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Demographic Features, Beliefs And Socio–Psychological Impact Of Acne Vulgaris Among Its Sufferers In Two Towns In Nigeria

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Abstract:
There is paucity of reports in the demographic knowledge, belief and socio-psychological impact of acne vulgaris sufferers towards the disorder in a black population. This is the first study from Nigeria designed to address this issue. A total of 174 facial acne sufferers completed a self-administered questionnaire, which contained several items mentioning different areas in their belief, knowledge, perception, severity, socio-psychological impact and medication attention. The findings were discussed and compared to those of the Caucasians. The occurrence of the disorder was higher in females (65.0%) compared to the males (35.0%). About 54.0% of the female subjects indicated increase in severity of the disorder during their pre-menstrual period. Also 64.9% of acne sufferers indicated increase in severity during the rainy season, while 93.1% of the population implicated stress to perpetuate the severity of the disorder. Most (75.7%) of

the acne sufferers believed that it is caused by oily diet, 40.8% thought that it is hereditary, while barely 5.2% had at sometime sought doctor's attention. Non-prescription products used by acne sufferers were cleansers and cream/lotions. Psychological abnormalities experienced by the sufferers included social inhibition, depression and anxiety. Pain and discomfort are the psychosomatic symptoms. No major differences were found in the beliefs, misconception and socio-psychological impact of acne sufferers in a black population (Nigeria) compared to the Caucasians. There is need to improve the understanding of the disorder in Nigeria through health education programmes.
Key Words: Acne vulgaris, Beliefs, Nigeria, Perceptions, Severity

Introduction

Acne Vulgaris represents the most chronic skin condition seen by dermatologists.[1] It occurs in many forms, from more common types with comedones and inflammation to the often devastating types with cyst and sometimes disfiguring scars and keloidal reactions which persist for the rest of the sufferers life.[2] Post-adolescent acne represents an increasing and important population among acne vulgaris sufferers.[2,3] Dehydroepioandoesterone sulphate (DHEAS) appears to play an important role in the initiation of acne.[4] The aetiopathogenesis of acne vulgaris include excessive sebum production, hyperkeratinization of the pilosebaceous duct follicles and bacterial colonisation with *Propionibacterium acnes*.[5,6] Recently, Ikaraoha et. al.,[7] reported an alteration in the composition of human skin surface lipids in acne vulgaris sufferers. The severity and prevalence of acne vulgaris may be influenced by climatic factors.[8] The reports on racial differences and ethnicity in severity of acne vulgaris are conflicting.[9] However the use of cosmetics, drugs and occupation were not found to be significant aetiological factors of acne vulgaris.[3] The severity of this disorder has no association with sex.[7] A review of recent literature shows that acne sufferers are not well informed about the causes of the acne vulgaris and modalities to alleviate the severity.[10-12] Moreover, there are no reports on the demographic, belief, perception and socio-phychological impacts of acne vulgaris in a Nigerian-black population. Hence this study on post–adolescent acne vulgaris sufferers in two distant Nigerian University towns.

Materials and Methods

Study Area

By simple random method, two University towns were selected. They were University of Ibadan, Ibadan, Oyo State and Ambrose Alli University Ekpoma, Edo State. The climatic features of the two towns were similar but, ethnic groups and cultural practices were different.

Subjects

One hundred and seventy four (174) subjects with facial acne vulgaris were selected from the 2 Universities. They included 61 males and 113 females within the age range of 18-32 years who volunteered to participate in the study. The exclusion criteria were manifestation of any other skin disease such as eczema, ringworm or any form of dermatitis.

Methods of data collation

Questionnaires were distributed to all participants. They were verbally interpreted in simple English language and explained to avoid any form of misunderstanding and to facilitate accurate response by the subject. They were retrieved from the participants and the data collated.

Statistical Analysis

Simple proportion and percentage was used to represent the data collated.

Results

The demographic factors that affected the severity of acne are shown in Table 1.

Females were more affected than the males (65% &35%) respectively, no ethnic differences were observed as most of the tribes in the study environment were affected. Acne sufferers had the highest increase in severity during the rainy season. In females, 54.0% indicated an increase in severity during the pre-menstrual period. Also (93.1%) of the acne sufferers indicated increase in severity as a result of stress. While 74.2% of the acne subjects had suffered the disorder for more than 5 years.

