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# THE SUN SCREEN USE AND SUN PROTECTION BEHAVIOR AMONG YOUNG FEMALES IN MAKKAH CITY, SAUDI ARABIA

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Article Info	ABSTRACT
Article Info Received 15/02/2015 Revised 27/03/2015 Accepted 12/04/2015 Key words: Sun screen, Tanning, Skin cancer; Awareness; Adolescents; Females.	<b>ABSTRACT</b> Excessive exposure to ultraviolet radiation (UVR) in childhood and adolescence contributes to the risk of skin cancers later in life. Hence, primary prevention of skin cancer, by modification of risky UVR exposure behaviors, represents an important public health priority. To assess the awareness about skin cancer and side effects of excessive use of sun screens among Saudi adolescent females. A cross sectional study was done among 250 Saudi females, their ages ranged from 17 to 26 year old. They all used the sun screen as a way of protection from sun light. No history for any skin disease was reported. Self-administered questionnaires were distributed among them. Two hundred fifty Saudi female were involved in the study. Among them, 61 (32.4%) girls were using the sun screens every time they went out. One hundred fifty three (61.2%) girls had sun burns while exposure to sun light before. 139 (90.8%) girls noticed decreased sun burns after using the sun screens whereas the other 14 (9.1%) girls did not noticed any change in sun burns (P=0.00026). Among the 250 girls used the sun screen as a protective way, 46 (18.4%) girls had noticed skin changes after using the sun screen (p=0.0038); 32 (69.5%) girls had noticed changing in color (tanning), 14 (30.4%) girls had noticed changes in consistency (more friable skin). 64 (25.6) girls were aware that excessive unprotected sun exposure causes wrinkles, premature aging and possible skin cancer in some cases. Using sun screens as a protective way from sun light has a benefit in decreasing the severity and frequency of sun burns. Some of unwanted skin changes have appeared as a result of excessive use.
	although not statistically significant. We recommend sun burns for people who like tanning, but must
	be careful of using sun screens excessively.

### INTRODUCTION

Excessive exposure to ultraviolet radiation (UVR) in childhood and adolescence contributes to the risk of skin cancers later in life [1]. Hence, primary prevention of skin cancer, by modification of risky UVR exposure behaviors, represents an important public health priority. Studies have shown that parents may be an important social influence on their children's UVR exposure behaviors and sunburn rates [2–5].

Sunburn has a lifetime relative risk for melanoma of up to 1.6 and is a risk at all ages [6, 7]. Previous studies providing estimates of UVR exposure outcomes have

focused on all adults, [8, 9] parents of young children [5, 10] or have included non-generalizable samples [11, 12]

This study aimed to assess the awareness about skin cancer and side effects of excessive use of sun screens among 250 Saudi girls.

#### SUBJECTS AND METHODS

A cross sectional study was carried out among 250 Saudi females, their ages ranges between 17 and 26 years. They all used the sun screen as a way of protection from sun light. No history for any skin disease was

reported among them. Self-administered questionnaires were distributed among them, some questionnaires were verbally filled. The questionnaire included questions regarding how often they used the sun screen, sun burns and if they improved after using sun screens. They were also had been asked about if they had noticed any skin change or skin medical problem after using the sun screens.

SPSS statistical program version20.0 was used for the data analysis. Chi-square test was utilized for testing the association between categorical variables and level of significance was determined at  $p \le 0.05$ .



#### RESULTS

Two hundred fifty Saudi female were involved in the study. Their ages ranged between17 and 26 years, 93 (37.2%) girls had attended educational course about skin cancer. Twenty-eight (11.2%) girls had attended an educational course about methods for sun protection.

Among respondents, 61 (32.4%) girls were using the sun screens every time they went out, 46 (22.4%) girls they were using the sun screens most of times they went out, 30 (12.0%) girls were using the sun screens some times when they went out, 83 (33.2%) girls were using the sun screens rarely when they went out.

One hundred fifty three (61.2%) girls had sun burns while exposure to sun light before. Among them, 126 (82.3%) girls had mild degree of sun burns, 24 (15.6%) and 3(1.9) girls had moderate and sever degrees of sun burns, respectively.

Among girls who had sun burns (153), 139 (90.8%) girls noticed decreased sun burns after using the sun screens whereas the other 14 (9.1%) girls did not noticed any change in sun burns (P=0.00026).

As obvious from figure 1, among the 250 girls used the sun screen as a protective way, 46 (18.4%) girls had noticed skin changes after using the sun screen (p=0.0038); 32 (69.5%) girls had noticed changing in color (tanning), 14 (30.4%) girls had noticed changes in consistency (more friable skin) while the other 204 (81.6%) girls did not notice any skin change.

Twenty-nine girls (11.6%) girls had noticed skin problems after using the sun screen (p=0.0130); 19 (65.5%) girls noticed development of rash, 4 (13.7%) girls noticed development of erythema and hotness, 6 (20.6%) girls noticed development of dark pigmentation. Regarding the purpose for using sun screen, 206 (82.4%) girls used it only for sun protection as their skin usually expose to sun light, 44 (43.1%) girls used it as their sensitive skin for sun light and sun always made their faces worse and 19 (17.6%) girls of those were diagnosed with lupus erythrematous disease and sun screen were prescribed for them as a treatment (p=0.00081).

As seen in figure 2, 64 (25.6) girls were aware that excessive unprotected sun exposure causes wrinkles, premature aging and possible skin cancer in some cases, while the majority of 186 (74.4%) girls were not aware that excessive unprotected sun exposure causes wrinkles premature aging and possible skin cancer in some cases.

