

PAKISTAN BIOMEDICAL JOURNAL

https://www.pakistanbmj.com/journal/index.php/pbmj/index Volume 5, Issue 3 (March 2022)



Systematic Review

Increase in Body Dysmorphia and Eating Disorders Among Adolescents Due to Social Media

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ARTICLE INFO

Key Words:

Social media, body dysmorphia, anorexia, disorder, eating disorder, bulimia nervosa, depression, dissatisfaction, body image, behavior **How to Cite:**

Rizwan, B. ., Zaki, M. ., Javaid, S. ., Jabeen, Z. ., Mehmood, M. ., Riaz, M. ., Maqbool, L. ., & Omar , H. . (2022). Increase in body dysmorphia and eating disorders among adolescents due to social media: Increase In Body Dysmorphia and Eating Disorders Among Adolescents. Pakistan BioMedical Journal, 5(3). https://doi.org/10.54393/pbmj.v5i3.205

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ABSTRACT

In this review, an analysis of the studies pertaining to the role of social media in body dissatisfaction eventually leading to body dysmorphia and eating disorders was conducted. Objective: The aim was to review how social media creates the urge of attaining unrealistic body images which is impossible in real life but possible in real-life. Methods: Different search mediums including PubMed, Science direct, and Google Scholar were used in order to find out the effects of social media in influencing body dissatisfaction. The inclusion criteria were based on the selection of research articles from 2014-2021 which correlated social media with eating disorders & body dysmorphia. Additionally, the articles that were not original researches, abstract only and not in English were excluded. After exclusion of irrelevant sources, duplicated article, abstract only& articles published before 2014, Total 25 articles were selected for the purpose of a systematic review. Result: As per this systematic review, body dysmorphia & eating disorders were related to high levels of social media addiction. Moreover, how much social media has negatively impacted both the physical health of young adults, especially in regards to disordered eating patterns as well as mental health. Social comparison in order to attain unrealistic images on social media results in body dysmorphia and body dissatisfaction. Conclusion: By reviewing different studies and finding out the effects of social media on body dysmorphia it is revealed that social media can highly influence various types of eating disorders like anorexia nervosa, bulimia nervosa, and binge eating disorders.

INTRODUCTION

Body dysmorphia is a mental health problem in which the patient perceives a slight or small defect in appearance that is not even observed by individuals. The patient feels so embarrassed about that small flaw that social situations are even avoided. It is often recognized in some patients who come to the plastic surgeon requesting for multiple cosmetic surgeries. Patients of body dysmorphia may wish for amputation of healthy limbs. Checking of mirror repeatedly, seeking reassurance, seeing people's glances in a negative way thinking that they are noticing your flaws, comparing your appearance with others are some symptoms of body dysmorphia [1]. Two disorders that centers around body image issues as the pivotal clinical features, are eating disorders and body dysmorphia. However, patients suffering from eating disorders are mostly concerned with the body type whereas body dysmorphia causes a variety of different self-esteem issues regarding appearance and patients to give themselves harsher evaluation and generally have more complaints and dissatisfaction. Two diseases, however, are both extremely severe when it comes to body image and present symptoms that are much more serious than normal. In addition to that, while both disorders depict cases with low self-esteem, body dysmorphia presents more psychological symptoms[2]. Eating disorders can occur in patients with body dysmorphia, in fact it is quite common. Patients that suffer from both, body dysmorphia and eating disorders, receive more psychological treatments than the ones that only suffer from eating disorder [3]. Thus, eating illnesses don't only refer to "gender or appearance" but it's also a coping strategy surely traumas like racism, heterosexism, poverty, sexual offense, and classism". Researchers must also effort on the inter collectedness of gender, ethnicity, education

level, sensual orientation, socio-economic status and aptitude which are commonly seen as separate factors in involving a combination of cultural and social demographic variables [4]. The relation between exposure to an unattainable and unrealistic image on social media and how it affects the ethnicity of Latina girls should also be considered by researchers. The use of social media as a form of precaution, researchers can be encouraged to take part in content analysis to visually check every day content to monitor Latina girl's exposure while being online [5].Social media Programs that will propose sociocultural pressure on Latina adults cause them to adopt thin ideals, leading to dieting, body dissatisfaction, and lots of other adverse effects, hence increasing eating-disorder risks. Clinicians should integrate culture-specific and familybased modes of intervention. Therefore, the risk of dysfunctional eating of Latina women should be minimized. It's vital to grasp that some risk factors will contribute to body dissatisfaction and eating disorders in Latina women, which isn't acceptable by their family [5].

