

Investigating the impact of using Instagram on the evaluation of body image among university students

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ABSTRACT

One of the newest areas of study in the social sciences and health is body management and body image. Body image and negative body satisfaction can have numerous consequences on people's function. This is especially important for young people. The use of new media in Iran, especially Instagram, has increased the importance of the body category for young people. The study was based on a quantitative and cross-sectional approach. The study method was a survey type. The statistical population included Shiraz Medical Sciences University students, and the sample size was calculated to be 400 subjects. Sampling was done by simple random sampling, and SPSS analyzed data. The results showed a significant negative relationship between age and body image. There was also a significant difference between men and women in appearance evaluation among pharmacy, dentistry and medicine, and other students. Overall, it seems that weight concerns most students in terms of body image. Students' satisfaction is high for almost all areas of the body.

Keywords: Instagram, Appearance orientation, Appearance evaluation, Body areas satisfaction, Self-Classified weight, University students

Introduction

The body image represents an individual's imagination of their body. It is the most critical component of self-imagination since physical appearance is the primary feature that people judge when they interact. On the other hand, satisfaction with the mental image of the body and a positive attitude towards the body is one of the criteria considered in mental health [1]. Study results show that better body self-imagination, the more satisfaction leads to better mental health [1-3].

Appearance dissatisfaction causes a phenomenon called "appearance pressure." Being pressured by appearance leads to

judgments about it. Appearance evaluation means the importance degree of every physical attractiveness to the individual and to what extent the person's thoughts and behavior are focused on the appearance. Negative body evaluation has negative consequences on people's performance [4], such as extreme involvement in appearance-changing that might raise health risks, addiction to physical exercise, unhealthy diets, and cosmetic surgeries.

Abbaszadeh *et al.* revealed that social acceptance dramatically affects women's tendency to cosmetic surgery [5]. According to studies, there is a link between body image and eating disorders [6, 7]. Therefore, an individual's body image and even level of satisfaction with the body are considered critical in social and health studies.

Today, young people around the world, in their daily lives, endure various pressures regarding their bodies and appearance. Peer groups constantly discuss each other's physical appearance and offer solutions on how to look attractive. Magazines and TV shows display people who offer beauty ideals and promote ways to change their appearance. That is why the youth are more involved in the issue of body image and its consequences than

Access this article online

Website: www.japer.in

E-ISSN: 2249-3379

How to cite this article: Riasaty A, Parhizkar H, Maghami H, Hoseini R, Hasehmpour-Sadeghian M. Investigating the impact of using Instagram on the evaluation of body image among university students. *J Adv Pharm Educ Res.* 2022;12(2):117-22. <https://doi.org/10.51847/OxnvQAxFnm>

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other groups of society. Statistics provided by the Statistics Center of Iran show that 25% of the population is young [8]. Thus, the issue of appearance and body evaluation is serious in Iran.

Due to its photo-oriented nature, the emergence of new media, especially social networks like Instagram, as an essential factor has a significant impact on changing the youth's attention to the body and its management [9-13]. Studies conducted in Iran imply that media use considerably influences the body's attention. Abaszadeh *et al.* [5], in a study entitled "Sociological study of the interventionist role of social acceptance variable in the influence of media on women's tendency to cosmetic surgery," examined the extent of women's tendency to beauty with surgery and the impact of factors such as social acceptance and the media on such surgeries. The study was conducted on 385 subjects. The results show that the social acceptance effect on the women's tendency to cosmetic surgeries was higher than the impact of media.

In a study entitled "Media and women's attitudes towards their gender identity," Hatami and Mazhabi [14] investigated women's gender identity and its relationship with the media, especially modern media like the Internet. Their survey was conducted on 410 women 18-64 years old. The results showed that the variable of education, the extent of self-satisfaction in society, and household income had significant impacts on explaining the dependent variable.

Mehdizadeh and Rezaei [15], in a study entitled "The role of mediating variables in the impact of satellite TVs on the body management of girls and young women," explored the relationship of viewing rate, program genre, and attitude to women's face and appearance on a satellite with body management and its association with body-satisfaction, self-esteem, and family and friends' perspectives. The survey was conducted using a questionnaire among 419 young women 18-29 years old in Tehran. The results indicate a significant and direct relationship among the viewing rate, the genre, the attitude towards women's faces and appearance on satellite, and body management. They found that friends' attitudes, body satisfaction, and body management are interrelated.

Fathi and Mokhtarpour [16], in a study entitled "Study of the role and impact of new visual media in lifestyle changes," investigated the role and impact of new visual media in changing people's lifestyles. The survey was conducted on 923 students of Islamic Azad University, Science and Research Branch of Tehran. They concluded that the use of new visual media leads to forming an exceptional lifestyle. It also changes different aspects of lifestyle, value system, and worldview resulting in diverse reactions by individuals as well as following other models in various areas of their lives, including leisure and how to spend it, attitudes towards marriage, religious behavior, and fashion.

