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Research Article

**TANNING PRACTICE, PERCEPTION AND SUNBURN AMONG
KING ABDUL-AZIZ UNIVERSITY STUDENTS****Reem H. Alenazi¹, Bashair M. Alwasiyah¹, Abdulaziz H. Alanazi², Ahmed Hassan Alhasan², Maha H. Alenazi², Dania A. Alseini*, Mohamed Abduljabar³**

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Abstract:

Background: One of the most important causes of skin cancer is exposure to Ultraviolet (UV) radiation. Non-melanoma skin cancer is more prevalent than malignant melanoma skin cancer. One in three cases are diagnosed as skin cancer. One very important step in reducing its incidence is to educate all people about the harmful implications of exposure to sunlight and to raise awareness through education among people on how to better protect themselves against UV radiation. Sunburns and tanning promote damage which induce immunosuppression and skin cancer.

Method: A representative sample of 236 of KAU's students living in varied area of Jeddah was selected randomly to filling electronic questionnaire. The sample will be 236 members. Data were collected by Co-Authors, The target population was the general population of adults residing in Jeddah, age 18 and over, Saudi citizen, willing to participate, and KAU students. Non-KAU students and under 18 were excluded from the study.

Result: Out of 236 participants who met the inclusion criteria, 203 (86%) were female and only 33 (14%) were male so the number of women participating has doubled the men, which means females had better cooperation, also Men and women appear to differ in how they respond to sun-safe practices. 3 (1.3%) of participants had diagnosed with a skin cancer. And only 1 (0.4%) had family history diagnosed with a skin cancer. According tanning less than half of participants 95 (40%) had practice tanning. 20% of the tanners reported using sun screen but details on the proper use or the specific levels of sun protective factor (SPF) is not known to ensure the significance of the finding Tanning Side effect, and 36.4% of them use sunglasses during the tanning. Burns are the most common complication by 45% followed by itching and redness. Overall, respondents had a sense that sun exposure is bad for their health. Most of the population correctly identified that the sun causes skin cancer and that it is more harmful for fair skin than for dark skin.

Conclusion: Although our study sample possessed good knowledge towards sun tanning, their attitude and practices were satisfactory. Thereby, they need to be informed and educated as how to be safely protected against excessive sun exposure.

Key words: Tanning, sunburn.

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INTRODUCTION:

Skin cancer is the most common type of cancer. It is very concerning that the incidence rates of skin cancer are alarmingly increasing which in turn is also contributing to a slight increase in mortality rates. One of the most important causes of skin cancer is exposure to Ultraviolet (UV) radiation [1]. People are exposed to high amount of UV rays on a daily basis due to thinning of stratospheric ozone layer and other factors such as lifestyle practices aggravate the situation for example ,living in sunny climate, outdoor sports, tanning and sunbathing [2]. Non-melanoma skin cancer is more prevalent than malignant melanoma skin cancer with about 2-3 million cases of melanoma skin cancer being diagnosed every year [3]. One in three cases are diagnosed as skin cancer[4]. One very important step in reducing its incidence is to educate all people about the harmful implications of exposure to sunlight and to raise awareness through education among people on how to better protect themselves against UV radiation [5]. Sunburns and tanning promote damage which induce immunosuppression and skin cancer [6]. Some candidates are more prone to skin cancer than others, for instance organ transplant recipients, AIDS patients, people who undergo radiation therapy, phototherapy, psoralen, PUVA and individuals with familial genetic syndromes [7][8][9].

Other associative factors include viral infections such as human papilloma virus which can cause squamous cell carcinoma, ionizing radiation ,environmental pollutants, chemical carcinogens, and exposure related to profession. Moreover, one's age, skin color, diet and smoking play a role as well [10].

METHODS:

A knowledge, attitude, and practice (KAP) cross-sectional study design was used to investigate general knowledge, attitudes, and practices related to Tanning, skin cancer and factors associated with its development among students of King Abdul-Aziz University. The study was conducted in the period (August 2018– October 2018).

The target population was the general population of adults residing in Jeddah. Eligibility criteria were: age 18 and over, Saudi citizen, willing to participate, and KAU students. Non-KAU students and under 18 were excluded from the study. The sample size was calculated by Raosoft Website for sample size calculation.95% confidence level, 5% error and 10% for defaulter and non-respondent of a total population. The sample will be 236 members, Data were collected by Co-Authors. A representative sample of 236 of KAU's students living in varied area of Jeddah was selected randomly to filling electronic

questionnaire.

A comprehensive literature search was performed of electronic databases (MEDLINE and EMBASE), and relevant studies were reviewed with the aim of informing design of this study, The questionnaire includes 2 sections, the demographic data and 22 closed questions about Tanning knowledge, attitude, practice of KAU's Students, Ethical approval was obtained from the Human Research Ethics Committee, Faculty of Medicine, King Abdul-Aziz University, Jeddah, Saudi Arabia. (Reference No 3-18). Participation in the study was voluntary. Informed Consent was included in questionnaire.

STATISTICAL ANALYSIS:

Data were entered, coded and processed using Microsoft Excel and the software Statistical Package for Social Science (SPSS) (Version 21) for Mac system. Descriptive statistics, frequencies and percentages were used to describe all variables. Association between dependent variables and independent variables (Participants socio-demographics) were tested by using Chi-square test. P values of < 0.05 were considered statistically significant

RESULTS:

Socio-demographic characteristics of participants Out of 236 participants who met the inclusion criteria, 203 (86%) were female and only 33 (14%) were male, and aged either between 20 and 29 years 148 (62.7%) or less than 20 76 (32.2%). More than half 141 (95.7%) had a bachelor's degree. About 9% of participants suffer from skin problems such as acne. Prevalence of skin cancer and tanning 3 (1.3%) of participants had diagnosed with a skin cancer. And only 1 (0.4%) had family history diagnosed with a skin cancer. According tanning less than half of participants 95 (40%) had practice tanning. Socio-demographics factors had no significant association with this prevalence ($p > 0.05$).

