

# The influence of social media on body dissatisfaction among college students

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## ABSTRACT

**Background:** Social media is growing rapidly in the last few years and it became daily used by individuals, especially adolescents and young adults. Although social media has several benefits such as easy communication between individuals, it has also other drawbacks and negative influence on individuals. **Aim:** To assess the association between the level of social media use and body dissatisfaction among male and female college students and to examine these associations according to different types of social media. **Method:** This is a cross-sectional study that was conducted on students at King Saud University in Riyadh—Saudi Arabia, using self-administrated questionnaire “The Body Shape Questionnaire BSQ-8.” Data were analyzed using SPSS statistical software (Version 21.0). **Results:** The present study included 204 students, females were more dominant (53.9%). Around 47.1% of participants spent >4 h, and the most used type of social media used was Twitter (46.6%). There were 71.1% who had low dissatisfaction. Several factors significantly had an impact on the level of dissatisfaction including upper class status ( $P = 0.015$ ), using social media for 3–4 h ( $P = 0.05$ ) and using social media for more than 4 h ( $P = 0.011$ ). **Conclusion:** There was low level of dissatisfaction level among students, however this level didn't differ between gender, so social media in Saudi Arabia didn't have the huge effect seen in other countries, especially among females.

**Keywords:** Dissatisfaction, effect, factors, impact, influence, social media

## Introduction

Social media was defined as “a group of internet-based applications that is build on the ideological and technological foundations of Web 2.0, which allow the creation and exchange of User Generated Content,”<sup>[1]</sup> although oxford dictionary defined social media as websites and applications that enable users to create

and share content or to participate in social networking.<sup>[2,3]</sup> The overall number of users of social networking sites has leveled off since 2013 with continues of growth in social media usage among some groups that were not among the earliest adopters. Young adults (ages 18–29) are the most likely to use social media—fully 90% do.<sup>[4]</sup> Social media is popular among college students as shown in a study done at Mid-Western University in the US students which revealed all of the sampled college students were using at least one form of social networking website and the females students were using SMS more than the males.<sup>[5]</sup> On the other hand, Gerlich study has shown no significant difference between

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male and female in their Internet usage, social media usage, and also beliefs about social media sites in general.<sup>[6]</sup> Facebook is the popular social media site used among college students in United Kingdom, United States, Malaysia, Turkey, and Bangladesh.<sup>[2]</sup> With the beginning of 2018, the number of Internet users in Saudi Arabia rose swiftly to touch 30 million. With nearly 25 million active users on social media, 18 million access these platforms through their mobile devices. YouTube boasts 23.62 million active users, accounting 71%, while Facebook comes in second with 21.95 million users (66%). Instagram is the third with 17.96 million users (54%) and Twitter is the fourth with around 17.29 million users (52%).<sup>[7,8]</sup> However, among 108 University students in Saudi Arabia Twitter is the most popular followed by the Facebook then Instagram and other social networks, for example, LinkedIn, path, and ask.fm. Twitter accounts almost twice as popular as Facebook among Saudi students with 90% and 44%, respectively, while being 35% more popular than all other networks collectively.<sup>[9]</sup> On other hand, WhatsApp was the most popular site among medical student in King Saud University by (87.8%), followed by YouTube (60.8%) and Twitter (51.8%). Same study found that the male sex preferred YouTube and Facebook more than female students who preferred Instagram and Path in compare with male counterparts. Most of the students were using social media for entertainment (95.8%), staying up-to-date with news (88.3%), and for socializing (85.5%) with female students were significantly using social media for shopping comparing with male students.<sup>[2]</sup> Social media now is an integral part of daily life among adolescence in US. In spite of the advantage of Internet enhancing information dispersal and communication worldwide we should not ignore the negative impact of it. Social media use is related to various aspects of wellbeing in adolescents. Adolescents who used social media more and those who were more emotionally invested in social media experienced negative impact on sexual and social wellness, poorer sleep quality and higher levels anxiety and depression, lower self-esteem, body dissatisfaction, and eating disorders.<sup>[10,11]</sup> Body image defined by national eating disorders collaboration as person's perception of their physical self and the thoughts and feelings, positive, negative or both, which result from that perception. Body dissatisfaction is a part of body image defined as a negative subjective evaluation of the weight and shape of one's own body. And it predicts the onset, severity, and treatment outcomes of eating disorders.<sup>[12]</sup> The impact of social networking sites use on body image, body dissatisfaction, and its consequences related to type of social media activity. Such as viewing and uploading photos and seeking negative feedback via status updates, exposure to thin-ideal media and social appearance comparison especially among popular social media platforms as Facebook, Instagram, and Snapchat, and some having indirect effect on body dissatisfaction as peer competition. Furthermore, the effect of mass media on body dissatisfaction is more prominent in Chinese/Asian than Western nations. Moreover, many consequences can result from it such as social media as Facebook being significantly and uniquely associated with eating disorders with 60% of variance in eating disorders among college students. Also, women who spend more time on Facebook reported being in a more negative mood than others. And others as low self-esteem, related conflict