Among girls who had past history of sun burns 153 (61.2%), 139 (90.8%) girls had noted decreased sun burns after using the sun screens. On the other hand, 46 (30.1%) girls had noticed skin changes after using the sun screens; 32 (69.5%) girls had noticed changing in color (tanning), 14 (30.4%) girls had noticed changes in consistency (more friable skin). Also, 29 (19.0%) girls had noticed skin medical problems after using the sun screens; 19 (65.5%) girls noticed development of rash, 4 (13.7%) girls noticed development of erythema and hotness, 6 (20.6%) girls noticed development of dark pigmentation.

### DISCUSSION

According to our cross sectional study, using the sun screen decreasing the severity and frequency of sun burns among young Saudi girls. This finding is in accordance with what has been reported previously in USA [13]. Despite recommendations by several national organizations [14-16], the use of multiple sun protection behaviors remained low in Saudi Arabia, consistent with findings in the U.S. adult population [17]. Given these findings, skin cancer prevention programs should emphasize the practice of multiple sun protection behaviors, including the use of sun-protective clothing and sun avoidance, as well as appropriate sunscreen use and application guidelines.

In contradiction to what has been reported [17] that more than 90% of users of tanning were aware about the fact that excessive unprotected sun exposure causes wrinkles, premature aging and possible skin cancer in

some cases, in the present study, only one-fourth of our cohort were aware about that. In conclusion, using sun screens as a protective way from sun light has a benefit in decreasing the severity and frequency of sun burns. Some of unwanted skin changes has appeared but not statistically significant, could be related to race or environmental factors. SLE is a significant medical factor for using sun screens for long times. As sun screens approved improvement in sun burns, we recommend sun burns for people who like tanning, but must be careful of using sun screens excessively.

#### REFERENCES

- 1. Whiteman DC, Whiteman CA, Green AC. (2001). Childhood sun exposure as a risk factor for melanoma: a systematic review of epidemiologic studies. *Cancer Causes Control*, 12, 69–82.
- 2. Cokkinides V, Weinstock M, Lazovich D et al. (2009). Indoor tanning use among adolescents in the US. Cancer, 115, 190–198.
- 3. Cokkinides VE, Weinstock MA, Cardinez CJ *et al.* (2004). Sunsafe practices in U.S. youth and their parents: role of caregiver on youth sunscreen use. *Am J Prev Med*, 26,147–151.
- 4. Riordan DL, Geller AC, Brooks DR *et al.* (2003). Sunburn reduction through parental role modeling and sunscreen vigilance. *J Pediatr*, 142, 67–72.
- 5. Turrisi R, HillhouseJ, Robinson J *et al.* (2006). Influence of parent and child characteristics on a parent-based intervention to reduce unsafe sun practices in children 9 to 12 years old. *Arch Dermatol*, 142, 1009–1014.
- 6. Dennis LK, Vanbeek MJ, Beane Freeman LE, Smith BJ, Dawson DV, Coughlin JA. (2008). Sunburns and risk of cutaneous melanoma: does age matter. A comprehensive meta-analysis. *Ann Epidemiol*, 18, 614-27.
- 7. Chang YM, Barrett JH, Bishop DT, Armstrong BK, Bataille V, Bergman W, *et al.* (2009). Sun exposure and melanoma risk at different latitudes: a pooled analysis of 5700 cases and 7216 controls. *Int J Epidemiol*, 38, 814-30.
- 8. Coups EJ, Manne SL, Heckman CJ. (2008). Multiple skin cancer risk behaviors in the U.S. population. *Am J Prev Med*, 34, 87–93.
- 9. Centers for Disease Control and Prevention. (2007). Sunburn prevalence among adults United States, 1999, 2003, and 2004.*MMWRMorb Mortal Wkly Rep*, 56, 524–528.
- Turner LR, Mermelstein RJ. (2005). Psychosocial characteristics associated with sun protection practices among parents of young children. J Behav Med, 28, 77–90.
- 11. Johnson K, Davy L, Boyett T et al. (2001). Sun protection practices for children: knowledge, attitudes, and parent behaviors. Arch PediatrAdolesc Med, 155, 891–896.
- 12. Boyett T, Davy L, Weathers L et al. (2002). Sun protection of children at the beach. JAmBoardFamPract, 15, 112–117.
- 13. Bandi P, Cokkinides VE, Weinstock MA, Ward E. (2004). Sunburns, sun protection and indoor tanning behaviors, and attitudes regarding sun protection benefits and tan appeal among parents of U.S. *Pediatr Dermatol*, 27(1), 9-18.
- 14. American Cancer Society. Skin cancer prevention and early detection. (2008). Cited at: http://www.cancer.org/docroot/PED/content/ped\_7\_1\_Skin\_Cancer\_Detection\_What\_You\_Can\_Do.asp.
- 15. National Cancer Institute. (2008). Skin cancer prevention. Cited at: http://www.cancer. gov/cancertopics/pdq/prevention/skin/Patient/
- 16. Glanz K, Saraiya M, Wechsler H. (2002). Guidelines for schoolprograms to prevent skin cancer. *MMWR Recomm Re,* 51, 1–18.
- 17. Coups EJ, Manne SL, Heckman CJ. (2008). Multiple skin cancerrisk behaviors in the U.S. population. *Am J Prev Med*, 34, 87–93.
- 18. Knight JM, Kirincich AN, Farmer ER, Hood AF. (2002). Awareness of the risks of tanning lamps does not influence behavior among college students. *Arch Dermatol*, 138(10), 1311-5.