METHODS

Protocol & Registration: Systematic review of this study was reported and conducted in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A pre-published protocol (PROSPERO CRD42017065324) was used in it.

Search Strategy & Data Sources: Pub med, Embase, Scopus, Science direct, Cochrane Library, Directory of Open Access Journal, Medline, Medline plus, Science open, Open DOAR, Biomed Central, PLOS Public Library of Science, Web of Science, ISTOR, Semantic Scholar, Europe PMC, SID (scientific information data base). Research articles from the year 2014 to 2021 were selected.

Data Extraction and analysis: Research articles were selected from researches done on the social media's impact on eating disorders and body dissatisfaction and data was extracted from them. 500 articles were initially selected from various data bases. 250 of them were excluded as they were duplicates additionally 150 articles were excluded because they were published prior to 2014 or that they weren't in English. 50 articles from the remaining were further excluded as they were meta- analysis, reviews, abstracts only or that the subjects of the study weren't age appropriate according to this systematic review. The 25 articles that remained were included in this systematic review. Inclusion Criteria was Articles from the year 2014-2021 and the articles which correlated social media with eating disorders and body dysmorphia. Exclusion Criteria was the articles published prior to 2014, Review articles, meta-analysis, articles that weren't accessible beyond the abstract and the articles that were not in English language.

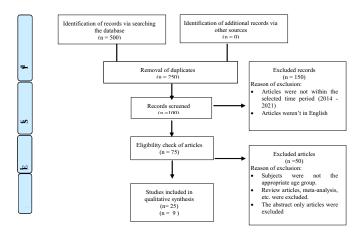


Figure 2: PRIMA flowcharts for study selection

RESULTS

The data collected as demonstrated in following tables depicts a clear co-relation between social media and boy dysmorphia/ eating disorders. The 25 articles that were chosen for the purposes of the review, through a myriad of ways established that social media and its growing influence on the society especially amongst youth in different population is a pivotal catalyst in the formation of body dissatisfaction, unhealthy ideals and eventually seriously detrimental eating disorders.

| Study Design | Study Population | Study Duratio n | Body Image/Eating Disorder Measure | Evidence Based Research Studies | Outcomes/ Results |
|--|--|---|--|--|--|
| Ecological momentary assessment [6] | 30 college going women. Mean age:18.52 years | Five days | Body dissatisfaction | Asses the result ofsocial media consumption on body disappointment. | The amount of social media site: stayed was an important interpreter of body disappointment although time spent using social media was not |
| Cross sectional study design [7] | Age ranges from 18 to 78 years. | 4 consec utive days for 1 month | Body dislike and eating disorder symptoms, height and body fat disappointment. | To assess the relationship between body dissatisfaction and social media. | Positive co-relation between the intake of anabolic steroids and disordered eating and the use of social media was discovered. |
| Snowball sampling method[8] | 208,063 twitter users | 1.5 year | Eating disorder and personal emotions. | To estimation the determining factor of dropout while addressing the endogeneity issues by via an instrumental adjustable approach in an online ED public. | Estimations results suggests the user's reactions and system significances have effects on the dropout performances on Twitte |
| Experimental study design [9] | 112 female from the age of 17 to 25 years. | 1 month | Negative mood, weight and shape discrepancy. | To investigate the result of Facebooks tradition on ladies' body image and attitude. | Members who spent time on regulator websites have better mood than women who consume more time on Fæebook. |
| Quantitative, descriptive and cross sectional stud design [101] | 337 women between the age of 15 and 30 year. | 4 months | Eating disorder | To examine the relationship between the risk of the use of community networks and eating disorder. | Entire of 143 cases with a risk of Eating Disorders were recognized |
| 639 Individuals Younger adults[11] | About:639 Individuals Younger adults | 1 year | Eating disappointment | Examiningspread of illness globally. | Internet is playing an important role on betterment of eating disorders |
| Survey Based Study[12] | Adolescents | 1 day | Hunger Malnourishment | Examining the clear factors related to food insecurity. | Adolescents who were not in the school have increase number of food insecurity |
| Cross- sectional study[13] | 1765 early grownups ages 19 32 years, of age. | One month | bulimia nervosa, anorexia nervosa, binge eating disorder . | Inspect relations between social media use, and eating concerns. | There were important positive general direct links between the social media use variables and eating concerns. |
| Sampling Study[14] | An over-all of 268 sexual underground young people and mature men, extending from fourteen to thirty five years old | Two to four months | Body dysmorphic illness, Body disappointment, Minority pressure, Sexual minority | Inspect relations between minority stressors and body dysmorphia. | Higher incidence of body dysmorphia in sexual minority men. |
| qualitative, correlational and experimental studies[15] | Studies were mainly conducted among children / adolescents | 6- 7month s | Pro-eating Disorders | Investigative the connection among the usage of social media ,Internet and eating concerns, body image. | 67 empirical studies discovering the bond among the body image eating concerns and Internet. |

