

ROLE OF SOCIAL MEDIA USE AND SOCIO-CULTURAL ATTITUDE TOWARDS APPEARANCE IN EATING PROBLEMS AMONG ADULTS

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DOI: <https://doi.org/10.5281/zenodo.14855105>

Keywords

Eating problems, social media use, socio-cultural attitude towards appearance.

Article History

Received on 23 December 2024

Accepted on 23 January 2025

Published on 12 February 2025

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Abstract

The present study was conducted to explore the relationship between social media use and related affect (positive affect and negative affect) and internalization of socio-cultural attitudes towards appearance (thin body fat, muscular, pressure from family, pressure from peers, and pressure from media) in eating problems among adults. Differences across gender and other of demographic variables in the proposed relationships were also studied. Research variables were measured by using Eating Disorder Examination-Questionnaire (Fairburn & Beglin, 1994), Socio-cultural Attitudes Towards Appearance Questionnaire-4 (Schaefer et al., 2013), Social Networking Sites (SNSs) Usage Questionnaire (Shi et al., 2013), and a demographic sheet were used for data collection through online survey taken up due to COVID-19 Lock Down. Sample was drawn conveniently comprising of Pakistani adults (N = 266) with minimum age 18 years and having English language skills to respond. Analysis was conducted through SPSS-22. Alpha coefficients of the measures were found to be satisfactory. Findings showed that social media use was significantly positively related to eating problems. Internalization of pressure regarding socio-cultural attitudes towards appearance by family, media, peers, having thin, and muscular body had a significant positive relationship with eating problems. There was non significant differences between male and female participants on eating problems and its domain; eating concern, shape concern, weight concern, and restraint. It was found that thin body fat, pressure from family, and pressure from media were significantly predicting eating problems. There were significant differences between male and female participants on socio-cultural attitude towards appearance and its domains; muscular, pressure from family, and pressure from media. Men had more internalization of muscular body ideal of socio-cultural attitudes towards appearance than women. Findings were discussed in the light of past literature and cultural context. The results and implications were discussed in Pakistani context.

INTRODUCTION

The word "eating problems leading to altered food intake or absorption, which impairs physical health or psychological results," is described as eating

disorders (American Psychiatric Association [APA], 2013). The eating disorders contain eating nonfood items; avoidances of food or limiting food

consumption because of not liking food for various reasons, like for fear of gaining weight (i.e., anorexia nervosa); purging out food (i.e., bulimia nervosa); and binge eating disorder (p. 329). These conditions are either inadequate or too harmful for the physical and emotional health of a person. Binge eating, bulimia nervosa and anorexia nervosa are the most common forms of eating disorder (Hudson, Hiripi, & Kessler, 2007). These are potentially fatal among psychological disorders. In addition, other psychological conditions including depressions, alcohol dependence and anxiety are widely connected with eating disorders (Hudson et al., 2007).

Disordered eating habits seem more common but less serious than diagnosed eating disorders. The distinction between uncontrollable eating and occasional eating disorder is the severity and intensity of the eating behavior. The consistency theory suggests that eating problems vary only in the degree of disordered eating in terms of eating disorders (Pike & Rodin, 1991). Studies have shown that disordered diet or unusual eating habits are far more severe and prevalent than real eating disorders. In several nations, nearly all countries worldwide, disordered eating habits occur (APA, 2006). Disordered eating is the spectrum from dietary control and psychiatric eating conditions and excessive eating. Most eating disorders are part of unorganized eating, but not many unorganized eating behaviors meet the eating disorder requirements. While, this word cannot yet be defined in a fine way, it is common to describe eating behaviors that are less extreme than those listed in DSM IV-TR and ICD-10, which are disordered. On the other hand, disordered eating is not enough to require medical attention and is popular among young people (Muazzam & Khalid, 2011).

Eating disorders are severe that can have detrimental long-term consequences that affect millions. There may be some who may not survive. The Department of Mental Health in 2016 in South Carolina reports that 8 million Americans (7 million women and 1 million men) experience from eating disorders. The crude rate of mortality is about 5 percent per decade for anorexia nervosa. Moreover, some people may die from illness or suicide as a result of medical

problems, 12 per 100,000 people per year (APA, 2013). In Pakistan, 369 girls from the school in Lahore and another 271 girls from Mirpur found one case of bulimia and no anorexia, while five girls from Lahore had partial bulimia nervosa (Mumford, Whitehouse, & Choudhry, 1992). Another survey in Lahore of 111 volunteers showed that the existence of only one recorded case of anorexia nervosa in sample (Imran & Ashraf, 2008), two cases of bulimia nervosa, and two other cases of unreported eating disorder (Suhail, 2002). Consequently, disordered eating patterns have a more common occurrence and prevalence than full blown eating disturbances. Around 45 to 50% of college students have a disordered eating pattern (Muazzam & Khalid, 2008). The aetiology of the eating concerns is multi factorial and involves physiological, psychological, personal and environmental consequences (Littleton & Ollendick, 2003). The creation of these concerns, which probably are mediated by the thin ideal internalization, is related to an environmental effect the exposure of advertising, such as fashion magazines and the television (Levine & Murnen, 2009). However several aspects of traditional media and technologically-enabled peer-networking are newly established in social media (Perloff, 2014). A greater chance of eating disorders may be linked to this combination of vision media and to the spread of stereotypes among peers. For example, a study of the YouTube video-sharing platform showed that one-third of anorexia-related videos could be categorized as "pro-anorexia," and these videos were more likely to achieve higher audience scores than "informative videos, such as those addressing the health effects of eating disorders (Syed-Abdul, Fernandez-Luque, Jian, Li, Crain, Hsu, ... & Liou, 2013). Similarly, Facebook studies have found that maladaptive uses are related to greater disordered eating and physical dissatisfaction in college-level women such as evaluating one's own with others (Fardouly & Vartanian, 2015). Studies have also shown that even non-maladaptive Facebook use can be connected with both body image concerns and eating disorders (Smith, Hames, & Joiner, 2013).

Thompson and Stice (2001) noted that the production of eating disruptions through thin-ideal internalization is a strong underlying risk factor. The internalization of that ideal is achieved by social

consolidation and roommate behaviors that conform to that ideal can enhance probability of becoming thin at a time in which they build their fully developed personality. Once internalized, this ideal might contribute to the lasting influence of peer behaviors extended gone even when one is no longer living with their college roommates. Women may consider themselves under pressure to be as models and actresses and men may feel pressure to appear as big and muscular as the actors and male models. Such perfect bodies may be attained by limiting diets, surgical procedures, deteriorating diets, extreme exercise, malnutrition, self-induced vomiting or bulimia, steroid use, and other medicines (Haferkamp & Kramer, 2011).