Knowledge Assessment

The population's knowledge about relationship of sun tanning with skin cancer was measured by three questions . The results show the majority of participants knew this relation and aware about tanning side effects. Chi-square test summarizes the tests for associations between knowledge level and age, gender, educational level. The knowledge score was statistically significantly different with gender. Knowledge level was significantly higher for females compared to males.

Attitude and practice Assessment

We asked the participants many questions about

tanning practice, it is discussed in (Table 1).

Table 1: Tanning practice among KAU students.

Question	N	%
Q1. When did you do the last suntan		
During the last 6 months	14	17.3
During the last 9 months	31	38.3
During the last 3 months	8	9.9
During the last month	28	34.6
Q2. When your first Suntan was Done		
For a few weeks	6	6.3
For a few months	5	5.3
For a few years	53	55.8
I don't remember	31	32.6
Q3. How often do you usually practice tanning		
Weekly	2	2.5
Monthly	12	15.0
Yearly	66	82.5
Q4. What is the method of tanning usually you used		
Direct exposure to the sun	39	42.9
Use the Creams of self-tan from pharmacies	50	54.9
Use a tan bed	1	1.1
Homemade mix	1	1.1
Q5. Where you are often exposed to a tanning bed		
Beauty center or salons	5	16.7
Clinic	2	6.7
sport club	7	23.3
Outside KSA	16	53.3
Q6. What is the reason for doing tanning		

I would like to get a color for dissatisfaction with my color	35	38.5
To take vitamin D	10	11.0
for relax	19	20.9
Style	27	29.7
Q7. What are the periods		
continuous	5	5.7
Intermittent	44	50.6
When needed	34	39.1
Just before the events	4	4.6

Only 20% of the tanners reported using sun screen but details on the proper use or the specific levels of sun protective factor (SPF) is not known to ensure the significance of the finding Tanning Side effect . And 36.4% of them use sunglasses during the tanning.

Tanning burns and complications

We asked the participants two questions about tanning burns, it is discussed in (Table 2).

Table 2: Tanning burns.

Question	N	%
Q1. Does the suntan Burn your skin		
Yes	35	38.5
No	56	61.5
Q2. How many times did your skin burn		
Not burned	48	56.5
one to 3 times	29	34.1
3-5 times	6	7.1
More than 5 times	2	2.4

Regarding the tanning complications, Burns are the most common by 45% followed by itching and redness. And majorities 30% ignored these complications and not deal with it.

Finally, more than half of participants 56.4% had satisfactions from tanning results. And only one-third 33.3% had been warned about the dangers of tanning.

DISCUSSION:

There has been a significant increase in the incidence of skin cancer over the last 20 years and it has been shown that the risk of someone developing the condition is related to cumulative sun exposure over a lifetime[11]. However, tanned skin is still a common beauty ideal. The relationship between knowledge, attitudes and protective behavior is not fully

understood yet.

Our study goal is identified knowledge and practice of KAU students regarding tanning and skin cancer. Their knowledge level, attitudes, beliefs, and prevention practices will help shape future patient care and strategic decisions aimed at lowering the burden of skin cancer.

According to baseline characteristics, the number of women participating has doubled the men, which means females had better cooperation.

Overall, respondents had a sense that sun exposure is bad for their health. Most of the population correctly identified that the sun causes skin cancer and that it is more harmful for fair skin than for dark skin.

In addition, research suggests that differences by sex exist with regard to attitudes and practices related to sun-safe behaviors. Men and women appear to differ in how they respond to sun-safe practices.

More than half of the participants knew the risks related to tanning. This could be related to increased exposure to media and social networking in recent years. Nevertheless, there are also a significant number of participants who do not know the harms of tanning. These harms are generally not discussed in schools and non-medical colleges in the country.

Comparison with Other Studies

The nine sunbed users in this sample were women, which corresponds to published studies [12,13,14,15]. Several studies reported differences by sex with regard to sun protective behavior. Female medical students reported a greater intention to use sun protective behavior, greater skin cancer knowledge, and more appreciation for sun protection than their male counterparts [16,17,18].

Strengths

This study is the first conducted to assess knowledge, attitudes, and practices regarding tanning and skin cancer prevention in Jeddah.

The questionnaires were self-administered allowing the respondents to answer the questions independently. Furthermore, each one in population has an equal chance of being chosen to participate which decrease the bias.

Limitations

There are several potential limitations of the current study. A convenience sample from only one university was surveyed; thus, caution must be extending our findings to other universities, especially universities situated in other geographical regions. This study results rely on self-reported data, which could introduce recall and social desirability biases. Finally, the results are limited by cross-sectional nature of this study, which means that directions of effects can only be speculated .

CONCLUSION:

Although our study sample possessed good knowledge towards sun tanning, their attitude and

practices were satisfactory. Thereby, they need to be informed and educated as how to be safely protected against excessive sun exposure.

Recommendations

- Replicate the same study within other areas of Jeddah and with diverse samples drawn from the population.
- Investigate current sources of KAP and explore future avenues to improve KAP for skin cancer prevention.
- Study KAP of health care practitioners regarding skin cancer and its prevention .

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