In another study entitled "The impact of mass media consumption on women's body management," Qaderzadeh *et al.* [17] inspected the influence of mass media consumption on women's body management. The survey was done on 480 women of 17-40 years old in Baneh. The findings show both a negative and positive correlation between the consumption of internal and external media and body management. Television

(among domestic media) and satellite (among foreign media) have the most substantial relationship with body management. Moreover, the correlation between internal and external media with body management components and dimensions varies slightly.

Despite studies on explaining the relationship between appearance pressure, appearance evaluation, and appearance change strategies, there are several gaps in this area. First, they mostly focus on the influence of traditional media, mainly television and magazines, as well as face-to-face communication. However, today, young people predominantly use the Internet and especially social networks such as Instagram to communicate and entertain.

Social networks can shape individuals' attitudes towards their appearance. Diverse shreds of evidence are emerging that the use of social media can alter the evaluation of appearance, but there is a lack of robust research in this area. Hence, the current study explores the relationship between the use of Instagram and students' attitude towards their appearance at Shiraz Medical Sciences University. The study emphasizes Instagram as a popular social network among students because it is more attractive to young people due to its visual components. It might also cause remarkable influences due to the individuals' visual susceptibility. The research is to study one of the most important groups of the youth that is the students of the University of Medical Sciences.

The main research questions follow:

- To what extent do students concern about their appearance?
- How do students evaluate their appearance?
- To what extent are students satisfied with their body areas?
- To what extent do they concern about weight and overweight?
- How does Instagram usage affect students' appearance evaluation?
- How can some demographic variables such as age, gender, parental education, and field of study be related to variables of appearance orientation, appearance evaluation, body areas satisfaction, and self-classified weight?

Materials and Methods

This is a cross-sectional survey. The population includes all of the students of Shiraz Medical Sciences University. The sample size was calculated using the sample size determination formula to estimate the correlation coefficient.

Estimation of correlation coefficient confidence $\rightarrow \omega = \frac{1}{2} Ln \frac{1+r}{1-r}$

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta} \right)^2}{(\omega)^2} + 3 \quad (1)$$

A simple random sampling method was applied to select the participants. Since the field of study could affect responses, the respondents were classified into pharmacy, dentistry, and

medicine students and the students studying other majors in the medical university.

The study purpose was explained to the participants, and after assuring confidentiality of their personal information, questionnaires were distributed. Finally, 417 questionnaires were completed. Seventeen questionnaires with missed data were deleted from the analysis, and finally, 400 questionnaires were analyzed.

Respondents provided their demographic information in the first section of the questionnaire and then answered the questions. Demographic information included age, gender, father education, mother education, and major.

Measurement of Instagram usage

Several questions measured the use of Instagram. The first question at the level of nominal assessment is asked to find "Is s/he a member on Instagram or not?" The second and third questions at the ranking level are asked to determine "How many minutes does s/he averagely spend on posting and visiting in a day?" The fourth question at the ranking level is asked to determine "How often does s/he change the profile photo?"

MBSRQ

When doing a necessary check-up, the Multidimensional Body-Self Relations Questionnaire (MBSRQ) was realized as the most appropriate instrument. The questionnaire is a 46-item test designed to measure body-self multidimensional relations. It includes 6 subscales: appearance evaluation (7 questions), appearance orientation (12 questions), and fitness evaluation (3 questions), and fitness orientation (13 questions), self-classified weight or mental weight (2 questions), and body areas satisfaction (9 questions: face, hair, lower body, trunk, upper body, lean muscles, weight, height, and overall appearance). Each item was scored using a 5-point Likert spectrum (1 = strongly disagree, 2 = often disagree, 3 = no idea, 4 = often agree, 5 = strongly agree). A higher score indicates more satisfaction with the body. According to the aims of this study, two subscales (fitness evaluation and fitness orientation) were omitted. Experts have evaluated the face validity of MBSRQ. The reliability and validity of MBSRQ have been checked in Iranian samples [18].

It should be noted that, according to experts, many questions unrelated to the goal of the current study were omitted, reducing the number of questions and the time to respond. Sub-scales of appearance evaluation, appearance orientation, self-classified weight, and body areas satisfaction were measured. Therefore, the reliability of the questionnaire was re-calculated by Cronbach's alpha method, and good reliability of 0.753 was obtained.

Results and Discussion

Descriptive results show that most participants were 18-22 years old (62.2%) and female (70.5%). Approximately half of the

sample included pharmacy, dentistry, and medical students. A high percentage of students are Instagram users (76.5%) (Table 1). 59.8% of them spend less than an hour posting in a day. 37.3% of them spend about 1-3 hours visiting pages a day, which is the highest percentage. In total, respondents do not spend much time changing their profile photo; 40% of respondents change it once a month or once a year (Table 2).