Social media as a category of internet-related applications focused on internet philosophy, technology, and content production and sharing (Kaplan & Haenlein, 2010). Digital media have been introducing various types of social networks since its introduction in an internet environment. Although, social media is known to be "devices" or "means of communication" for broadcasting, reaching and manipulating individuals, social networking can be defined as the use of "social media resources" for directly communicating and interactions with people with whom you are related (Wells, 2011).

Social media use refers to the two states of affect that are positive affect and negative affect. The positive effect refers to how a person experiences positive things including pleasure, curiosity and attention subjectively (happy, cheer, joyful, and contentment). Positive effects are related to mood conditions more strongly because positive emotions include positive thoughts as well as emotional enthusiasm, thinking and behavior (Peterson, 2006). Negative affect is a broad term, and can be summed up as emotional discomfort (Watson, Clark, & Tellegen, 1988); simply, they are characterized by the general variation between anxiety, depression, anxiety, anger, shame and disgrace, irritability and others unpleasant emotions (unpleasant, depression, anger, and afraid). In the current study, four negative (unpleasant, unhappy, angry and fearful) and four positive (happy, pleasant, cheerful and contented) elements were tested to assess the mental well-being of the SNS (Shi, Luo, Yang, Liu, & Cai, 2014).

In recent decades the role of the media in our daily lives has drastically shifted and its impact on cultural and social behaviors such as eating habits is now extensive (McHale, Dotterer, & Kim, 2009). Emerging adults use the media longer than they do any other practice, especially social media (Coyne, Padilla-Walker, & Howard, 2013). Usage of mass media and SNS like consumption of photographs was shown to be connected to eating behaviors, eating disorders and related variables in various ways (Elfhag & Morey, 2008). TV watching time, for instance, is positive for BMI (Spence, Okajima, Cheok, Petit, & Michel, 2016). Exposure to mass media has also been continuously shown to include the negative picture of the body and the idealization of thinness in relation to eating habits that decrease body weight and EDs (Elfhag & Morey, 2008).

The social networking sites (SNS) for food items are full of knowledge on how to become victim of anorexia or bulimia. Their content incorporates text, illustrations, and "thin motivational images" showing very slim models. Such websites encourage awareness, actions, and behaviors in order to reach incredibly low body weights. Web pages and networks that promote eating problems have arisen where users can find content to aid eating disorders (Borzekowski, Schenk, Wilson, & Peebles, 2010). When peer behaviors pose a significant risk factor for disordered eating, gender risk variations in the association of equal sex peers may be exacerbated. Specifically, their association with girls who are more likely to eat may increase their likelihood of having a disordered diet. On the other hand, boys are extra prone to spend time with people who are less risky from a poorer eating (Gravener, Haedt, Heatherton, & Keel, 2008). Gravener et al. (2008) also observed that both men and women are positively correlated to the diet standard of homosexual partners. However, women and men have indicated that their female friends are consumed more often than their male friends and that their female friends have a higher diet. In addition, boys may be less vulnerable to peers' influence on disordered eating.

Hargittai (2007) has found that women spend more time on SNS than men. Stafford (2008) said men use SNS like Facebook to build and socialize new connections, while women use it to make the most of their spare time, to communicate with their mates.

Raacke and Bond (2008) also showed that shifts in social networking accounts are more common for women than for men. Social media has both positive and negative effects. However, it cannot be doubted or denied that adolescents and young adults in Pakistani culture constantly encounter body image issues and engage in risky and unhealthy eating behaviors. For example, a study conducted in seven private universities across Karachi, one of the most populous cities in Pakistan, showed that 54.45% of males and females had a negative score of body image satisfaction (Khan, Khalid, Khan, & Jabeen, 2011).

Haferkamp, Emiler, Papdakis, and Kruck (2012) noticed that the websites of social networking focus more on bodies. Women share more images of half of their bodies than their entire photos. It allows women to compare facial features, hair texture, and skin tone more with the whole body, and men are no longer concerned about the images they share. Research on how adolescents turn up on Web-Platforms such as Twitter, blogging, and Facebook among children has been conducted by Ringrose and Barajas (2011). They find that gender differences exist when one physically views oneself. Girls' post those photos in which they are appearing as good looking and physically attractive, but boys' sample are not much clarified. The preferences of both genders represent certain media pictures that are sexually appealing when you pick the photo to reveal them. While selecting the photo for showing own self, both sexes' priorities mirror those media images which are sexually attractive (Siibak, 2009). Researchers found a connection between the use of SNS and poor body image (Tiggemann & Slater, 2013). SNS users are more dissatisfied than non SNS users (Stronge, Greaves, Milojev, West-Newman, Barlow, & Sibley, 2015). A longitudinal analysis showed that the increased level of use of SNS predicted increased body dissatisfaction after more than one year of SNS use (De Vries, Peter, de Graaf, & Nikken, 2016).

Eisenberg and Neumark-Sztainer (2010) observed that the diet level of friends at baseline reliably predicted disabilities in girls, but not boys, at five-year follow-ups. Therefore, the risk of increasing eating disorder can shift between the sexes under the peer and social influences. Different research

documented eating disorders prevalence. The population- and clinical studies in Western countries have recorded a 0.1% -5.7% incidence of anorexia nervosa, with 0.3% -7.3% of females (Makino, Tsuboi, & Dennerstein, 2004). Prevalence of eating problems is more common in women than men (APA, 2013). Social scientists claim that the degree to which an individual cognitively accepts and engages in behaving to obtain socially identified attributes of attraction (Thompson, Van Den Berg, Roehrig, Guarda, & Heinberg, 2004), leads to dissatisfaction with one's body that is when one has negative thoughts and feelings about one's body, for example, that my body is not slim enough. The interactions of these factors (thin, thin-ideal exteriorization, and corporeal dissatisfaction pressure) are risk factors for increasing eating related pathology, and multiple longitudinal, prospective, and experimental studies have shown that this is significant (Thompson & Stice, 2001).

Socio-cultural attitude means the internalization of self-value recognizing the standards of socio-cultural beauty through mass media, and psychological dimension such as self-expression, personality, brand, etc. (Park, 2012). Socio-cultural attitude toward appearance refers to forming a socio-cultural attitude by evaluating and internalizing his/her body with ideal beauty delivered through mass media (Heinberg & Thompson, 1995). Comparisons of appearance can be defined as a disparity between one's own appearances and others in order to determine attractiveness (Van den Berg et al., 2002).

