%)
	Syrian	1(9.1%)	5(45.5%)	5(45.5%)	10(90.9%)	1(9.1%)
	Sudanese	1(3.2%)	19(61.3%)	11(35.5%)	22(71%)	9(29%)
	Pakistani	1(7.1%)	5(35.7%)	8(57.1%)	13(92.9%)	1(7.1%)
	Indian	1(11.1%)	3(33.3%)	5(55.6%)	5(55.6%)	4(44.4%)
	Others	2(28.6%)	3(42.9%)	2(28.6%)	5(71.4%)	2(28.6%)
	P-value	0.4			0.08	
Qualifications	Bachelor	5(7.5%)	27(40.3%)	35(52.2%)	52(77.6%)	15(22.4%)
	“Postgraduate diploma/Master”	2(7.1%)	14(50%)	12(42.9%)	19(67.9%)	9(32.1%)
	Board	0(0%)	2(28.6%)	5(71.4%)	2(28.6%)	5(71.4%)
	Others	1(14.3%)	5(71.4%)	1(14.3%)	5(71.4%)	2(28.6%)
	P-value	0.3			0.05	
Years of experience after bachelor degree	<5	0(0%)	1(25%)	3(75%)	3(75%)	1(25%)
	5-10	1(4.8%)	6(28.6%)	14(66.7%)	13(61.9%)	8(38.1%)
	11-15	2(7.2%)	15(55.6%)	10(37%)	17(63%)	10(37%)
	16-20	1(4%)	14(56%)	10(40%)	19(76%)	6(24%)
	>20	4(12.5%)	12(37.5%)	16(50%)	26(81.3%)	6(18.8%)
	P-value	0.4			0.4	

4. Discussion

Patients with acne usually referred to primary health care centers at early stages of the disease. The knowledge about acne is very important for correct diagnosis and good managing of acne [3]. The present study was conducted to assess knowledge and practice of primary health care physicians regarding acne management. There was a lack in knowledge among physicians, where 49% had good knowledge, whereas 44% and 7% had moderate and poor knowledge respectively. Our findings are in agreement with results of previous study from Qassim [3], where there was a inadequate knowledge among primary health care physicians regarding disease management, only 11.3% of participants had high level of knowledge, 38.7% had low knowledge and 50% had moderate knowledge. Another Saudi study [5] showed a lack of knowledge among primary healthcare physicians towards acne. A study from Jeddah demonstrated that primary healthcare physicians had insufficient knowledge about acne, 64.2% of participants answered incorrectly about acne [7]. A study from Croatia reported that the overall knowledge about acne causes, therapy and natural course was very low among acne patients and family physicians [8]. Inadequate knowledge was reported from Zambia, where pharmacists and prescribers had inadequate knowledge on acne management, 6%, 21% and 73% had high, low and moderate levels of knowledge respectively [1]. A study was conducted on Saudi medical students showed that lack of knowledge about acne was widespread among medical students [9]. Regarding practice, the current study showed that there was a poor practice among physicians where 72% of physicians had poor practice, while 28% had good practice. A study from Qassim showed low practice of physicians in many aspects, however the results were better than ours, where 1/3 of physicians independently dealt with patients with acne without referral [3]. Another study from Abha city, Saudi Arabia [10] showed that 96.2% of physicians have treated patients with acne, also 32.4% reported that they were very confident to manage acne, while only 1% and 19% reported that they need to learn a lot and a bit about acne respectively. Inappropriate practice was reported in another Saudi study [5]. The present study revealed that knowledge was independent of physicians haracteristics, practice of physicians was associated with age only (P-value=0.03), there was no other factor influence practice. Poor practice was more common among older physicians, whereas good practice was more common among physicians with age of 35-44 years old. Lack of knowledge and practice of acne is very prevalent in Saudi Arabia, also there is lack of studies conducted on this subject. Studies which conducted on this subject didn’t correlate the level of knowledge or practice with participants demographics, whereas our study did reflecting a strength point for our study, however there were limitations in the present study including small sample size and few comparison to previous studies as there were differences in the design of the different studies and limitation in the number of

studies conducted on this subject. We recommend establishing awareness programs and training to physicians to increase their knowledge and practice and then performing further studies to assess their knowledge and practice to estimate the effect of training programs.

5. Conclusion

There was a lack in knowledge and a poor practice among physicians regarding acne management. Age was the only factor affected practice of physicians, while knowledge was independent of physician characteristics.

6. Resources

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