

Social Media Addiction and Disordered Eating Behavior Among University Students: Appearance Based Rejection Sensitivity as Mediator

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Abstract

Social media has become a necessary part of people's lives in the current era. However, compulsive use of social media could have severe consequences for the psychological and social health of users. The current research was carried out to study the relationship between social media addiction, appearance-based rejection sensitivity, and disordered eating behaviors among university students. Data was selected through non-probability convenience sampling, and a sample of 300 university students aged 18-30 years (M=21.34, SD= 5.86) was collected. The Bergen Social Media Addiction Scale, Rejection Sensitivity Scale, and Disordered Eating Behavior Scale were used for assessment. Results indicated that there was a significant positive relationship between social media addiction, appearance-based rejection sensitivity, and disordered eating behavior in students. Also, rejection sensitivity acts as a mediator between social media and disordered eating behavior. The study found disordered eating behavior is more common in women than men. This research implies that social media can serve as a significant factor in appearance-based rejection sensitivity and eating disorders in students and young people. This study could create awareness about appropriate social media use and its consequences on students. It would also help in devising strategies that could prevent the damage it could have on the mental and physical health of students, particularly appearance comparisons and judgments, risk of depression, and appearance-based rejection sensitivities.

Keywords: Rejection Sensitivity, Social Media Addiction, Eating Disorders, Disordered Eating Behavior, University Students.

Introduction

Socializing through social networking sites has become a prominent recreational activity over the last few years, especially among students. Though the use of social networking sites by most people is not problematic, some people could involve themselves in social networking to such an extent that it leads to problems like low self-esteem, anxiety, complexity, and psychological distress due to its compulsive and excessive usage (Adoasi, 2015). Social media has the potential to create an environment of social comparison as well as an obsession with one's appearance, which could impose threats for emotional and psychological issues. The excessive use of social networking platforms such as Facebook and Instagram has caused people to be sensitive to their

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physical appearance. The presence of unrealistic images and messages about food and appearance on social media can lead to the development of disordered eating behaviors as well as appearance-based rejection sensitivity.

Social media addiction could cause an individual to spend a significant amount of their time on social networking sites in such a way that it hurts other aspects of their life, such as work, family, and relationships. People can be considered social media addicted if they have an intense longing or urge to use social networking sites unreasonably and extremely (Griffiths & Kuss, 2017). Activities include checking the number of likes on posts, searching for the profiles of friends or relatives, uploading status, and checking how many views the status receives (Adoasi, 2015). High involvement in social networking has been linked with decreased life satisfaction and psychological well-being. It is also linked with low general mood and mixed feelings. Furthermore, it is associated with alarming and inappropriate usage of social networking sites during university lectures and driving. When people cannot use their time on social media due to work or any other reason, they may develop unpleasant feelings /physical effects like low mood and irritation (Griffiths & Kuss, 2017; Hawes et al., 2020).

Young adults, especially students and adolescents, use social media to interact and form connections. In doing so, they often post pictures and videos to share their life experiences with others. However, while doing so, they also precisely draw other people's attention to themselves and their appearance. Social media platforms are interactive, so people are continuously exposed to public comments and feedback about their appearance and life, creating a kind of appearance socialization structure. Studies have also revealed that social media interactions tend to contribute substantially to unrealistic appearance-related expectations and negative self-appraisals, which could trigger low mood, stress, anxiety, and emotional disturbances (Fardouly & Vartanian, 2015; Holland & Tiggemann, 2016; Mills et al., 2018). Considering social media as a risk factor for anxiety, depression, and emotional maladjustments, research has posed that these heightened symptoms of maladjustment are related to appearance and anxiety related to appearance or sensitivity to appearance-based rejection (Lonergan et al., 2019; Mills et al., 2018).

Appearance-based rejection sensitivity is characterized by expectations and anxious concerns that one can be rejected or dropped out based on his/her physical appearance and attractiveness. People vary when it comes to rejection sensitivity based on appearance. This significantly affects their self-esteem, physical and mental health, and feelings of belonging. *Rejection sensitivity* is the shift in which a person anxiously predicts, promptly grasps, and startles to rejection based on one's physical outlook and appearance (Park & Pinkus, 2009). Several studies have identified rejection sensitivity as critical in forming interpersonal relationships. High degrees of rejection sensitivity have been associated with extra insecurity and hostility in romantic relationships (Park & Pinkus, 2007), a higher risk for sexual victimization, a decline in academic functioning, social withdrawal, deficits in emotion regulation, and hostility and aggression (Calogero et al., 2010).