Two main components of socio-cultural attitude towards appearance (SCATA) are Awareness and Internalization (Abrams & Stormer, 2002). The awareness refers to 'the degree to which a person is conscious of the significance imposed in western society of beauty and thinness,' while the internationalization refers to how often an individual "internalizes these ideals by approving and wanting to imitate social norms relevant to appearance" (Warren, Cepeda-Benito, Fernandez, Gleaves, & Rodriguez-Ruiz, 2005, p. 241-249). Moreover the internalization of the perfect skinny body is a key contributing factor for body dissatisfaction, negative body perceptions, the prediction of eating and binge consumption (Stark-Wroblewski, Yanico, & Lupe, 2005). According to social psychologists, "thin-ideal

internalization" is the degree to which an individual recognizes and includes activities in obtaining socially determined qualities of attraction (Thompson et al., 2004).

Gender differences in internalization and pressure could be due to female disparities in internalization and pressure may be attributed to the fact that girls are more prone to ideals of the media than boys. Public media is a key function to communicate bodily values (Thompson et al., 1999; Tiggemann & Pickering, 1996) and media expectations seems more frequently and more directly by women than men (Strahan et al., 2006). Studies have for instance, indicates that women are advertised more for eating and muscle growth than male magazines (Andersen & DiDomenico, 1992). A tripartite effect model among the most popular and empirically validated etiological models in this field (Thompson, Schaefer, & Menzel, 2012) indicates that friends, parents and media (e.g. commercials on TV and magazines) impact the production of body figure and eating disorders. In specific, the three factors of impact relay signals to endorse and maintain the fine ideal by remarks on weight, endorsing diet, glorifying the perfect models and other reinforcement behavior (Thompson & Stice, 2001). This socio-cultural strain of friends, parents, and the media will help internalize the slim model (Thompson & Stice, 2001; Van den Berg et al., 2002).

Pressure from family.

Parents were believed to cause their children's vulnerability to the rejection of beauty by transmitting their own beliefs to their children concerning appearance and by expressing the impression that their affection and approval depend on the appearance of the child. In reality, earlier research has shown that parents play a key role in shaping the look and feel of their child through modeling and promotion (McCabe & Ricciardelli, 2004).

Pressure from peers.

Peers may also be critical for determining people's susceptibility to appearance-based rejection. A large number of research have shown that people are inclined to obey their peers' expectations, convictions and approaches, notably for beauty standards,

particularly in relation to attractiveness ideals (Jones, Vigfusdottir, & Lee, 2004). While many studies find that peer influence is a major source of social-cultural ideals and attitudes toward girls and boys beauty (Jones & Crawford, 2006).

Pressure from media.

The media plays a vital role in shaping what people expect and how they feel themselves and their bodies (Levine & Smolak, 1996). Although, the media has been recognized as an increasingly important source of social and cultural values and perceptions toward girls and boys (Thompson & Cafri, 2007). More recent studies have found more standardized links between media impact and girls' looks issues (Groesz et al., 2002). Almost any type of media expose audiences to awareness of female expectations of appearance and slimness (Calogero, Boroughs, & Thompson, 2007) such as magazines, TV shows, TV commercials and the music industry (Tiggemann & Slater, 2013).

Some studies have shown women to be unhappy with appearance more strongly and consistently, and as a result, following intensively the female body's socio-cultural ideal duly focused at slenderness and thinness promoted by significant others and in the media (Grabe, Ward, & Hyde, 2008). Studies have found that advertising penetration (TV and magazines) has a positive effect on disordered eating, body dissatisfaction, and thin-ideal internalization (Thomsen, 2002). Moreover, body satisfaction cannot be induced by seeing images on the media among men but inward-looking photographs. Many findings suggest that women and men associate with unreasonably slim or muscular bodily values. Whether women stress on weight and height, many women see it as ideal and wish to be slim (Tod, Edwards, & Hall, 2013). Men are similarly unhappy with earlier research which has shown that men consider that the representation of the men and women as ideal is greater than their actual shape (Demarest & Allen, 2000).

In the sense of body image, the upwards contrast, which one finds superior to others, also plays a significant role. Many studies show that women are often compared with better, thinner, actresses or popular people (Homan, McHugh, Wells, Watson, & King, 2012). For instance, in their critical analysis, Levine and Murnen (2009) claimed that Broadcast

media should be seen as a health risk to be a causal risk factor for self-assurance. In their meta-analysis they proposed that the relationship between the Social and Eating Disorder should be examined by factors such as the perception of the value of a slim ideal for society and the internalization of the image and the social pressure that it perceived to be slim. Between the 1950s and the 2000s, the beautiful female body seen in magazines increasingly enhances, establishing the thin-ideal as a body image most wanted by women (Wiseman, Gray, Mosimann, & Ahrens, 1992).

Previous surveys, focuses on thinness, found women are relatively unhappier than men with their bodies. However some findings suggest that men prefer to express worries that they are underweight as opposed to their wives who worry about more being overweight (Levinson, Powell, & Steelman 1986). Study based primarily on the will of weight loss (slimming), while avoiding the drive for gains, must be researched closely and an approach more comprehensively to recognize the effect on men and women of socio-cultural attitudes. Evidence reveals that expectations of beauty that are used in the media only factor of body dissatisfaction when these values are internalized (Swami, Taylor, & Carvalho, 2011). The interplay of the slim image is affected by reading fashion magazines among women. Nevertheless, it does not inherently trigger discontent in body and disordered eating (Tiggemann, Verri, & Scaravaggi, 2005).

According to social comparison theory, eating disorders are often more common for women who are also likely to develop social competition. If a person sees a difference between himself and the picture she relates to, she will always take action to become more like that figure. This theory of social comparison found that those with the highest BMIs were more likely to associate with slim images in social comparison, which in effect is believed to contribute to increased levels of body discontent. Women who evaluate themselves to socio-cultural images portrayed in the media may be more likely to internalize unrealistic body weight and shape standards.

