

Knowledge About the Prevalence of Acne Scars, Skin Hyperpigmentation, Chloasma and Freckles in Hail's Community, Saudi Arabia

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ABSTRACT

Background: despite the modern society, medical support and education about skin problems, skin problems have been common in individuals living in Hail city.

Objectives: to assess the knowledge about the prevalence of common skin problems like acne scars, pigmentation, chloasma and freckles in Hail's community, Saudi Arabia.

Methods: a cross-sectional study on the common skin problems was randomly distributed among men and women in Hail city of Saudi Arabia from February to October 2017 involving 6032 participants.

Results: in (35.3%) have acne scars, (30.8%) don't have any skin problems, (26.7%) have pigmentation, (11.2%) have chloasma and (5.5%) have freckles.

Conclusion: my result showed that huge number of participants are suffering from a specific skin problem.

Keywords: acne scars, pigmentation, chloasma, freckles.

INTRODUCTION

Acne has a prevalence of over 90% among adolescents^[1] and persists into adulthood in approximately 12%–14% of cases with psychological and social implications of high gravity^[2, 3]. All body areas with high concentrations of pilosebaceous glands are involved, but in particular the face, back and chest. Inflammatory acne lesions can result in permanent scars, the severity of which may depend on delays in treating acne patients. The prevalence and severity of acne scarring in the population has not been well studied, although the available literature is usually correlated to the severity of acne^[4]. 2133 volunteers aged 18 to 70 from the general population showed that nearly 1% of people had acne scars, although only 1 in 7 of these were considered to have "disfiguring scars"^[5]. Severe scarring caused by acne is associated with substantial physical and psychological distress, particularly in adolescents. Chloasma is a required hypermelanosis of sun-exposed areas and it can affect 50–70% of pregnant women. It presents as symmetric hyperpigmented macules, which can confluent or punctuate. The most common locations are the cheeks, the upper lip, the chin and the forehead^[6]. Chloasma is a synonymous term sometimes used to describe the occurrence of melasma during pregnancy. Chloasma is derived from the Greek word chloazein, meaning »to be green. « Melas, also Greek, means »black. « Since the pigmentation is never green in appearance, melisma is the preferred term. Chloasma is more common in women than in men, and women are affected in 90% of cases. It can affect 50–70% of pregnant women. Melasma is rare before puberty.

Persons of any race can be affected. However, it is much more common in constitutionally darker skin types than in lighter skin types. More than

30% of patients have a family history of melasma. Identical twins have been reported to develop melasma while other siblings under similar conditions did not. Freckles are clusters of concentrated melanized cells which are most easily visible on people with a fair complexion. Freckles do not have an increased number of the melanin-producing cells, or melanocytes, but instead have melanocytes that overproduce melanin granules (melanosomes) changing the coloration of the outer skin cells (keratinocytes). As such, freckles are different from lentigines and moles^[7].

Hyperpigmentation can be caused by sun damage, inflammation, or other skin injuries, including those related to acne vulgaris^[8, 9, 10]. People with darker skin tones are more prone to hyperpigmentation, especially with excess sun exposure^[11]. Many forms of hyperpigmentation are caused by an excess production of melanin^[11]. Hyperpigmentation can be diffused or focal, affecting such areas as the face and the back of the hands. Melanin is produced by melanocytes at the lower layer of the epidermis. Melanin is a class of pigment responsible for producing color in the body in places such as the eyes, skin, and hair. As the body ages, melanocyte distribution becomes less diffuse and its regulation less controlled by the body. UV light stimulates melanocyte activity, and where concentration of the cells is greater, hyperpigmentation occurs. Another form of hyperpigmentation is post inflammatory hyperpigmentation. These are dark and discolored spots that appear on the skin following acne that has healed.

MATERIALS AND METHODS

A cross-sectional study involving 6032 participants from Hail city of Saudi Arabia was done

between February-October 2017. The selected sample size for this study was randomly determined. A self-administered questionnaire was developed after a careful review of literature on the subject and it includes 7 questions. The questionnaire consisted of two parts. Part one; demographical data that includes gender, age, marital status, educational level, employment status, type of skin color. Part two; the participants were asked whether they have a current dermatological problem like chloasma, freckles, acne scars and skin hyperpigmentation from sun exposure. Data were collected by two methods, one by questioner paper collected from people attending public areas like shopping malls, working areas such as schools, business and Government offices, second method was by distribution of a survey website-link through Saudi population of Hail city in social media. Descriptive statistics were used to describe the answers of the participants in the study using numbers and percentages. Comparing the answers for different questions within the different groups was done using Pearson chi-square test. Statistical significance was set at $p < 0.05$ and analysis was performed using IBM SPSS statistics, version 23 (IBM, Armonk, NY, USA).