and negative romantic relationship.<sup>[13-18]</sup> Another study conducted by Shannen Tadena reported that in order to promote healthy eating attitudes and to improve body satisfaction among Philippine adolescents, educational strategies tailored to social media users will be needed.<sup>[19]</sup> To the best of our knowledge and background, no study is done in this area in our region or Middle East. Therefore, the aim of our study is to fill this gap and to have our data as a source for further research.

## Methods

Cross-sectional study was conducted at King Saud University Campus in Riyadh, Saudi Arabia. This were done during the period from March 2019 to January 2020.

### Sample size (using standard equations)

Using the stander formula for single group mean:

$$N = (Z_{\alpha/2})^2 \frac{s^2}{d^2}$$

Where:

**s** is the standard deviation obtained from previous study = 9.83

**d** is the accuracy of estimate or how close to the true mean. = 2

$Z_{\alpha/2}$  is the standard normal coefficient, typically 1.96 for 95% CI.

$$N = 92.7 \text{ with } 25\% = 116$$

The required sample size will be 232 (116 males and 116 females)

A simple random sampling technique was carried out in King Saud University. We achieved our number through randomly selecting students at King Saud University campus who meet inclusion criteria of being a KSU student (excluding employees and visitors) and between the age of 18 and 25 years. The self-administered questionnaire was distributed to all study participants. Informed signed consent was obtained from all study participants.

### Data collection methods

The main outcome which is the body dissatisfaction will be addressed by using The Body Shape Questionnaire. The English version of the Body Shape Questionnaire (BSQ-8C; Evans & Dolan, 1993)<sup>[20]</sup> measured participants' attitudes toward their body. It is a validated shorter version of the original BSQ-34 Questionnaire, which has high internal consistency and test reliability.<sup>[21]</sup> Additional sociodemographic questions will be added to the questionnaire to identify the age, socioeconomic status, parent educational level, and marital status. The study exposure (social media) will be assessed by asking the participants about the type and frequency of using social media.

A pilot study was carried out to test the time needed to complete the questionnaire on 10 participants.

### Data analysis plan

Data was analyzed using SPSS 21.0 version statistical software. Descriptive statistics (frequencies, percentages, mean, standard

deviation, median, and IQR) were used to describe the categorical and quantitative variables. Normality of the variables were assessed. Appropriate parametric statistical tests (Student's *t*-test for independent and paired samples, one-way ANOVA, correlation and regression) was used to compare the mean values and to observe the relationship of quantitative variables. Multivariate analysis (linear regression) was used to identify the independent variables related to the study outcome variable. A *P* value of  $\leq 0.05$  and 95% confidence intervals was used to report the statistical significance and precision of results.

### Ethical considerations

The research was approved by Institutional Review Board (IRB) of the College of Medicine—King Saud University, Saudi Arabia. The study was approved by king fahad medical city, 19-307 on 21/5/2019.

## Results

### Participants' characteristics

The total number of included participants was 204 students, females were more dominant (53.9%) than males (46.1%). The participants' demographics characteristics are presented in Table 1. Overall, almost half of participants were in age range of 21–22 years old and 107 (52.5%) reported upper middle class of socioeconomic status. Almost all students were single (99%). The most reported duration of daily usage of social media was more than 4 h 96 (47.1%) and the most type used was Twitter 95 (46.6%).

The questionnaire used in this study included 8 questions with 5 options as answers, the details of the percentage of answers about each question among student are shown in Table 2.

The overall dissatisfaction level was evaluated and shown in Figure 1, there were only 59 (28.9%) reported high dissatisfaction, whereas 145 (71.1%) reported low level of dissatisfaction.