In the current study, the role of social media usage and socio-cultural attitude towards appearance in eating problems is studied in adults, and additionally,

the role of demographic variables is also taken into consideration. The aim of this study is to explore the relationship between social media use and related affect, internalization of socio-cultural attitudes towards appearance, and eating problems among adults. The goal of this study is to explore the prevalence of eating problems in adults, not disorder, and to investigate their relationship with social media use and internalization of socio-cultural attitudes towards appearance. Rationale behind studying eating problems is to highlight its significance, if its timely intervention and assessment if not done it may lead to pathology. Over the past decade, understanding and education of eating disorders has increased significantly but Pakistan is still unable to address the concept of disordered eating. Eating disorders are not recorded or reported to conform to the clinical classification; there may be several explanations for a lack of prevalence in Pakistan. However, teens and young adults are never challenged or denied that they are actively having body image issues and taking on unsafe and unhealthy eating habits in Pakistani cultures. One of Pakistan's most populated towns has shown, for instance, that 54.45 percent of both men and women had a negative body image satisfaction score (Khan et al., 2011) in seven private universities across Karachi. It is likely that eating disorders may not be present clinically, but the dynamics underlying them are present and may be having a silent detrimental influence. This research is aimed to study social media use and eating related problems for past 28 days. During lock down, our lifestyle has bit changed where use of social media and interaction with family members have also increased. In this context, the research has examined to study their impact on health and eating. Findings of this study may help psychologists and health worker later to plan interventions for youth in how to handle pressures and media influx that may have negative impact on health.

Findings will increase awareness of how eating problems is affected by different factors and how social media use and internalization of socio cultural attitudes towards appearance participate a role in the severity of eating problems. Following are the objectives of the study to explore:

Current research work is aimed to study:

1. Relationship between social media use and related affect, internalization of socio-cultural attitudes towards appearance, and eating problems among adults.
2. Predictive role of social media use and internalization of socio-cultural attitudes towards appearance in eating problems among adults.
3. Role of demographic variables (e.g., age, gender, education, socioeconomic status, family system, BMI, etc.) in social media use, internalization of socio-cultural attitude towards appearance, and eating problems among adults.

Hypotheses

Based upon literature it is assumed that:

1. Social media use is positively associated with eating problems.
2. Internalization of socio-cultural attitudes towards appearance is positively associated with eating problems.
3. Negative affect associated with social media increases eating problems.
4. Women score high on eating problems as compared to men.
5. Women's internalization of media, peers, and familial socio-cultural attitudes towards appearance is higher than men.
6. Women's internalization of thin body ideal towards appearance is higher than men.
7. Men have higher internalization of muscular body ideal of socio-cultural attitudes towards appearance than women.

Method

Research Design

Current study is correlational, cross-sectional, and quantitative in nature. Survey method is used for online data collection during lock down of COVID-19 pandemic.

Sample

Sample consists of 266 female and male adults from different cities of Pakistan. Convenient sampling was used. The inclusion criteria in all should be using social media (e.g. Facebook, Whatsapp, Twitter, Snapchat, Instagram, WeChat), resident of Pakistan only, minimum 18 years of age and possess a

minimum of 12 years of education with enough understanding of the English language. Individuals younger than 18 years of age were not eligible to participate in this research. The sample age ranges from 18 to 49 years ($M = .29$; $SD = 4.89$).

Instruments

The three scales used to evaluate the variables in this study are briefly described as below:

Eating Disorder Examination-Questionnaire (EDE-Q). It is a scale of 21 items used to assess the characteristics of the eating disorder over the past 28 days (Fairburn & Beglin, 2008). In general, the test measures the frequency of cognitions and actions characteristic of eating disorders. The EDE-Q consists of four subscales measuring Dietary Restraint (1, 2, 3, 4, & 5); Eating Concern (7, 9, 19, 21, & 20); Weight Concern (12 & 8); and Shape Concern (6, 8, 10, & 11). Items are scored on a 7-point Likert scale ranging from 0 (no days) to 6 (every day). In Items 13–18 of the EDE-Q, particular dietary habits, such as target binge eating, self-induced vomiting, laxative use or excessive activity, have been openly receptive (number periods or days). Over the past 28 days. These are not part of the subscale ranking. Higher scores reflect the psychopathological level of higher eating. The EDEQ displayed a strong consistency in a Cronbach alpha of .94, from .70 to .80 for Weight Concern and Shape Concern respectively (see Appendix).

The Social Network Sites (SNSs) Usage Questionnaire.

The scale was developed by Shi et al. (2014). The SNSs Usage Questionnaire has two subscales, the SNSs Affective Experience Scale and the SNSs Featured Usage Scale. It includes 13 items to measure the uses of SNSs, such as status alerts and homepages for mates ($\alpha = .82$). In the current study, only first three items of this subscale was used, that is (1. "How long are you using SNS"? 2. "On average, how long will you spend on SNS every time you visit it"? 3. "How many friends do you have on your favorite SNSs?"). Participants are necessary to account on 7-point rating scale (1 = never, 7 = many times a day), they reported the duration of surfing SNSs each time (1 = 15 minutes, 7 = Four hours or

so), your friends number (1 = 1-50, 7 = more than 500).

The Affective Experience of SNS an 8-item subscale ($\alpha = .82$) measuring affective experience after using social media including good mood (joy, happiness, cheer, pleasure) or bad mood after using social media (sadness, nervousness, unhappiness, anger) Likert type scales with 7-Point SNSs (1 = never, 7 = always) were measured by participants. Higher scores show more social media use (see Appendix).

Socio-cultural Attitudes Towards Appearance Questionnaire-4 (SCAAQ-4). This instrument is used to measure one's internalization of comments or remarks about his/her appearance and the external standards of beauty. It is a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The SCCAQ-4 has 22 items. It has five subscales including internalization related to Thin/low Body Fat (3, 4, 5, 8, & 9); Internalization related to Muscular/Athletic (1, 2, 6, 7, & 10); Pressure from Family (11, 12, 13, & 14); Pressure from Peers (15, 16, 17, & 18), and Pressure from Media (19, 20, 21, & 22). High score on the scale reflects high internalization and low score reflects low internalization (Schaefer et al., 2013). The scale was found to have good reliability that is alpha .84 (see Appendix).

Demographic sheet. For this research the following demographic variables are included in the demographic sheet that is age in years, gender, marital status, height, weight, no. of siblings, birth order, education, degree level, semester, residence, family status, family income, native language, parental education and occupation, spouse's education if married, and occupation (See Appendix).

