



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2552654>Available online at: <http://www.iajps.com>

Research Article

**THE PREVALENCE OF COSMETIC SURGERY AMONG  
FEMALE UNIVERSITY STUDENTS IN RIYADH,  
SAUDI ARABIA****Malak Abdulaziz Alsaif<sup>1\*</sup>, Rawan Sultan Aljohany<sup>2</sup>**<sup>1</sup> King Saud Bin Abdulaziz University for Health Sciences, Riyadh, Saudi Arabia, <sup>2</sup> Alfaisal University, Riyadh, Saudi Arabia**Abstract:**

**Objectives:** This study aimed to estimate the prevalence of cosmetic surgery among Saudi female University students and to assess their experiences and attitudes toward cosmetic surgery.

**Methods:** During 2018, a cross-sectional comparative study at Riyadh Universities. Initially, a simple random sampling technique was employed to select relevant colleges from within the Universities. In the second stage, two to three courses from each graduating class were randomly selected. Finally, using the systematic random sampling strategy, each 4th student in the class was selected until the desired sample size was achieved. Two self-administered questionnaires were used for data collection: the Multidimensional Body-Self Relations Questionnaire and the Cosmetic Surgery Attitudes Questionnaire.

**Results:** The response rate was 99.3%. Thirteen students (2.2%) had received cosmetic surgery, and 11.4% were potential cosmetic surgery candidates. Fifty-two percent of students agreed that the cost of cosmetic surgery would be a waste of money; however, 15.3% supported those who wanted to undergo surgery. The highest mean score of 3.93 + 0.47 was recorded for appearance orientation followed by appearance evaluation (3.86 + 0.68). Students who had been subjected to cosmetic surgery were significantly more concerned about overweight preoccupation ( $p < 0.05$ ). Almost half of the students who had undergone cosmetic surgery agreed that social media had influenced their decisions.

**Conclusions:** In this study, a small number of undergraduate University students had been subjected to cosmetic surgery, and 16% indicated that they would consider surgery later in life. Social media has a major impact on decision-making regarding cosmetic surgery.

**Keywords:** College students; Cosmetic surgery; Cosmetic surgery attitudes questionnaire; Saudi Arabia.

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Please cite this article in press Malak Abdulaziz Alsaif et al., *The Prevalence Of Cosmetic Surgery Among Female University Students In Riyadh, Saudi Arabia.*, Indo Am. J. P. Sci, 2019; 06(01).

## INTRODUCTION:

Cosmetic surgery refers to a subspecialty that uses surgical and medical techniques to restore, maintain or enhance an individual's physical appearance. In the past 10 years, we have observed a dramatic increase in the number of cosmetic surgical procedures performed in the Western hemisphere [1]. According to the American Society for Aesthetic Plastic Surgery; nearly 8.3 million cosmetic surgical and nonsurgical procedures were performed in 2003. These figures represent an increase of 299% between 1997 and 2003, and the number has further risen in the last decade. Stereotypically, the image of a patient seeking cosmetic surgery is envisaged as an older woman attempting to turn back the hands of time. The typical patient, however, is considerably younger; 45% of all patients are between the ages of 35 and 50 years old, and 27% are under 35 [2]. There are three factors likely to play a role in the recent upsurge of cosmetic surgery. These factors include medical advancements, patient characteristics, and media influences [3]. For several years, it has been known that mass media has a large impact in determining both personal appearance and potentially one's decision to select cosmetic surgery. For decades, the public has mirrored the hairstyles, clothing, and body types of the famous, and as a result, many studies have determined that mass media influences, such as magazines, TV shows, and movies, may affect body image satisfaction and self-esteem [3]. It is extremely important to understand the psychological processes that lead a person to undergo aesthetic medical treatments, including cosmetic surgery [4]. One previous study suggested that body image was the main psychological variable involved in the decision to undergo cosmetic surgery. Body image is often considered to consist of two components: body image orientation, referring to how important body image is for a person, and body image evaluation, indicating how satisfied a person is with his or her own body [5]. The objectives of this study were to estimate the prevalence of cosmetic surgery and to assess the experiences and attitudes toward receiving cosmetic surgery among Saudi female college students in Riyadh.

## MATERIALS AND METHODS:

The researchers conducted this study in 2018 at Riyadh Universities. To identify students for the study, the multistage sampling technique was used. In the first stage, to choose one Science College and one Arts College, the simple random sampling technique was used; again, in the second stage, simple random sampling technique was also used to assign students from 2 to 3 courses at each college grade level. In the third stage, the systematic random sampling

technique was applied to select every 4th attending student until the desired sample size was reached. Using the EPI program information, the sample size found was 600 students. Data entry and analyses were performed using SPSS software statistical program version 16. Descriptive statistics were described in terms of means and SDs for quantitative variables and in terms of frequencies and percentages for qualitative variables. The Mann-Whitney U-test was applied to compare mean differences of Multidimensional Body Self-Relations subscales according to a history of undergoing cosmetic surgery. Fisher's Exact test was applied to test the association of student opinions on the notion that Mass media affects decision-making about cosmetic surgery. The significance level was determined at  $P < 0.05$ . A self-administered questionnaire was used to measure experiences and attitudes toward cosmetic surgery. With email permission from the corresponding author, the questionnaire borrowed questions from the MBSR and CSAQ. Prior to participation in the study, verbal permission was received from all involved students.