### Factors affecting the level of dissatisfaction

Several factors were investigated if they affect the level of dissatisfaction are shown in Table 3. Both of gender and age had no influence on the level of dissatisfaction, also the education level of students parents as well as the marital status of students didn't have an impact on the level of dissatisfaction, whereas upper class of socioeconomic status significantly affected dissatisfaction level ( $P = 0.015$ ). Using social media for 3–4 h and more than 4 h significantly affected the level of dissatisfaction ( $P = 0.05$ ,  $P = 0.011$ ) respectively, whereas the type of social media didn't have any influence on the level of dissatisfaction.

## Discussion

The present study aimed to assess the level of dissatisfaction among male and female college students and to investigate the

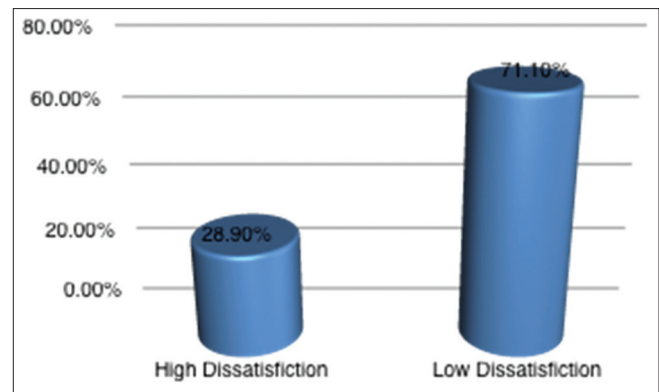


Figure 1: Overall Dissatisfaction level

Table 1: Demographics of participants

Variables	Description (n=204)
Gender	
Male	94 (46.1)
Female	110 (53.9)
Age	
18-20	83 (40.7)
21-22	104 (51)
23-24	17 (8.3)
Socioeconomic status	
Upper class	11 (5.4)
Upper middle class	107 (52.5)
Middle class	84 (41.2)
Poor	2 (1)
Parent educational level	
Less than high school	15 (7.4)
High school	49 (24)
University degree	140 (68.6)
Marital status	
Single	202 (99)
Married	2 (1)
Daily usage of Social Media	
30-60 min	19 (9.3)
1-2 h	39 (19.1)
3-4 h	50 (24.5)
>4 h	96 (47.1)
Types of SM	
Snapchat	60 (29.4)
Facebook	3 (1.5)
Instagram	40 (19.6)
Twitter	95 (46.6)
YouTube	4 (2)
What's app	2 (1)

association between the level of social media use and body dissatisfaction, we found low level of dissatisfaction among students that didn't varies significantly between males and females.

We included 204 students, there were 47.1% of students reported using of social media for more than 4 h, followed by 24.5% who reported usage for 3–4 h, the most type used of social media was Twitter 46.6%, followed by Snapchat 29.4% and Instagram

**Table 2: Body Dissatisfaction questionnaire components**

Question numbers	Never	Rarely	Sometimes	Often	Very often	Always
Have you been so worried about your shape that you have been feeling you ought to diet?	40 (19.6)	28 (13.7)	46 (22.5)	29 (14.2)	33 (16.2)	28 (13.7)
Have you noticed the shape of other and felt that your own shape compared unfavorably?	47 (23)	46 (22.5)	48 (23.5)	27 (13.2)	19 (9.3)	17 (8.3)
Has been naked, such as when taking a bath, made you feel fat?	68 (33.3)	43 (21.1)	36 (17.6)	23 (11.3)	16 (7.8)	18 (8.8)
Have you not gone out to social occasion (e.g. parties) because you have felt bad about your shape?	152 (74.5)	28 (13.7)	11 (5.4)	6 (2.9)	4 (2)	3 (1.5)
Have you worried about other people seeing rolls of fat around your waist or stomach?	90 (44.1)	40 (19.6)	29 (14.2)	17 (8.3)	10 (4.9)	18 (8.8)
When in company have you worried about talking up too much room (e.g. sitting on a sofa, or a bus seat)	128 (62.7)	29 (14.2)	26 (12.7)	8 (3.9)	5 (2.5)	8 (3.9)
Have you pinched areas of your body to see how much fat there is?	62 (30.4)	43 (21.1)	34 (16.7)	28 (13.7)	18 (8.8)	19 (9.3)
Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)?	80 (39.2)	43 (21.1)	31 (15.2)	14 (6.9)	9 (4.4)	27 (13.2)