Procedure

It was an online survey due to Lock Down of COVID-19. To collect data, Google form was constructed

(<https://forms.gle/bG5wx3kXR1s6yT7D9>). Data was collected through different social medias like Facebook, Instagram, WhatsApp, email, etc. Questionnaires were in simple language and did not pose any potential harm. It was informed that participation is strictly voluntarily, which means that it is up to the participant to decide whether he/she wants to take part in this study. If a person doesn't

wish to participate, he/she has the right to withdraw from participation anytime without penalty. If one decides to withdraw, his/her data will not be saved/will be destroyed. Once they were agreed to participate, they ticked the option of agree to continue further. All of the individuals who participated in the research were assured that their information would be kept confidential. Anonymity was also ensured that their name or identity will not be displayed anywhere in the results or in future publication of the results. After getting the data automatically got saved in excel from which it was imported in SPSS 22, they were thanked for their cooperation. A total expected time to take was 10-15 minutes.

Out of the total 300 data, 266 responses were received hence included in analyses and rest were discarded.

Results

Data is analyzed through SPSS-22 using descriptive and inferential statistics. Firstly, the alpha reliability coefficients of measures are computed to check internal consistency of these scales. To check the normality of data, descriptive statistics are computed. The relationships among variables and predictions are established through multiple stepwise regression analysis and Pearson Product Moment correlation, respectively. Independent sample t-test is done to study group differences along gender.

Prevalence of Eating Problems

In Figure 1, the Pie chart shows the division of the data into two categories; participants with and without eating problems. The division was based on the cutoff score of Eating Disorder Examination Questionnaire. Cutoff score for the scale was 2.3 on average scores computed on first 12 and last 3 (19, 20, 21) items (Mond, Hay, Rodgers, Owen, & Beumont, 2004). Average scores at or above 2.3 indicate eating problems; hence all the participants who fell at the total Eating Disorder Examination Questionnaire score of 2.3 or above are placed in the category of participants having eating problems. According to the results, (n = 113) 42.5% of the participants exhibit eating problems, and (n = 153) 57.5% came out to be participants without eating problems.

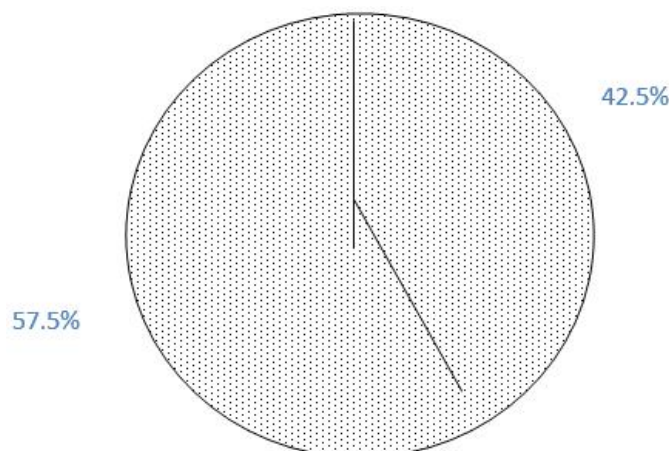


Figure 1. Participants with or without eating problems.

Correlation of Study Variables

Correlation between study variables. Pearson Product Moment Correlation analysis is run in order to find direction relationship among social media use, eating problems, socio-cultural attitude towards appearance, and their domains. Table 3 shows relationship between study variables.

Table 1 indicates the coefficients of correlation between study variables. Social media use is positively related to eating problems, which shows social media use increases eating problems and vice versa which confirms Hypothesis 1. Socio-cultural attitudes towards appearance have a significant positive relationship with eating problems which shows that internalization of socio-cultural attitudes towards appearance increases eating problems also increases which confirms Hypothesis 2.

Table 1 also shows the subscales of Eating Disorder Examination that are Eating Concern, Restraint, Weight Concern, and Shape Concern have significant positive relationship with subscales of Socio-Cultural Attitudes towards Appearance that is, Pressure from Family, Pressure from media, Pressure from peers, Muscular, and Thin Body Fat. Subscale of SNS that is Negative Affect has significant positive relationship with Eating Disorder Examination and their domains (i.e., Eating Concern, Restraint, Weight Concern, and Shape Concern) and Socio-Cultural Attitudes towards Appearance and their domains (i.e., Pressure from Family, Pressure from media, Pressure from peers, Muscular, and Thin Body Fat). Similarly, the subscale of Social Networking sites

that is Positive Affect has significantly negative relationship with Eating Disorder Examination and their domains (i.e., Eating Concern, Restraint, Weight Concern, and Shape Concern) and Socio-Cultural Attitudes towards Appearance and their domains (i.e., Pressure from Family, Pressure from media, Pressure from peers, Muscular, and Thin Body Fat).

Table 1: Correlation Between Study Variables (N =266)

	VAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	EDE	-	.85**	.78**	.91**	.85**	.55**	.51**	.36**	.34**	.37**	.41**	.06	.13*	-.07	.03
2	RS		-	.53**	.66**	.59**	.41**	.40**	.32**	.21**	.27**	.29**	.02	.07	-.06	.06
3	EC			-	.64**	.63**	.44**	.37**	.32**	.29**	.26**	.33**	.12*	.10	.02	.07
4	SC				-	.87**	.54**	.52**	.29**	.35**	.48**	.41**	.06	.18**	-.13*	-.00
5	WC					-	.54**	.46**	.29**	.39**	.41**	.40**	.02	.11	-.11	-.03
6	SATA						-	.69**	.69**	.70**	.77**	.77**	.09	.22**	-.15*	.16**
7	TBF							-	.46**	.25**	.33**	.45**	.08	.11	-.02	.08
8	MUS								-	.32**	.32**	.35**	.10	.16**	-.06	.15*
9	PFF									-	.66**	.42**	.00	.16**	-.19**	.04
10	PFP										-	.57**	.00	.17**	-.20**	.07
11	PFM											-	.11	.18**	-.08	.23**
12	SNS												-	.69**	.47**	.15*
13	NA													-	-.30**	.12*
14	PA														-	.05
15	FUS															-

Note. EDE = Eating Disorder Examination; RES = Restraint; EC = Eating Concern; SC = Shape Concern; WC = Weight Concern; SATA = Socio-Cultural Attitude toward Appearance; TBF = Thin Body Fat; MUS = Muscular; PFF = Pressure from Family; PFP = Pressure from Peers; PFM = Pressure from Media; SNS = Social Network Sites; NA = Negative Affect; PF = Positive Affect; FUS = Featured usage Scale.

*p < .05. **p < .01. ***p < .001.

Results also show that Featured Usage Subscales (i.e. associated with Social Networking Sites) have positive relationship with eating disorder examination and their domain (i.e. restraint and eating concern) and negative relationship with the domains of Eating Disorder Examination (i.e. Shape Concern and Weight Concern). There is positive relationship between Featured Usage Scale (i.e. associated with Social Networking Sites) and Socio-Cultural Attitudes towards Appearance and their domains (i.e., Pressure from Family, Pressure from media, Pressure from peers, Muscular, and Thin Body Fat).

