

# Knowledge and practice of recreational tanning among female college students in the Eastern Province of Saudi Arabia: A cross sectional study

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## Introduction

Tanning is the process in which skin color turns darker to turn it brown or bronze. It is produced by direct exposure to ultraviolet (UV) radiation emitted by the sun or through tanning devices. The popularity of indoor tanning seems to be increasing between American and European young women (Lazovich et al., 2016; Scalbert et al., 2015; Boniol et al., 2012).

## Methods

A cross-sectional study was carried out in randomly chosen students from two non-medical universities in the Eastern Province of Saudi Arabia. The study was conducted in the period (March 2015–June 2015). A 14 item, close-ended Arabic questionnaire was distributed to female college students aged 19-24 years. Three hundred questionnaires were distributed in two universities. Each university received 150 forms. The questionnaire was validated for content validity and internal reliability through a focus group of 20 college students aged 19-24 and tested with kappa 0.8. The study was exempted from the Institutional Review Board as it was considered research on regular and special education instructional strategies. The information gathered was entered into a spreadsheet. Descriptive and bivariate analysis was derived using an SPSS program.

## Results

A total of 249 responses (response rate of 83%) were received. Of those, 60% described their skin as Fitzpatrick type 111–V while the rest of the subjects described their skin as I–II. Of those who were skin type I–II, 21.5% preferred outdoor tanning and no one preferred indoor tanning alone while 1% preferred both and 3% preferred artificial sunless spray/cream tanning. The rest (76%) did not prefer any form of tanning. Of those who were skin type III–V, 23% preferred outdoor tanning, 2.5% preferred indoor tanning, 3.2% preferred both and 9% preferred artificial sunless spray/cream tanning.

Thirty-one percent of the subjects with skin type I–II and 39% of subjects with skin type III–V (p value 0.35) thought tanning would make them look better. Of the subjects who tanned outdoor or in a tanning bed, 63% stayed more than 20 minutes while 36% stayed less than 20 min. The use of sunscreen was practiced in 70% of those who tanned while 30% did not use sunscreen. When asked about the risk of skin cancer in relation to indoor and outdoor tanning, more than 50% of the subjects knew there was a known risk while 3% thought there is no risk. The rest of the subjects 44% did not know the relationship of skin cancer and tanning. Sixty percent (60%) of the subjects did not know there was a relation between tanning and photoaging. While 33% thought there was a relation. The rest (5%) thought there was no relation.

## Demographic data and participant skin type

Demographic data and participants skin type	University 1 n = 119 (48%)	University 2 n = 139 (52%)
<b>Age</b>		
• Less than 18	1	2
• 18-24 years	113	123
• Above 24 years	5	5
<b>Nationality</b>		
• Saudi	112	117
• Non-Saudi	7	13
<b>Participant's mother educational level</b>		
• High school or less	60	42
• Diploma	9	13
• College education and higher	50	75
<b>Participant's lather educational level</b>		
• High school or less	46	16
• Diploma	13	6
• College education and higher	60	108
<b>Participant's skin type</b>		
• I-I I	49	49
• I1I-V	70	81

## Knowledge, attitude and behavior of the participants toward tanning

Variables	Skin Type I-II n = 98 (40%)	Skin Type III-V n = 151 (60%)	P Value
<b>Tanning practice</b>			
• Outdoor tanning	22	35	0.096
• Indoor tanning	0	4	
• Indoor tanning and Outdoor tanning	1	5	
• Artificial sunless tanning	3	14	
• Does not practice tanning	72	93	
<b>Student thinks she will look better with a tan</b>			
• Yes	31	59	0.35
• No	28	35	
• I don't know	39	57	
<b>Snulent thinks tanning bed worse than sun exposure</b>			
• Yes	12	12	0.40
• No	46	62	
• I don't know	40	77	
<b>Duration of tanning</b>			
• <20min	14	23	0.43
• >20min	20	44	
• Does not practice tanning	64	84	
<b>Sun screen during tanning</b>			
• Yes	25	50	0.65
• No	14	19	
• Docs practice tanning	59	82	
<b>Awareness of skin cancer in relation to tanning</b>			
• Yes	58	70	0.22
• No	2	7	
• Don't know	38	74	
<b>Awareness of skin of photnagmg in relation to tanning</b>			
• Yes	36	49	0.91
• No	5	9	
• Don't know	57	93	

## Conclusions

This study showed that the younger female population is significantly interested in tanning. Outdoor tanning was preferred. This study might help guide us and other dermatologists to create community-counseling campaigns to address these trends and their relationship with skin cancer and photoaging. Counseling health education on proper sun protection should also be presented and sunless tanning should be promoted. Regulating or restricting tanning beds before their appearance in the country is an important point.

## Bibliography

Lazovich, D., Isaksson Vogel, R., Weinstock, M.A., Nelson, H.H., Ahmed, R.L., Berwick, M., 2016. Association between indoor tanning and melanoma in younger men and women. *JAMA Dermatol.* 152 (3), 268-7.

Scalbert, C., Grenier, M., Maire, C., Cottencin, O., Bonneville, A., Behal, H., et al., 2015. Indoor tanning: motivations and beliefs among users and non-users in the population of Lille (Northern France). *Ann Dermatol. Venereol.* 142 (1), 10-16.

Boniol, M., Autier, P., Boyle, P., Gandini, S., 2012. Cutaneous melanoma attributable to sunbed use: systematic review and meta-analysis. *BMJ* 24 (345), e4757.