**Table 3: Factors affecting body Dissatisfaction level**

	Dissatisfaction level		P*
	High dissatisfaction (n=59)	Low dissatisfaction (n=145)	
Gender			
Male	22 (37.3)	72 (49.7)	0.108
Female	37 (62.7)	73 (50.3)	
Age			
18-20	22 (37.3)	61 (42.1)	0.529
21-22	29 (49.2)	75 (51.7)	0.739
23-24	8 (13.6)	9 (6.2)	0.098
Socioeconomic status			
Upper class	7 (11.9)	4 (2.8)	0.015
Upper middle class	31 (52.5)	76 (52.4)	0.987
Middle class	21 (35.6)	63 (43.4)	0.301
Poor	0 (0)	2 (1.4)	1.000
Parent educational level			
Less than high school	6 (10.2)	9 (6.2)	0.377
High school	13 (22)	36 (24.8)	0.672
University degree	40 (67.8)	100 (69)	0.870
Marital status			
Single	58 (98.3)	144 (99.3)	0.496
Married	1 (1.7)	1 (0.7)	
Daily usage of SM			
30-60 min	5 (8.5)	14 (9.7)	0.793
1-2 h	9 (15.3)	30 (20.7)	0.371
3-4 h	9 (15.3)	41 (28.3)	0.050
>4 h	36 (61)	60 (41.4)	0.011
Types of SM			
Snapchat	19 (32.2)	41 (28.3)	0.577
Facebook	1 (1.7)	2 (1.4)	1.000
Instagram	7 (11.9)	33 (22.8)	0.076
Twitter	30 (50.8)	65 (44.8)	0.434
YouTube	0 (0)	4 (2.8)	0.326
What's app	2 (3.4)	0 (0)	0.083

\*Chi square test

19.6%. This reflects the wide usage of social media because long duration of usage was reported by students, moreover we can notice that the most used types of social media were applications of publishing photos and videos. In a previous Saudi study, it was found that the most reported duration for using social networks

was 4–6 h (45%) followed by 7–9 h (25.1%).<sup>[22]</sup> Negative attitude toward the own physical appearance and body dissatisfaction are aspects of boarder body image concept.<sup>[23]</sup> During adolescent, body dissatisfaction increases, especially among adolescent girls who reported high level of body dissatisfaction.<sup>[24]</sup> It was

reported that social media is one of factors contributing to body dissatisfaction.<sup>[13]</sup> Another study explained the role of social media on dissatisfaction as viewing posts of others on social media was related to social comparison which lead to increased level of body dissatisfaction.<sup>[25]</sup> In the current study, high percent of students had low level of dissatisfaction (71.1%), only 28.9% had high level of dissatisfaction. The factors that were significantly associated with high level of dissatisfaction included upper class, whereas using social media for long durations, 3–4 h and more than 4 h were associated with low level of dissatisfaction as unexpected results. This can be explained as social media can't alone affect the dissatisfaction of individuals, this requires additional factors such as upper class status. There may be other several factors affecting and associated with dissatisfaction that require further investigation. In a recent study from Brazil,<sup>[26]</sup> it was found that mass media was associated with higher probability of presenting body dissatisfaction among adolescents. In a previous Saudi study,<sup>[22]</sup> it was found that there was significant association between social media and BMI, but not body image, there were 24.4% reported moderately satisfaction level, also there was social media addiction among students. A study conducted on young women in Canada showed that comparison of body appearance among young women on social media increases the concerns of women.<sup>[27]</sup> A former study from Australia conducted on young women illustrated that appearance focused social networks activities related to Facebook and Instagram are related to various body image concerns, while the overall usage of such social networks may not related to such concerns.<sup>[28]</sup>

### Strengths and limitations

This study included small sample size which was a limitation of the study, whereas strength points are this was the first Saudi and Arabian study to be conducted on the current subject, also this study present first findings about the effect of social media on boy dissatisfaction.

### Conclusion and Recommendations

There was low level of dissatisfaction among students using social media, also types of social media didn't affect the level of satisfaction, only upper class socioeconomic status was associated with higher level of dissatisfaction. So, parents of students with upper class socioeconomic status should provide care and interest to their sons and daughter and provide love to them as well as acceptance and tot to critic the shape of them, also parents should discuss with their sons and daughters not to compare themselves with others. Further studies with larger sample size are very recommended and further factors associated with body dissatisfaction are recommended for further investigation.

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### Conflicts of interest

There are no conflicts of interest.

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