Table 1 also shows that there is a significant positive correlation between four subscales of Eating Disorder Examination that is Restraint, Eating Concern, Shape Concern, and Weight Concern. Similarly, there is a significant positive correlation between five subscales of Socio- Cultural Attitudes towards Appearance that is Pressure from Family,

Pressure from media, Pressure from peers, Muscular, and Thin Body Fat. There is a significant positive relationship among subscales of Social Networking Sites that is Positive Affect, Negative Affect, and Featured Usage Scale. There is a significant negative relationship between subscales of Social Networking Sites that is Negative Affect and Positive Affect and positive relationship between Featured Usage Scale, Negative Affect, and Positive Affect (i.e. associated with SNS).

Predictors of Eating Problems

Predictors of overall eating problems. Table 2 shows step-wise multiple regression analysis performed to study effect of social media use and its domain (i.e., featured usage scale, negative affect, and positive affect) and domains of socio-cultural attitude towards appearance (i.e., pressure from family, pressure from media, pressure from peers, muscular, and thin body fat) in overall eating problems.

Table 2: Step-wise Regression Analysis Showing Predictive Role of Social Media Use and Socio- Cultural Attitude Towards Appearance in Eating Problems (N = 266)

Predictors	R ²	ΔR^2	B	F	95% CI	
					LL	UL
Model 1	.26	.26				
Constant				95.37***	-3.30	10.29
Thin Body Fat			.51***		1.81	2.72
Model 2	.31	.05				
Constant				60.53***	-11.69	3.19
Thin Body Fat			.45***		1.55	2.47
Pressure from family			.23***		.645	1.70
Model 3	.33	.01				
Constant				43.63***	-12.21	2.53
Thin Body Fat			.39***		1.26	2.24
Pressure from Family			.17***		.344	1.46
Pressure from Media			.16***		.179	1.21

*p < .05. **p < .01. ***p < .005.

Table 2 shows for eating problems in Model 1 thin body fat is predicting with variance 26% eating problems, that is as thin body fat increases eating problems also increases. In Model 2, pressure from family appears with 5% added unique variance, and in Model 3, pressure from media contributed with 1% unique variances with significant positive predictive values. That is after concern about body fat, pressure from family then from media are

perceived as having significant role in eating problems of the participants of the study. That is as thin body fat, pressure from family, pressure from media increase eating problems also increases. This means that eating problems is significant positive relationship with thin body fat, pressure from family, and pressure from media associated with socio cultural attitude towards appearance.

Table 3: Mean Difference along Gender on Study Variable (N = 266)

VAR	Male n = 56		Female n = 210		t(264)	P	95%CI		Cohen's D
	M	SD	M	SD			LL	UL	
EDE	33.00	17.40	36.23	21.20	-1.05	.29	-9.29	2.82	-
RES	10.10	6.08	11.28	8.31	-.98	.32	-3.51	1.16	-
EC	10.33	6.48	9.73	5.78	.67	.50	-1.15	2.35	-
SC	10.10	6.33	11.76	7.91	-1.44	.14	-3.90	.59	-
WC	4.94	3.67	5.60	3.96	-1.12	.26	-1.81	.49	-
SATA	62.41	13.40	54.92	17.02	3.04	.00	2.65	12.32	0.48
TBF	14.00	3.63	14.16	4.88	-.23	.81	-1.54	1.21	-
MUS	16.19	4.59	12.83	4.97	4.56	.00	1.90	4.80	0.70
PFF	10.92	4.14	9.35	3.94	2.62	.00	.39	2.75	0.38
PRP	10.51	4.20	8.91	4.26	2.50	.01	.34	2.86	0.37
PFM	10.76	4.11	9.65	4.86	1.57	.11	-2.81	2.51	-
SNS	32.17	5.76	32.39	6.56	-.22	.82	-2.11	1.68	-
NA	14.32	5.92	14.93	5.93	-.69	.49	-2.37	1.14	-
PA	17.85	5.06	17.45	4.76	.55	.58	-1.02	1.82	-
FUS	14.64	3.86	10.79	3.05	7.89	.00	2.88	4.80	1.10

Note. VAR = Variables; CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit; EDE = Eating Disorder Examination; RES = Restraint; EC = Eating Concern; SC = Shape Concern; WC = Weight Concern; SATA = Socio-Cultural Attitude toward Appearance; TBF = Thin Body Fat; MUS = Muscular; PFF = Pressure from Family; PFP = Pressure from Peers; PFM = Pressure from Media; SNS = Social Network Sites; NA = Negative Affect; PF = Positive Affect; FUS = Featured usage Scale.

The result in Table 3 shows significant differences are observed on sociocultural attitude towards appearance and its domains being muscular, pressure from family, and pressure from peers. Male participants are scoring significantly high than female participants. Cohen's D shows weak effect size for sociocultural attitudes towards appearance and its domains pressure from family, pressure from peers, and Cohen's D values for muscularity (i.e., domain of sociocultural attitudes towards appearance) shows moderate effect size describing difference in mean of two groups. Whereas, Cohen's D value for featured usage scale (i.e., associated with SNS use) shows large effect size describing difference in mean of two groups.

There is a non-significant difference between male and female participants on eating problems and its domain; eating concern, shape concern, weight concern, and restraint. There is also a non-significant difference on thin body fat, pressure from media,

positive and negative affect associated with social media use (Table 3).

Discussion

Present study aimed to find out relationship between internalization of socio cultural attitudes towards appearance and social media use in eating problems among adults. Independent sample t-test is done to study group differences along gender. Additionally, prediction of socio-cultural attitudes towards appearance of internalization and social media use for eating problems and its four domains (i.e., eating concern, weight concern, shape concern, and restraint) was also studied.

Sample of the study was comprised of adults (N = 266) which includes 56 male and 210 female participants. Sample of the current study was unequal with respect to gender. It was an online survey taken up during lock down through Google form to collect data online. That's why; there was unequal distribution of gender. In total 270, participants participated through social media. After excluding 4 invalid cases or questionnaires on the basis of incomplete responses, total 266 valid cases or questionnaires were retained for further analyses. Turnout rate is 98%, which is very good.