## RESULTS:

The response rate was 99.3% (596 out of 600 questionnaires distributed), and the majority of the interviewed students (86.6%) were single. Almost two thirds (63.6%) were than 21 years old with a mean age of  $20.2 \pm 2.1$ . Almost one half of the students (53.7%) indicated that their monthly family income was more than 10,000 SR, and almost an equal percentage (53.9%) reported that their fathers had university qualifications. Only 37% of their mothers had university qualifications, and 26.5% were employed. Only 2.2% (13) of surveyed students reported that they had undergone cosmetic surgery, and 12.4% of the total sample revealed that one or more of their family members had been subjected to cosmetic surgery. Student attitudes toward cosmetic surgery are demonstrated in Table 1, where 11.4% think that they might undergo cosmetic surgery upon the request of their spouse or if they were to have unlimited financial resources. In the opinion of almost half of the students (52.1%), cosmetic surgery is perceived as a waste of money. Only 15.3% of those surveyed would support others who want to undergo cosmetic surgery, and almost 16.2% agree that they might submit to cosmetic surgery upon arrival at middle age. However, almost one third (30.4%) indicate that they would feel shy about informing people if undergoing cosmetic surgery. While less than one quarter of the students surveyed (23.2%) agree that some people would undergo cosmetic surgery to improve their looks, a higher proportion (32.8%) agree with the notion that

individuals have the right to improve their appearance. It is noted that two thirds of those surveyed (65.1%) do not believe that mass media affects the decisions of those considering cosmetic surgery. Table 2 shows that the majority of the students (78%) are satisfied with their look as is, and an equal percentage (78%) are satisfied that others recognize they look good. Conversely, it was found that 20.2% of students dislike their physique, and a handful (15.7%) perceives them as physically unattractive. Table 3 illustrates that those students who had been subjected to cosmetic surgery were significantly more concerned with overweight preoccupation, which includes being worried about becoming fat. Being conscious of even small weight

changes, the students tend to try many weight-loss diets. The mean score accounted for  $3.54 \pm 0.67$  for those with a history of cosmetic surgery compared to  $3.03 \pm 0.86$  among those who possessed no such history ( $P < 0.05$ ). Otherwise, between the two groups there were no statistically significant differences shown with the MBSR subscales, which included body area satisfaction, appearance evaluation, appearance orientation and selfclassified weight ( $P > 0.05$ ).

Table 4 shows that almost half of the students who had undergone cosmetic surgery, and 46.2% agreed that mass media does affect decisions about cosmetic surgery; however, ensuring the statistical significance of this difference was not feasible.

**Table 1: Attitudes of students toward cosmetic surgery.**

Items reflecting attitudes toward cosmetic surgery	Response		
	Agree No. (%)	Not sure No. (%)	Disagree No. (%)
Support those who undergo cosmetic surgery	91 (15.3)	117 (19.6)	388 (65.1)
Cosmetic surgery is a waste of money	310 (52.1)	114 (19.1)	172 (28.8)
Would feel shy to inform people when undergoing cosmetic surgery	180 (30.4)	133 (22.5)	279 (47.1)
Agree with those who undergo cosmetic surgery to look better	138 (23.2)	105 (17.6)	352 (59.2)
May undergo cosmetic surgery later at middle age	97 (16.2)	56 (9.4)	443 (74.4)
People have the right to improve their appearance	195 (32.8)	119 (20.0)	280 (47.2)
Might undergo cosmetic surgery upon request of their spouse	68 (11.4)	54 (9.1)	472 (79.5)
Could undergo cosmetic surgery if having unlimited resources	68 (11.4)	55 (9.2)	471 (79.4)
Mass media affects decisions regarding cosmetic surgery	139 (23.3)	68 (11.4)	389 (65.3)

**Table 2: Evaluation of the students on their appearance.**

Appearance evaluation scale items	Agreement		
	Agree No. (%)	Not sure No. (%)	Disagree No. (%)
My body is sexually appealing.	296 (51.7)	196 (34.3)	80 (14)
I like my looks just the way they are.	459 (78)	46 (7.8)	84 (14.2)
Most people would consider me good-looking.	459 (78)	102 (17.3)	28 (4.7)
I like the way I look without my clothes on.	263 (45.3)	174 (30)	143 (24.7)
I like the way clothes fit me.	509 (86.6)	49 (8.3)	30 (5.1)
I dislike my physique.	(20.2) 88	119 (14.9)	382 (64.9)
I am physically unattractive.	92 (15.7)	126 (21.4)	370 (62.9)