Table 1. Demographic Characteristics of the Respondents (N= 400)

Variables	N (%)
Age	
18-22	248 (62.2)
23-26	126 (31.6)
27-48	26 (6.8)
Gender	
Man	112 (28)
Woman	282 (70.5)
Father Education	
Less than a diploma	56 (14)
Diploma	114 (28.5)
M. A.	141 (35.3)
B.A/M.D/Ph.D.	85 (21.3)
Mother Education	
Less than a diploma	110 (27.5)
Diploma	139 (34.8)
M. A.	116 (29)
B.A/M.D/Ph.D.	35 (8.8)
Major	
Pharmacy/ Dentistry/ Medicine	232 (58)
Other majors in medical university	168 (42)

Table 2. Variables to measure Instagram usage

Variables	N (%)
Instagram usage	
yes	306 (76.5)
no	92 (23)
Post sending time	
Less than 1 h	239 (59.8)
1-3 h	47 (11.8)
3-6 h	14 (3.5)
More than 6 h	1 (0.3)
Page visiting time	
Less than 1 h	73 (18.3)
1-3 h	149 (37.3)
3-6 h	63 (15.8)
More than 6 h	16 (4)
Profile photo changing	
At least once a day	4 (1)
At least once a week	28 (7)
At least once a month or year	160 (40)
No post	107 (26.8)

Mean and standard deviation of appearance orientation, appearance evaluation, body areas satisfaction, the self-classified weight of the respondents were 25.3 ± 3.645 , 16.26 ± 4.241 , 31.80 ± 6.444 , and 4.85 ± 1.124 , respectively (Table 3). However, in the case of body areas satisfaction with the highest ranking and level, it is noteworthy that among the areas measured - face, hair, lower body, trunk, upper body, lean muscles, weight, height, and overall appearance- the face (M =

3.85) and the overall appearance (M = 3.86) had the most level of satisfaction while the weight (M = 3.27) had the least level.

Table 3. Descriptive statistics of MBSRQ Subscale

MBSRQ Subscale	Mean	SD	Min	Max
Appearance Orientation	25.03	3.645	10	37
Appearance Evaluation	16.26	4.241	7	32
Body Areas Satisfaction	31.80	6.444	9	45
Self-Classified Weight	4.85	1.124	2	6
Total	77.29	8.65	36	102

The Pearson correlation test calculated the relationship between age and MBSRQ Subscales. The only significant relationship was observed for age and appearance orientation ($r=-0.180$) ($P<0.001$) which was a negative relationship (Table 4).

Table 4. The relationship between age and MBSRQ Subscales

Variable	Index	MBSRQ Subscale				
		Appearance Orientation	Appearance Evaluation	Body Areas Satisfaction	Self-Classified Weight	Total
Age	r*	-0.180	-0.095	0.030	0.094	-0.062
	p	<0.001	0.059	0.557	0.064	0.214

*Pearson correlation coefficient test

T-TEST results also showed that women and men respond differently only for appearance evaluation ($r = -1.967$) ($P < 0.05$). They behave similarly only for appearance orientation, body areas satisfaction, and self-classified weight ($P < 0.05$) (Table 5). The degree of appearance orientation is high among the pharmacy, dentistry, and medical students (M = 16.53) compared to the other majors (M=15.89M), and this difference is significant ($P < 0.05$) (Table 5). However, in the case of appearance evaluation, body areas satisfaction, and self-classified weight, there is no significant difference among the students of different majors ($P < 0.05$) (Table 6). The different levels of parental education don't cause significant differences in subscales of MBSRQ ($P < 0.05$) (Table 6). It was also observed that there is no significant difference between the appearance-related variables in terms of Instagram usage ($P < 0.05$) (Table 7).

Table 5. Descriptive statistics of Self-Classified Weight Subscale

Self-Classified Weight	Mean	SD
Face (face organs, face combination)	Woman	3.87
	Man	3.79
Hair (color, thickness, texture)	Woman	3.69
	Man	3.76
Lower body (hips, thighs, legs)	Woman	3.51
	Man	3.49
Trunk (waist, abdomen)	Woman	3.35
	Man	3.35

Upper body (breast, shoulders, arms)	Woman	3.54	1.101
	Man	3.43	1.125
lean muscles	Woman	3.36	1.068
	Man	3.50	1.026
Weight	Woman	3.30	1.184
	Man	3.21	1.188
Height	Woman	3.50	1.078
	Man	3.62	1.052
Total	Woman	3.88	0.832
	Man	3.81	0.892

Table 6. The average score difference of MBSRQ Subscales regarding sex, major, and parents' education