Prevalence of Eating Problems

In Figure 1 the Pie chart showed the division of the data into two categories; participants with and without eating problems. The division was based on the cutoff score of Eating Disorder Examination Questionnaire. Cutoff score for the scale was 2.3 (Mond et al., 2004). Scores at or above 2.3 indicate eating problems; hence all the participants who fell at the total Eating Disorder Examination Questionnaire score of 2.3 or above were placed in the category of participants having eating problems. According to the results, 42.5% of the participants exhibited eating problems, and 57.5% came out to be participants without eating problems. The questionnaire consisted of total 21 items out of which 6 are open ended. Open ended items do not have cutoff points. Most of the participants in present study met the criteria of bulimia nervosa. People were stressed and lockdown due to COVID 19 can be the reason for those people who met the criteria of bulimia nervosa.

Relationship between Study Variables

To study the relationship between study variables, bivariate correlation that is Pearson Product-Moment Correlation was computed between social media use and related affect, internalization of socio-cultural attitudes towards appearance, and eating problems among adults (see Table 1). Correlation analysis provides basis for predictions and further high order analyses. There was a significant positive correlation among Eating Problems calculated by Eating Disorder Examination and its four domains that is Shape Concern, Restraint, Eating Concern and Weight Concern. Similarly, there was a significant positive correlation between Socio-Cultural Attitudes Towards Appearance and its five domains that is Pressure From Family, Pressure From Media, Thin Body Fat, and Muscular. Thus, it confirmed the construct validity of respective scales (see Table 1) (Schaefer et al., 2013).

On the basis of previous literature, it was proposed in Hypothesis 1 that increased social media use increases eating problems. Findings of the present research also confirm the research Hypothesis 1. According to previous studies, people who use more social media are exposed to more photos and messages which pose a danger to eating problems.

Certain social media platforms such as Instagram, Snapchat, Pinterest and Tumblr have a better visual focus to share and view photos and videos. Accommodating 53 % of online adults between 18 and 29 years use Instagram and 49 % of Instagram users use this site every day, according to the Pew Research Center (2014). Studies indicate that People using Facebook compare it to those who can contribute to body issues. This could contribute to unreasonable beauty requirements for users. Qutteina, Nasrallah, Kimmel, and Khaled, (2019) have found that intense (hourly) use of social networks by young women is positively and significantly related to disordered eating patterns, independently of established predictors such as body shapes and social support.

Hypothesis 2 of the study stated that internalization of socio-cultural attitudes towards appearance was positively associated with eating problems. The results of the correlation analysis support this hypothesis showed that as the internalization of socio-cultural attitudes towards appearance increases (pressure from family, pressure from peers, and pressure from media, thin body fat, and muscular,) eating problems also increases. Du (2015) has confirmed in his analysis that comparison of appearance was specifically and positively linked to eating disorder, indicating a greater risk for disordered eating behavior in individuals with a tendency to compare their physical appearance. Grabe et al. (2008) indicate that higher rates of girls' and women's body distress and eating disorder symptoms are associated with higher exposures to fashion magazines or TV shows a thin body ideal. Bailey and Ricciardelli (2010) suggest that American women tend to have more upwards and fewer downwards associations as they face interference from social influence such as their families, peers and the media; this tendency is predictive of higher body dissatisfaction and eating problems.

The relation of anorexia nervosa to depression was shown by Kaiser, Syed, and Qazi (2007), which explained the potential for anorexia nervosa as a clinical condition of depression. The findings are consistent with how depression and the body type have been linked with the prevalence of eating disorder in Pakistan (Suhail, 2002). Suhail (2002) also investigated the type of the body and attitudes to

eat among postgraduate women and found that these variables are linked positively. Riaz and Iqbal (2008) found a positive association with self-esteem between disturbed body image and disordered eating between adults. The relation between affection and the opposite sex and the positive body image in adults has been studied by Muneer (2006). In comparison, the findings reveal that male respondents had an extra positive body image and self-attitude than female participants. This shows that previous studies support that the current study hypothesis that men have more internalization of muscular body ideal of socio-cultural attitudes towards appearance than women.

Ain (2015) identified elevated levels of disorderly eating behavior among young adults with stereotypical gender roles. Research from Haworth-Hoeppner (2000) has demonstrated that no socio-cultural force has influenced eating disorders but is correlated with a variety of contexts, for example, vital families, parental control and weight expression. Table 1 also shows that the subscale of SNS that is Negative Affect has significant positive relationship with Eating Disorder Examination (i.e., Shape Concern, Weight Concern, Restraint, and Eating Concern) and Socio-Cultural Attitudes towards Appearance (i.e., Pressure from Family, Pressure from Peers, Thin Body Fat, Muscular, and Pressure from Media). According to the findings of Hawkins, Richards, Granley and Stein (2004) an increasingly depressive mood condition of women subject to thin-ideal images is consistent with the fact that thin-ideal media consumption often results in negative affect in women. The study had showed that the risk of eating and body image issues was 2.2 times higher for participants who have spent the most time in social media all day, and 2.6 times higher rates for those who have spent the most time monitoring social media over the entire week (published in ABC news, 2016). This means that when the social media has negative impact on mood, risk of eating and body related issues increases. Similarly, the subscales of SNS use that is Positive Affect has significantly negative relationship with Eating Disorder Examination (i.e., Shape Concern, Weight Concern, Restraint, and Eating Concern) and Socio-Cultural Attitudes towards Appearance (i.e., Pressure from

Family, Pressure from Peers, Thin Body Fat, Muscular, and Pressure from Media).

Previous findings have shown that media attention to body displeasure; thin-ideal internalization and disordered eating have been related positively (Thomsen, 2002). This may lead to weight problems, and then restrictive eating and exercise. This correlation in Western cultures had been supported by studies that indicate that American women appear to be having more upward comparison and less downward when they experience external pressure from the families, peers and media; this pattern expected higher bodily discomfort and food disruption (Bailey & Ricciardelli, 2010).

Predictors of Eating Problems

Stepwise multiple regressions were computed to find the significant predictor of eating problems. Table 2 showed for eating problems in Model 1 thin body fat is predicting with variance 26% eating problems that were as concern for thin body fat increases eating problems also increases. In Model 2, pressure from family appear with 5% added unique variance, and in Model 3, pressure from media contributed with 1% unique variances with significant positive predictive values. That was after concern about body fat, pressure from family then from media were perceived as having significant role in eating problems of the participants of the study.