The thought of getting rejected based on appearance has a particular effect on the physical, psychological, and mental health of the individuals, their sense of association, and self-esteem. People with higher scores in appearance-based rejection sensitivity are observed to escape social interactions and closeness. This behavior becomes more common after getting negative evaluations about their looks. Moreover, these people have been noticed abstaining from others on days with high appearance-based rejection sensitivity (Calogero et al., 2010).

Appearance-based rejection sensitivity is also associated with an increase in the risk of disordered eating behaviors and shape and weight-related concerns. Individuals with such sensitivity fear being rejected due to their self-perceived physical flaws. They are preoccupied with their

appearance and adopt unhealthy diets and habits to improve it as per societal and social media standards (De Paoli et al., 2017). Appearance-based rejection sensitivity is also related to body image dissatisfaction and disordered eating behavior (Linardon et al., 2017).

Disordered eating is used to explain behavior that has an irregular eating range that a specific eating disorder may or may not warrant. Many individuals who suffer from disordered eating patterns do not fully understand the effect it has on their physical and mental health. This lack of knowledge increases the harm caused by disordered eating behaviors. Harmful consequences can include a greater risk of eating disorders and obesity, fluid imbalances, bone loss, electrolyte imbalance, gastrointestinal disturbances, low blood pressure and low heart rate, increased anxiety, depression, and social isolation (Anderson et al., 2020).

In the present day, people live arbitrary lives. Highly excessive use of social networking sites is negatively affecting their lives psychologically, lowering their self-esteem and leading to personal and appearance-based rejection sensitivity. The increase in social media applications creates an unrealistic, flawless world, which creates a complex situation for people, causing them to wonder why they cannot look impressive like vloggers or celebrities. They think they are too fat, especially women. There is a complexity in them as social media has created beauty standards that make women conscious of the food they eat, and at times, they indulge in patterns that make it disordered eating. Boys also want to look muscular, and for that, they start eating high-calorie food to gain muscles and then extremely unhealthy diets and supplements to look like other male models (Cheah et al., 2022; Forrester & Zemp, 2012).

Study Rationale

Social media plays a significant role in today's society and dramatically impacts people's thoughts and behaviors. The physical and emotional wellbeing can suffer from a constant assault of unrealistic images, advertisements, and messages. Social media platforms have been used to spread materials that encourage disordered eating. Dieting promoted by family, friends, and peers using Photoshop images can result in abysmal self-esteem as well as an unhealthy relationship with food or dietary restrictions. While social media has connected people globally on the negative side, it has set unrealistic expectations and beauty standards for both genders. Thus, it may create low self-esteem related to body modification, body image, and how they see themselves concerning others. In order to be recognized in society, females have to face body image issues from a very young age, where having a slim body is considered to be the ideal body type.

In contrast, males are expected to have a muscular body. This pressure to look perfect can create appearance-based rejection sensitivity among people, especially youth. Hence, the purpose of the current research is to study the relationship between social media addiction, appearance-based rejection sensitivity, and disordered eating behaviors in university students.

Objectives

- To examine the association between social media addiction, appearance-based rejection sensitivity, and disordered eating behavior.
- To examine gender differences in social media addiction, appearance-based rejection sensitivity, and disordered eating behavior.
- To examine appearance-based rejection sensitivity as a mediator between social media addiction and disordered eating behavior.

Methodology

A cross-sectional research design was used to study the multiple variables simultaneously in the study sample. The sample consisted of 300 students ($n=150$ males) with an age range between 18-30 years ($M=21.34$, $SD= 5.86$) from public sector universities of Lahore, including the University of Punjab, Lahore College for Women University and Government College University. A non-probability convenience sampling technique was used to get the data. The inclusion criteria were:

- Students studying in undergraduate and graduate programs.
- Students attending the public sector universities.
- Students from all academic fields, including the sciences and the humanities.
- Students who had any mental or physical disabilities were excluded.

Assessment Measures

The demographic variables like age, gender, current educational status, marital status, and family were measured.

Bergen Social Media Addiction Scale (BSMAS): The Bergen Social Media Addiction Scale was used in this research to assess the addiction to social media in the participants. It is a 5-point Likert scale consisting of 6 items with Cronbach alpha of .82 (Andreassen et al., 2017).

Rejection Sensitivity Questionnaire (RSQ): Rejection Sensitivity Questionnaire (RSQ), a 9-item scale was used. It is designed to measure respondents' rejection sensitivity based on appearance. This scale was used to assess the appearance-based rejection sensitivity in the participants. A single item explains a scenario that respondents might consider themselves in and choose the number that matches how they feel (Downey & Feldman, 1996).