| observationa I quantitative and qualitative studies[16] | Young adulthood (18-30 years) | 4 years | Calorie counting, self induced nausea fasting, and binge eating. | To assessed the influence in healthy young adults. And body image of habitual social media appointment or contact to image-related contented on food choices. | Social media appointment was related with selecting healthy foods, dieting/restricting food, et too much, and high body displeasure. |
|---|---|--|---|---|---|
| Cross sectional study[17] | approximately 79% of adults | 11 months | Fitspiration Thinspiration Body image Disordered eating | Compare Thinspiration n Fitspiration groups on Twitter. | Exposure of twitter user to such tweets lead to disordered eating |
| Data analysis [18] | Teenagers aged between 14 and 18 years, by sexual category. Girls 15.6% and boys 15.7% | | eating disorders; body dissatisfaction | To examine the effect of the social media on body dissatisfaction Eating disorders and body displeasure in adolescents. relating genders. | As a result, we find The consequence of the body mass index and social media are predictors of body displeasure ir both sexual category; and Body Displeasure is an interpreter of Eating Disorder risk in both girls and boys. |
| Sampling Study[19] | About 128 undergraduate students both Men and women | 1 Week | Thinspiration And Fitspiration | Inspect fitspiration and thinspiration in everyday lives of females and men. | The body satisfaction was highe than that of bad affect and positive affect signifying body fulfillment maybe more stable crossways time. |
| Present Study[20] | Sample of Adolescence. Age: 6-11 About 523 students. | 1 day | Overweight And Underweight | Use of community media is connected to body image concerns and poor emotional health in youth. | Female had higher body Concerns and Internalizing problems even afte counting body image worries. |
| Empirical Study[5] | College aged women with Instagram account. About 187 people. Age:19-24 | 1 day | Low self-esteem and Poor body image. | The relationship between social media use and body dissatisfaction. | Social media is a contibuting factor to almost every componer of young people's lives. |
| Present Study[4] | Premedical Students: 186 Mean age: 16-18 years | 1 day | Body Dysmorphia | Body dysmorphic between youths and young grown-ups | There is an increasing urgency o body dysmorphia in young people |
| Experimental Ecological Momentary Design[21] | 85 women | Six times daily for seven days | Disordered eating And Body dissatisfaction. | Belongings of temper, eating disorder and fitspiration pictures on body appearance. | There were m important effects on disordered eating or mood. |
| Content Analysis And Network Analysis[22] | Data set of Users: 3029 | 3 years | Social structure And communication patternresearch in eating disorders | Communal media plays an indispensable role in daily life of young people. | Recognized nine topics connecte to eating sickness specific content and communal support |
| Cross- sectional study[23] | 147 young adult university students | 3 months | Self-esteem, social networking sites, youth, eating behaviors. | Analysis of issues pertaining body image and existing eating disorders that are being aggravated by social media. | Most young adults are exposed to unhealthy beauty standards that affects their body image and self esteem issues which might lead t eating disorders. |
| Cross- sectional study[24] | 118 women in USA between the ages of 18 to 64 years | 6 years | Social assessment theory. Women's media use and body | Social media's contribution in the rise of women comparing themselves and dealing with body image problems | It was seen that those women wh regularly follow and show interes in fitness related content on Pinterest, followed a much strict dietary regime. |
| Thematic analysis[25] | 706 posts from twitter (353) and Tumblr (356) were considered | 3 months | Eating disorder ,anorexia, bulimia ,thinspiration. | Eating disorders prevalent in twitter and Tumblr users | pro anorexia related content was clearly visible on twitter |
| Snowball sampling method[26] | 252,970 tweets were taken into consideration 220 female | 2 weeks | Eating disorder: anorexia, bulimia, binge eating | Eating disorders prevalent in twitter users | Increased interaction between twitter users with the same eatin disorder. |
| Experimental design[27] Cross- | 220 female undergraduate students 168 female | 2 years | Body dissatisfaction Eating behavior | Eating disorders prevalent in social media users Establishing a link | Thin ideal images were seen to be a major contribution factor in increased body dissatisfaction About 93% of all subjects were in |
| sectional study[28] | students between | IIIOIIII | Lating benavior | between low self- | some shape or form not satisfied with their bodies. |