Table 1: Demographic factors affecting severity of Acne vulgaris in Nigerians

Duration of the disorder (n = 174)		n	%
	1 year	3	1.7
	2 years	42	24.1
	>5years	129	74.2
Gender (n = 174)		n	%
	Male	61	35.0
	Female	113	65.0
Ethnicity (n = 174)		n	%
	Yoruba	53	30.5
	Esan	62	35.6
	Igbo	41	23.6
	Others	18	10.3
Seasonal variation (n=174)		n	%
	Dry season	16	9.2
	Rainy	113	64.9
	Hamatan	9	5.2
	Unsure	36	20.7
Menstrual cycle (n=113)		n	%
	Premenstrual	61	54.0
	Menstruating	21	18.6
	After menstruation	10	8.8
	Unsure	21	18.6
Stress (n = 174)		n	%
	Stress	162	93.1
	No stress	4	2.3
	Unsure	8	4.6

About 74.7% of the subjects believed that oily/fatty diets contribute to perpetuation of acne vulgaris, while 40.8% believed that it is genetic/hereditary (Table 2). Very low population of the sufferers (5.2%) had at one time sought doctor's/medical attention, while 94.8% of the acne sufferers had not. Non -prescription products used by the subjects were cleansers (32.8%) and creams/lotions (59.8%) while 7.4% of the sufferers did not use any. Psychological abnormalities experienced by the acne patients were social inhibition (20.7%), depression (9.2%) and anxiety (17.2%). About 30.5% of the population experienced pain as pyschosomatic symptom while 29.9% and 13.2% experienced discomfort and embarrassment respectively.

Table 2: Beliefs, perceptions and psychological impacts of acne vulgaris among its sufferers in Nigeria

Diet (n = 174)		n	%
	Yes	130	74.7
	No	34	19.5
	Unsure	10	5.8
Heredity (n=174)		n	%
	Yes	71	40.8
	No	88	50.6
	Unsure	15	8.6
Medical Attention (n=174)		n	%
	Yes	9	5.2
	No	165	94.8
	Unsure	0	0.0
Non-prescription Product used (n=174)		n	%
	Cleanser	57	32.8
	Cream/Lotion	104	59.8
	None	13	7.4
Psychological effect (n=174		n	%
	Social inhibition	36	20.7
	Depression	16	9.2
	Anxiety	30	17.2
	Normal	92	52.7
Psychosomatic symptoms (n=174)		n	%
	Pain	53	30.5
	Discomfort	52	29.9
	Both	23	13.2
	Indifferent	46	26.4

Discussion

This study revealed that the females had higher prevalence (65.0%) of acne vulgaris than the males (35.0%), and that the severity of the disorder increases in about (54.0%) of the female population during their pre-menstrual period. Tallab[12] had earlier reported a higher prevalence of the disorder in females than the males in Saudi Arabia. The menstrual cycle is characterised by changes in hormonal concentration and levels of DHEAS may rise in pre-menstrual period and DHEAS has been reported to facilitate initiation of acne.[4] This may account for the increase in acne during pre-menstrual period. Ethnicity may not play a significant role in the prevalence of acne vulgaris, since the two major ethnic groups (Yoruba and Esan) in the study areas, Ibadan and Ekpoma respectively, were affected by the disorder. Previous reports on ethnicity and racial differences are conflicting.[9,13] In this study 64.9% of the subjects experienced increase in severity of the acne during rainy season. Other studies have shown that climatic/ seasonal variations may affect the severity of acne.[14] Rainy season in Ibadan and Ekpoma in Nigeria is associated with humid weather. In our previous work[7], we had reported that humidity favours bacterial growth and it is noteworthy that *Propionibacterium acnes* has been implicated in the perpetuation of acne vulgaris.[5] The increase in severity of acne during rainy season may be a result of increase in the growth of *Propionibacterium*

acnes, since humidity favours bacterial growth. Stress contributed to increase in severity of acne in 93.1% of the subjects. Chiu et al[15] had earlier reported a similar finding in a Chinese population. It could be that stress triggers off the mechanism involved in the formation of acne vulgaris comedons.

However, our study on belief and perceptions of acne among its sufferers revealed that 74.7% of subjects believed that it is caused by oily/fatty diet, and 40.8% believed that it is hereditary. Only 5.2% of its sufferers had sought doctor's attention and majority used non-prescription products like creams/lotion (59.8%) and cleansers (32.8%). This corroborates a previous report[16] in Caucasian population that acne is believed to be caused by hormonal and genetic factors, diet, poor skin hygiene and infection. The non-prescription products used by the Caucasian population were cleansers, acne pads and lotions.[16] Also a study in Hongkong revealed that only 2.4% of 522 acne sufferers sought medical attention.[17] We may conclude that both Caucasian and Nigerian-Black population express similar beliefs and perceptions about acne vulgaris.

This study shows that the psychological abnormalities expressed by acne sufferers includes: social inhibition in 20.7%, anxiety in 17.2% and depression occurring in 9.2% of the acne sufferers. The belief that the disorder has disfigured the face with scars, lesions and some times keloids and thus a tendency to withdraw from social gathering may contribute to these psychological problems in acne sufferers. It was observed in this study that 30.5% of the acne sufferers experienced pain, 29.9% had discomfort while 13% had both as psychosomatic symptoms. The pain and discomfort may be due to the reddening and swelling of the comedons. These findings are in line with a previous Caucasians report.[18]

We conclude that stress, seasonal variation (rainy season) and pre-menstrual period may affect the severity of acne vulgaris. Females had higher prevalence than males, while ethnicity may not be a determining factor. Nigerians share similar beliefs, perception and misconceptions with the Caucasians regarding acne vulgaris. Health education programme on acne is needed to improve the understanding of this disorder in Nigeria.

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