The study was done after approval of ethical board of University of Hail.

RESULT

A total of 6032 participates in the study, 3447 of them (57.1%) are females (Table 1). Almost half of the participants (47.9%) are between the ages of 20-30 years (Table 2), also, more than half of participants (61.9 %) are singles (Table 3), and about (59%) are students (Table 4), only (15.8%) of participants are office workers (Table 4). As regards skin color distribution, higher percentage of the participants have medium skin color (57.6%) followed by light skin color (26.7%) then dark skin color (15.7%). Some of participants have dermatological problems, where (35.3%) have acne scars, (26.7%) have pigmentation, those having chloasma (11.2%) and (5.5%) have Freckles. In term of knowledge, about (80.1%) (Table 5).

Table (1): sex distribution of the participants

Sex	Frequency	Percent
Female	3447	57.1
Male	2585	42.9
Total	6032	100

Table (2): Age distribution of the participants

Age	Frequency	Percent	Female	female percentage	Male	male percentage
15- 20 years	1529	25.3	1145	33.2	384	14.9
20-30 years	2890	47.9	1347	39.1	1543	59.7
30-35	903	15.0	512	14.9	391	15.1
35-40 years	382	6.3	232	6.7	150	5.8
>40 years	297	4.9	186	5.4	111	4.3
Total	6001	99.5	3422	99.3	2579	99.8
missing	31	.5	25	.7	6	.2

Table (3): Marital status of the participants

Marital status	Frequency	Percent	Female	Female percentage	Male	Male percentage
single	3684	61.9%	2057	61.0%	1627	63.2%
engaged	538	9.0%	284	8.4%	254	9.9%
married	1725	29.0%	1033	30.6%	692	26.9%
Total	5947	100.0%	3374	100.0%	2573	100.0%

Table (4): occupation of the participants

Occupation	Frequency	Percent	Female	Female percentage	Male	Male percentage
student	3517	59.0%	2008	59.3%	1509	58.5%
office work	941	15.8%	488	14.4%	453	17.6%
field work	659	11.0%	268	7.9%	391	15.2%
not working	849	14.2%	624	18.4%	225	8.7%

Total	5966	100.0%	3388	100.0%	2578	100.0%
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Table (5): prevalence of skin problems within the participants

skin problems	Frequency	Total Percentage	Female	female percentage	Male	male percentage
None of them	1855	30.8%	962	27.9%	893	34.5%
sun spots (pigmentation)	1611	26.7%	940	27.3%	671	26.0%
Acne scars	2132	35.3%	1311	38.0%	821	31.8%
Chloasma	673	11.2%	485	14.1%	201	7.8%
Freckles (Ephelides)	329	5.5%	204	5.9%	125	4.8%

DISCUSSION

Over all, I was able to detect a significant number of skin problems among people. Among the 6023 participants between the ages of 15 and over 40 years of age, (35.3%) of people are suffering from acne scars as a number one skin problem in community followed by (30.8%) don't have any skin problems, (26.7%) suffering from skin hyperpigmentation (sun spots), (11.2%) suffering from chloasma and (5.5%) suffering from freckles. It turns that acne scars are increasing these days not only worldwide but also in Hail community in Saudi Arabia. These acne scars are slightly more common in females than in males with a percentage of (38%) in females and (31.8%) in males. acne scars are usually more in men than in females⁽¹²⁾. Skin hyperpigmentation problem is also increasing being the second common skin problem after acne scars in a city that has a hot weather and (11%) of participants are field workers who continuously exposed to sun light. Freckles are the least common skin problems in the community and they are a common disorder of facial hypermelanosis among all races particularly South Asian and Hispanic population affecting (4%) of patient attending dermatological clinics^(13,14). These skin problems are showing a steady decline among those participants between the ages of 30 and more than 40 years of age.

CONCLUSION

We can conclude that dermatological problems are common in Hail community in Saudi Arabia. Acne scars, chloasma, freckles and hyperpigmentation are increasing among people. More community awareness and education is required and dermatology doctors are advised to have an active role in the health education and awareness about these dermatological problems.

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