The internalization of thin expectations could affect the body image and many researches have revealed that people with elevated levels of internalization reported greater physical inconsistency, dissatisfaction with their image and compulsion to slimming. In comparison, this effect in people with elevated levels of BMI was even greater (Forbes, Domaszewicz, Card, & Adam-Curtis, 2004). Dual path model (Stice, 2002) indicates that women are internalizing thin ideal norms due to peer pressure and the exposure of society to the western standards as a whole. It can lead to body discomfort, so a person starts checking his diet and develops poor eating habits. Previous researches have revealed that parents play an important part in defining and promoting their child's look and picture (McCabe & Ricciardelli, 2003). Furthermore, kids can associate beautiful appearance with approval and attractiveness to rejection if the affection of their

parents is conditional upon how they look (Elliot & Thrash, 2004).

Although parenting effect has been described as an important source of social-cultural values and attitudes in relation to boys and girls beauty (McCabe & Ricciardelli, 2003). Several reports have shown that parents have a bigger effect on girls' beauty with respect to boys. In comparison with boys for example, girls are much more told by their parents about diet and weight and in turn details larger worries about the body figure (Phares et al., 2004). In the current study, boys had demonstrated more internalization of socio-cultural attitudes towards appearance like pressure from family, pressure from peers, thin body fat, muscular, and pressure from media as compared to girls. Although, men who filled complete questionnaires are less in number but having concerns related body shape and weight more, that is why, they may be interested in survey to share their personal experiences. Men also stated on average that their actual bodies are much less muscular than their ideal bodies. On average men often believe themselves to be more muscular than the normal man, indicating either that some men overestimate their muscularity or they are more muscular than others.

The media play a powerful part in influencing the look and feeling of people and their bodies (Levine & Smolak, 2006). The media not only afford details regarding the importance of the ideals of look, but also can lead people to internalize the ideals of appearance and to pressure them to meet these ideals. In reality, evidence indicates that media internalization of the extent to which people identify and indulge in behaviors that meet social beauty expectations is a core indicator of physical disappointment and disorderly eating (Thompson & Stice, 2001). For example, Thompson and Cafri (2007) illustrate that the media can gradually been a source of valuable ideas and views towards boys and girls. Most studies have found that there tend to be more consistent correlations between media impact and girls' issues (Groesz et al., 2002).

Group Differences across Study Variables

Gender differences.

It was proposed in Hypothesis that men demonstrate more internalization of socio-cultural attitudes

towards appearance as compared to women. The results of independent t-test analysis revealed that the men showed more internalization of socio-cultural attitudes towards appearance as compared to women (see Table 3). Men have more internalization of muscular body ideal of socio-cultural attitudes towards appearance than women. Although men who filled complete questionnaires are less in number but having concerns related body shape and weight more that was why interested in survey.

In Previous literature, men are more attracted towards muscular bodies. In the last few decades, however, the ideal male body has also attracted attention. Nowadays, therefore, men are also confronted with an ideal body that is difficult to achieve. Accordingly, various studies have found that men, like women, feel greater dissatisfaction when they are confronted with ideal body stimuli of their own sex (Grabe et al., 2008). Previous researches indicate that, many men reported desiring increased muscularity for reasons related to being more effective in competition with other men. For instance, men wanted to be more muscular in order to be better fighters, to defend themselves, to be better at sports, and to intimidate other males. Also as expected, men desired increased muscularity in order to be attractive to women, and they believed that women prefer men who are more muscular than average (Frederick, Buchanan, Sadehgi-Azar, Peplau, Haselton, Berezovskaya, & Lipinski, 2007). Another socio-cultural attitude that affects male body image beliefs is the social pressure and the connection of muscularity and masculinity. This association generates a major link between the body image of a man and his sense of self (Mishkind, Rodin, & Silberstein, 1986). Consequently, men who struggle to attain a muscular body shape are vulnerable and frequently experience anxiety and high levels of disappointment with the picture of the body (Gillet & White, 1992). Increased body image issues and ideal male body tension among gay and bisexual men are closely associated with minority stress factors such as internalized homophobia and physical anti-gay assault (Kimmel & Mahalik, 2005).

Conclusion

Findings of the present study reveal that social media use and related affect, internalization of socio-

cultural attitudes towards appearance, and eating problems among adults, are positively related with each other. Muscular, thin body fat, pressure from peers, pressure from family, and pressure from media (domains of socio-cultural attitudes towards appearance) are the significant predictor of eating problems and its domains; shape concern, restraint, eating concern and weight concern, while pressure from media appeared as significant predictor of eating problems only. The domains of internalization of socio-cultural attitudes towards appearance that is pressure from peers and muscular did not appear as significant predictors of eating problems. Gender also plays a significant role in internalization of socio cultural attitudes towards appearance as surprisingly boys demonstrated more as compared to girls, while non-significant difference appeared on eating problems.

Limitations and Suggestions

As all scientific research, there are certain weaknesses in current study. Hence, prior to interpreting the results of current study subsequent limitations must be considered which are discussed for future studies.

- Data is collected online through Google form as a result sample is not true representative of population. Thus, putting bound on the generalization of the result. Gender distribution is also not equal for this very reason. Hence, findings are not generalizable.
- The data size is small hence; to increase external validity, large and data from diverse settings can be included.
- Present study research is correlational and social desirability is not controlled which can affect the findings of the study, therefore, it should be considered in future research.
- Instruments in English version were used in the present study, In future; Urdu versions of measures could be used to access more diverse sample.
- Self-report measures were used for data collection; it may be possible that participants may have not reported accurately because of social desirability. Therefore, multi-informant data or qualitative techniques of data collection could also be taken in future studies.
- Questionnaire booklet is lengthy and time consuming; boredom may have also effected the

findings of present research. So, short version of the instruments can be used in the future.

- Mediation and moderation analysis are not done as not allowed as per existing rule for MSc level research. This can be done in future research.

Implications

On the basis of findings following are a few theoretical and practical implications of present research.

- This study will be helpful for research purposes as it will add to the existing knowledge of the variables being studied and signify the role of social media and related affect in eating problems and internalization of socio cultural standards for appearance. The results of the current research can be utilized for future exploration and learning practice.
- Adults may compare themselves along standards of appearance as propagated by family, peers, media, thin body ideal, etc. and develop eating problems. Family's, peers', and media's role were found significant in eating problems, in current study. It suggests to psycho-educate people about significance of internalizations of such messages in developing mental health problems later and guide them in using positive coping strategies to combat issue of internalization.
- Awareness programs about appearance related messages and their internalization can be launched in school setting for better upbringing in upcoming generation to control such messages at their end which effect other's lives.
- This study will help find variables or constructs to target in prevention and intervention strategies to reduce and manage eating problems. Likewise, recent study findings would be useful in controlling social networking sites among students in academia for administration along with public and private university authorities.

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