Disordered Eating Behavior Scale (DEBS): Disordered Eating Behavior Scale (DEBS) consisting of 26 items was used to assess disordered eating patterns and behaviors. It is a five-point scale in which '0' represents "never" and '4' represents "always" (Muazzam & Khalid, 2009).

Procedures

Before the formal data collection, the authors obtained formal permission to take all measures. After the permission was granted, authority letters were granted by the psychology department, Lahore College for Women University, and administrative authorities were contacted by the universities for permission to collect data. After the permission was granted, the sample was approached, and the respondents sought consent forms and were briefed about the research's goal and purpose. It was explained to them that it would be a voluntary participation in the research. They can withdraw from the research at any time, and the information taken from them will be solely used for academic research and publication. The measures were administered. Moreover, the questions of the participants related to the research were answered.

Results

The data was analyzed in five key steps. In the first step, missing values were replaced through the median of nearby points. Reliability analysis was conducted for each scale in the second step, and Cronbach's alpha was reported. In the third step, Pearson product-moment correlation was employed to assess the relationships among the study variables. A test was applied to examine the

gender differences. Finally, mediation analysis was conducted to assess the relationship between social media addiction and disorder eating behavior with appearance-based rejection sensitivity as a mediator.

Table 1: Sample demographics (N=300)

Characteristics	f (%)	M (SD)
Gender		
Male	150 (50)	
Female	150 (50)	
Age		21.34 (5.86)
Education		
BS	190 (63)	
MS	210 (37)	

The socio demographic characteristics of the sample are given in table 1. Sample consisted of both genders with equal percentage. The age range was 18-30 years, mean of the age was 21.34 while standard deviation was 5.86.

Table 2: Reliability coefficients of the scales (N=300)

Variables	M	SD	Range	α
Social Media Addiction	19.02	4.01	18-29	.84
Rejection sensitivity	63.7	8.4	62-90	.70
Disordered Eating Behavior	61.21	20.1	52-101	.67

Note: M= Mean; SD= standard deviation; α = Cronbach's alpha

Table 2 indicates mean, standard deviation, range score and reliability coefficient of Bergen social media addiction, rejection sensitivity and disordered eating behavior scale. The Cronbach's α value for Social Media Addiction was .84 which indicate high reliability. The Cronbach's for rejection sensitivity was .70 which shows satisfactory reliability. The Cronbach's for disordered eating behavior was .67 which indicate moderate reliability.

Table 3: Correlation among the study variables (N = 300)

Variables	M	SD	1	2	3
1. Social Media Addiction	19.2	4.01	-		
2. Rejection Sensitivity	63.7	8.4	.34*	-	
3. Disordered Eating Behavior	61.1	20.1	.41**	.44**	-

Note. * $p < .05$; ** $p < .01$

As shown in table 3, social media addiction has significant positive relationship with appearance based rejection sensitivity ($r = .34$, $p = < .05$) and disordered eating behavior ($r = .41$, $p = < .01$). Appearance based rejection sensitivity has significant positive relationship with disordered eating behavior ($r = .44$, $p = < .01$).

Table 4: Independent sample T Test for gender differences in social media addiction, appearance based rejection sensitivity and disordered eating behaviour in students (N=300)

Variables	Men (n=150)		Women (n=150)		t (300)	P	Cohen's d
	M	SD	M	SD			
Social media addiction	18.8	4.2	19.57	4.1	-1.08	.28	.12
Rejection sensitivity	59.8	11.2	62.3	21.8	-1.59	.11	.16
Disordered Eating Behaviour	62.7	8.6	64.7	8.2	-2.01	.04	.23

Results in table 4 showed significant mean differences on disordered eating behavior in university students ($p < .05$) indicating more disordered eating patterns in women than men. The value of Cohen's d was .23 which indicate small effect size. However, that there were no significant gender differences in social media addiction and appearance based rejection sensitivity in university students ($p > .05$).

Table 5: Mediation analysis to study social media effect on disordered eating behavior

	B	SE	T	P	LLCI	ULCI
Total effect of social media on Disordered Eating Behavior	1.03	.28	3.2	.0004	.47	1.58
Direct Effect of social media on Disordered Eating Behavior	.894	.28	3.2	.0017	1.44	.178
	B			BootSE	LLCI	ULCI
Indirect effect of social media on Disordered Eating Behavior (Appearance Based Rejection Sensitivity)	.13			.067	.24	.28

The result in table 5 shows the total, direct, and indirect effect of social media addiction on disordered eating behavior through appearance-based rejection sensitivity. The estimate shows that social media addiction positively affects disordered eating behavior ($B = 1.03$, $p < 0.001$). Social media predicts disordered eating behavior ($B = .89$, $p < 0.001$). It also indicates that the indirect effect of social media addiction through appearance-based rejection sensitivity is significant ($B = .13$, $p < 0.001$). This shows that appearance-based rejection sensitivity partially mediates the relationship between social media addiction and disorder eating behavior.