	MBSRQ Subscale				
	Appearance Orientation	Appearance Evaluation	Body Areas Satisfaction	Self-Classified Weight	Total
Sex	T= -0.348	T= -1.967*	T= -0.156	T= 0.537	T= 0.851
Major	T= 2.961*	T= 1.486	T= -1.776	T= 0.075	T= -0.476
Father Education	F= 2.041	F= 1.439	F= 0.670	F= 0.440	F= 1.218
Mother Education	F= 0.852	F= 1.989	F= 1.548	F= 1.080	F= 0.785

Table 7. The relationship between Instagram usage and MBSRQ Subscales

	Appearance Orientation	Appearance Evaluation	Body Areas Satisfaction	Self-Classified Weight	Total
Instagram usage (yes/no)	T= 0.497	T= 0.077	T= 0.342	T= 0.372	T= 2.215
Sending posts	F= 0.314	F= 1.048	F= 0.501	F= 0.563	F= 0.513
Visiting pages	F= 1.411	F= 0.315	F= 2.289	F= 0.696	F= 1.930
Changes profile image	F= 0.369	F= 2.371	F= 1.158	F= 0.112	F= 2.025

Body image and body satisfaction are critical health issues involving salient mental and physical health impacts. This study aimed to investigate the relationship between the use of Instagram and the body image among students of Shiraz Medical Sciences University. 400 students participated in this study.

The results show that generally, parents have the education level of diploma and bachelor. Fathers' education level is higher than that of mothers, so most fathers have a bachelor's degree (35.3%), and the majority of mothers (34.8%) have a diploma. Also, 21.3% of fathers and only 8.8% of mothers have a master's degree or higher. The majority of respondents use Instagram as a social network.

Body image indicators include appearance orientation, appearance evaluation, body areas satisfaction, and self-classified

weight. Students are mostly satisfied with body areas; they are positive about their appearance; they have positive appearance evaluation; and finally, they are sensitive to weight and overweight. Since the majority of respondents (62.2%) are 18-22 years old, they are expected to be slightly overweight; thus, the average of this sub-scale is very low ($M = 4.85$). Although body areas satisfaction is high, more detailed studies suggest that facial satisfaction and overall appearance are higher than in other areas.

Previous research has shown that increasing age decreases satisfaction with body image decreases [19, 20]. Our study shows that increasing the students' age does not change the extent they care about the appearance evaluation, body areas satisfaction, or even self-classified weight. The extent of caring about appearance orientation is the only issue that is affected by age. The reason for this difference in results is that most students are 18-22 years old, so the average appearance orientation is higher than the appearance evaluation, but the older students seem to rate these two sub-scales in reverse. As they get older and more experienced, they realize that appearance evaluation is more important than just appearance orientation. The methodology section explained that since the major might affect the answers, the respondents were divided into two groups: pharmacy, dentistry, medical students, and students of other majors at the medical university. The students in the first group had more level of appearance orientation; however, there is no difference in other sub-scales between the two groups. Due to the high social status, students of the first group perceive a kind of superiority in the early years of their studies. This may have been an effective factor. Concerning this result and the results from the correlation between age and body image sub-scale, it is concluded that appearance orientation is mostly seen among the people who are less mature or less experienced.

There is no relationship between parental education and body image. Given that all of the students study medical sciences, it seems normal that the impact of parental education would diminish, and their current condition would affect their body image.

In terms of body image, the self-classified weight seems to be the most serious factor for the students. Student satisfaction with almost all areas is high, though weight satisfaction is lower than other body image variables. An examination of the appearance evaluation items shows that these items are more related to the overall appearance satisfaction regarding individual and social aspects. Therefore, the high level of overall satisfaction is considered a positive point. This sub-scale displays a high level for the older students and students of other majors.

Conclusion

Although the majority of the respondents are members of Instagram, most of them rarely change their profile photos. They also spend little time sending posts. This means that they are not active Instagram users. Moreover, about 40% of them spend about 2 hours a day on visiting pages, and 60% don't share their

face or body photo. The result was observed in the inferential statistics, so that 4 variables of Instagram membership, posting time, page visiting time, and the time spent on changing the profile photo, did not have a positive or negative impact on the respondents' attention to their appearance. In this regard, Fardouly *et al.*'s (2017) study also show that in the impact of Instagram on body image, the amount of use is very important [21, 22]. Another study conducted on Instagram users in Iran shows that how Instagram is consumed is related to managing the body [23]. Previous research has shown that increasing the level of education is effective in improving body image [19, 24].

For future studies, the comparison of humanities and engineering students with the medical sciences students is suggested. Further, young groups of people with different levels of education can be studied. Qualitative studies using in-depth interviews on young people's attitudes toward their body image are also recommended.

Acknowledgments: None

Conflict of interest: None

Financial support: None

Ethics statement: Informed consent was obtained from all participants to participate in the study. The ethical approval was obtained from Shiraz medical university.

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