**Table 3: Differences in the mean scores of the Multidimensional Body Self-Relations subscales according to history of undergoing cosmetic surgery.**

Multidimensional Body Self-Relations subscales	History of cosmetic surgery		P <sup>a</sup>
	Yes (13 students)	No (583 students)	
Body area satisfaction	$3.73 \pm 0.76$	$3.79 \pm 0.73$	0.796
Appearance evaluation	$4.00 \pm 0.40$	$3.86 \pm 0.68$	0.514
Appearance orientation	$3.81 \pm 0.35$	$3.93 \pm 0.47$	0.369
Self-classified weight	$2.79 \pm 0.89$	$3.02 \pm 0.82$	0.349
Overweight preoccupation	$3.54 \pm 0.67$	$3.03 \pm 0.86$	0.042

<sup>a</sup>Mann-Whitney test.

**Table 4: Student opinions on the notion that mass media affect cosmetic surgery decisions.**

		History of cosmetic surgery		P value*
		Yes %	No %	
Agrees with the notion that mass media affects cosmetic surgery decisions	Agree	3 23.1%	136 23.3%	0.101
	Not decided	4 30.8%	64 11.0%	
	Disagree	6 46.2%	383 65.7%	

\*P-value based on 2-sided Fisher's exact test.

### DISCUSSION:

In the current study, thirteen (2.2%) out of 596 surveyed female college students reported that they had undergone cosmetic surgery. Seventy-four students (12.4%) indicated that at least one of their family members had undergone such surgery. In a comparable study conducted among 559 female college students in Philadelphia in the United States, a higher prevalence of cosmetic surgery (5%) had been reported. In addition, approximately one third of the participants in the Philadelphia study indicated that a family member had undergone cosmetic surgery [2]. Among Saudi females, this comparatively low prevalence of cosmetic surgery, despite high economic status, was expected. After all, Saudi Arabia is a country where lifestyles are largely dictated by religion. As such, the low rates might at least partially be attributed to Islamic beliefs, which permit plastic surgery only in certain circumstances, such as following trauma or accidents. In the present study, 16% of the respondents indicated that they would consider having a cosmetic procedure when they reached middle age, and 11% might undergo cosmetic surgery upon request of their spouse. This finding confirms that college students are reasonably aware of cosmetic surgery as a means of appearance enhancement. These results are comparable to the 14% of women aged 18 to 24 who indicated that they would consider surgery in the United States [6]. Park et al. [7] asserted in their study that one fourth of the respondents without any self-reported beauty flaws still demonstrated an interest in cosmetic surgery. However, that rate is lower than another American study that reported approximately 40% would undergo cosmetic surgery [2]. Overall, compared to those studied in the United States, Saudi student attitudes toward cosmetic surgery are less favorable. Almost one third of our participants agreed that people have the right to improve their appearance. This proportion is lower than that reported in United States (43%). Conversely, slightly more than half of our sample considered cosmetic surgery to be a waste of money. Meanwhile, in the United States study, approximately one third agreed with the statement, "I think cosmetic surgery is a waste of money." Fifteen percent of our study group indicated that they support those who undergo cosmetic surgery with the goal of

changing their appearance to feel better about their selves. This portion is lower than that reported in the United States study (45%) [2]. Cosmetic surgery was significantly related to mass media's influence on body image and concerns with being overweight. Cosmetic surgery was unrelated to body area satisfaction, appearance evaluation and orientation. In other studies, appearance investment has been thought to play an important role in the decision to seek cosmetic surgery [3,7]. Studies have looked at the correlation between investment in appearance and cosmetic surgery but have not provided clear answers. Looking at a variety of research that has evaluated correlations between cosmetic surgery recipients, scaled data on appearance orientation, and corresponding control groups, we observed contradictory results [1,8-12]. Meanwhile, the results of this study proposed that mass media might influence attitudes toward cosmetic surgery. As in most parts of the world, the media bombards the Saudi female population with images defining physical beauty, which can promote an internalization of media-influenced beauty standards while undermining physical self-acceptance [13]. Without a doubt, expansive mass media coverage establishes beauty norms and impacts women's knowledge and attitudes toward cosmetic surgery [14].

### CONCLUSIONS:

The results of this study provide new information concerning young women's experiences and attitudes regarding cosmetic surgery in Riyadh, Saudi Arabia. Although only 2.2% of female college students reported having had cosmetic surgery, 16% would consider cosmetic surgery when reaching middle age. Preoccupation with being overweight was the most significant driving factor for the students who had undergone cosmetic surgery. Lastly, almost 65% of female students believed that the media did not have an effect in the decision to undergo cosmetic surgery.

### RECOMMENDATION:

Educate female college students concerning different cosmetic surgery procedures including indications, benefits and possible adverse outcomes. Further studies are needed to assess a community sample that

includes a wider range of ages and occupational backgrounds.

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