Table 1: Summary of literature review

DISCUSSION

This review is to establish the potentially detrimental effect social media can have on the youth in regards to body image dissatisfaction also how it eventually leads to disordered eating and body dysmorphia. Twenty-five research studies were selected and the data they provided was analyzed in order to understand the extent to which this problem exists and how social media is directly contributing to eating disorders/body dissatisfaction across different demographics. While most of the studies that were taken into account proved that social media indeed have a direct relation in body dissatisfaction and can lead to sever consequences, different methods and demographics were used across these studies to derive this common conclusion. The most commonly used method was crosssectional study, which was employed in 9 of the 25 selected studies. The purpose of this type of research design to ask the subjects about their perspective and figure out the root of the problem and to get a clear idea about the extent of the issue. In aforementioned studies the subjects were often young and therefore more likely to be exposed to

social media and influenced by it. This type of studies can be also done in large population therefore giving a wide array of explanations about the ways of how social media exposure directly correlates with body image issues. Other common type of study designs used was experimental study and snowball study which brought a much-needed diversity in the types of research methods for this issue. Griffiths et al, 2018, Oshana et al, 2020 dealt with body image issue in sexual minority men due to social media. It was discovered by both that men of alternate sexuality are more at risk of developing body image problems leading to body dysmorphic and eating disorders as compared to heteronormative men. The increased use of anabolic steroids due to social media influence was also observed [7,14]. Similarly, women present an increased risk of facing bodily image issues as eight of the studies chosen, selected women as their prime subjects. As seen in Bennet 2019, Fardouly 2014, Restrepo 2018, Wayles 2020 amongst others, women who spent more time on social media across multiple platforms such as Facebook, Instagram, Pinterest etc., were more likely to develop body image concerns or some type of dissatisfaction with one's self [6,9]. Young adults and adolescents were also the majority demographics of the selected studies suggesting that younger demographic is shown to be more affected by social networking and the health concerns it presents. Fourteen of the selected studies chose young people as their subjects while 11 studies chose subjects from varied age groups including adolescents and young adults. Bennet 2019, Fardouly 2014, Restrepro 2018, Ioannidis 2021, etc., established firm relationship between use of social networking and the rise of bodily image concerns the youth of today face [6,9,10,11]. Studies like Wang 2019, Wayles 2020, Branley 2017, etc. examined posts from across different social media websites including Instagram, Twitter, Tumblr, Facebook etc. to discover that many of these platforms host groups or pages that support pro anorexic lifestyle and influence users of these platforms to engage in disordered eating [8,21,4]. Another common thread seen being promoted on social media with similar repercussions is 'Thinspiration' which promotes rapid and unhealthy weight loss by demonstrating 'success stories' and give the impression of 'ideal' body. This type of 'inspiring' content creates insecurity amongst the users about their body and figure even when they are perfectly healthy [19,27]. A subset of 'thinspiration' is 'fitspiration' which similarly portrays muscular and bulky body type as easily achievable and desirable. Without proper knowledge of healthy weight loss or muscle gain, users try to achieve this by using short cuts of disorder eating such as starvation and induced vomiting. As well as indulging in products like 'detox' tea and diet pills which are just

laxatives and anabolic steroids which can cause severe liver and kidney problems [15]. After analyzing the data of the aforementioned twenty-five research studies there is no doubt that social media does indeed contribute a great deal in the development of body image concerns that can lead to eating disorders and body dysmorphia. Women and young adults, it appears, are the demographics most affected and eating disorders being the most common outcome of dangerous body ideals set by social media.

CONCLUSIONS

In teenagers especially, Anorexia Nervosa (17%), Bulimia Nervosa(2%) and Binge Eating Disorder (2%) are among the most common Eating Disorder types that lead to body dysmorphia. Some cross-sectional studies conclude that almost 93% of men and women are dissatisfied with their body type which is somehow connected to social media addiction. People compare themselves with others having unattainable or unrealistic images on social media, which creates a feeling of unhappiness.

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