Discussions

Social media is a source of healthy and unhealthy emotional adjustment among adolescents and adults, and understanding its impact on individuals requires research on its complexities. The findings of the current study indicated that there is a significant relationship between social media addiction, appearance-based rejection sensitivity, and disordered eating behavior. Our study highlights that constant exposure to social media platforms might bring some individuals into a state of social comparison. Students who constantly stay on the internet or social media may compare themselves with others' idealized body images and photographs. This could bring about a sense of imperfection related to oneself and trigger appearance-based rejection sensitivity, whereby people see themselves as imperfect to others. This dysfunctional thought process makes them indulge in behaviors related to their body image and unhealthy perceived imperfections (Casale et al., 2024).

Tiggemann et al. (2014) studied the relationship between exposure to the internet and the concerns related to body image in adolescent girls, and their main target was observing the impact of Facebook. They found that Facebook users scored significantly higher on all the scales of body image dissatisfaction than non-Facebook users. This research is closely related to the present study as it indicates that social media represents a potent socio-cultural medium relevant to body image. The present research supports the finding that the students who incorporated more media ideals and perceived social media strain to look fascinating were more sensitive to appearance-based rejection. This relationship between the study variables is consistent with other recent literature, which suggests that young people's preoccupation with likes and comments on social media posts, photos, and selfies is related to their appearance-related anxiety and psychopathology (Bell et al., 2018; Lonergan et al., 2019). It is also indicated that young adults' cognitive patterns and behaviors strongly correlate with maladjustments like disordered eating patterns (Shensa et al., 2018). The findings imply that people who encounter higher degrees of appearance anxiety may find it difficult to control their emotions. This discovery highlights the necessity of measures and assistance to improve emotional competence, especially for those having trouble with their body image (Mishra, 2013).

Another significant finding of the present research indicated that social networking addiction has a significant impact on disordered eating behavior, and rejection sensitivity acts as a mediator between these two variables. Social networking addiction seems to arise as a part of a cluster of symptoms of poor emotion regulation skills (Hormes et al., 2014). Moreover, high use of social networking sites leads an individual to body image concerns, especially the photoshopped images of peers, relatives, and other close ones, creating a sense of concern for one's appearance and looks regarding their physique, looks, dressing, etc. This can lead to a lowering of self-esteem app, clearance-based rejection sensitivity, and disordered eating, especially in the young generation. When they see a flawless world in which everyone looks perfect with flawless appearances, it unconditionally affects their mindset and instills a desire to look similar to their idealized models (Linardon et al., 2017).

Moreover, the present research showed significant gender differences in disordered eating behaviors but not in social media addiction and appearance-based rejection sensitivity in university students. Disordered eating behavior was significantly more in women as compared to men. This is consistent with previous findings, according to which women tend to overestimate their weight and its associated unattractiveness and indulge more in dieting and disordered eating patterns (Cheah et al., 2022; Knauss & Stutz, 2012). Research has supported that women tend to focus more on appearance-related behaviors focused on thinness, whereas men focus more on muscle building (Tiggemann et al., 2014).

The study had some limitations. The first one was that social media addiction, disordered eating, and appearance-based rejection sensitivity could have causal or bidirectional relationships. However, due to the study's cross-sectional nature, it could not be investigated. Future studies could be longitudinal to investigate these relationships. Another area for improvement was employing a convenience sample for the study, which could have limited its generalizability to some extent.

Conclusion

After following the fair analysis, the findings and the above discussion of the present study indicated that social media addiction had a significant relationship with appearance-based rejection sensitivity and disordered eating behavior in university students. Students having high usage of

social networking sites were found to have more rejection sensitivity based on appearance as well as disordered eating behaviors. The present research provides insights into the idea of eating problems and sensitivity to rejection based on appearance among Pakistani youth. The study also seeks to increase understanding of how social networking addiction is leading to appearance-based rejection sensitivity and poor eating habits in university students. The findings can also help in devising emotion management programs for students with rejection sensitivity based on appearance. The research findings can also be used to develop more outdoor and creative activities, such as sports or book readings so that students can spend less time watching social media and more time interacting with one another. Psychologists and counselors should work for the counseling of students engaging in social networking addiction so that problems such as appearance-based rejection sensitivity and eating behaviors are reduced, which can lead to positive, healthy emotional both physical and mental health of the students.

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