Social media leads to eating disorders and response strategies

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Abstract. With the increasing convenience that social media provides for people, its negative effects are becoming more prominent. The issue of eating disorders caused by social media is becoming more apparent. This article reviews past research and finds that social media causes people to have eating disorders through inducing appearance anxiety and low self-esteem, among other factors. It has been found that effective ways to alleviate the negative impact of social media on eating disorders include improving media literacy, changing people's acceptance of appearance, developing positive body image, and planning social media content. Through this review, a theoretical foundation has been established for future efforts to improve the openness of social media and change its negative impact on people.

Keywords: Eating disorders, Social media, Appearance, low self-esteem.

1. Introduction

Eating disorders (EDs) affect people worldwide with attributes of abnormal eating habits and specific psychopathological symptoms and appears more frequently in younger women. According to the American Psychiatric Association, the category of EDs include anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED), pica, rumination disorder, avoidant/ restrictive food intake disorder (ARFID), other specified feeding or eating disorders (OSFED) and unspecified feeding or eating disorder (UFED; American Psychiatric Association, 2013). EDs are prevalent globally, with incidence at 8.4% for females and 2.2% for males, respectively. Furthermore, a 7.8% increase in EDs Overall was reported for the period 2013-2018 (Frieiro et al., 2022), as well as increases among younger ages. While genetic vulnerability plays a crucial role in the development of eating disorders, the social environment's influence is also important (Guarda, 2022), including the influence of social media and the Internet.

Social network sites, such as Facebook, Twitter, and Instagram, are used by most adults as well as teenagers, with at least 200 million American users (Marks et al., 2020). A large number of users on social network sites have allowed the mighty transmission of information. Big data behind social network sites can personalize the information provided for the users by grabbing keywords in the search history and Browsing time. The emergence of short-form videos, overly exaggerated content, and autoplay of the next video relieves ennui, making users feel it is more difficult to exit the sites. Moreover, the COVID-19 pandemic has greatly restricted the in-person activities people used to engage in before, and therefore further augments the time people spend on social network sites. Though social networks offer the convenience of finding peers with similar interests, providing unlimited advice for various users, and enabling communication of different groups, increasing social network usage may negatively impact people's emotions and health. It can also cause social isolation. Several studies have demonstrated that intensive use of social media promotes disordered eating attitudes and behaviors (Frieiro et al., 2022). Eating disorders last for long periods and co-occur with poor mental and physical health conditions (Lonergan et al., 2020). Social media may influence eating disorders in several ways: (1) Marketing and advertising: Social media advertising and marketing can make unhealthy diets and weight loss products seem appealing and necessary, which may lead people to unreasonably change their eating and health habits. (2)Imitation and comparison: Social media is full of posts and photos about diets and body image, and people may influence their own diet choices and body image perceptions through imitation and comparison.(3)Information overload: Social media is flooded with health and diet information, some of which may be inaccurate or misleading, which may confuse and uncertain people and influence their dietary choices.(4)Social pressure: There are

many posts and comments on social media about body image and appearance, which can cause social pressure and anxiety and lead people to adopt unhealthy dietary practices.

2. Mantext

The impact of social media on eating disorders has attracted widespread attention from academia and society, and several studies have been conducted and analyzed. Some studies have shown a positive correlation between social media use and eating disorders. For example, a study found that more frequent use of social media was associated with a higher risk of eating disorders. In addition, some studies have found that frequent viewing of posts and content about health, diet, and weight loss is associated with an increased risk of eating disorders. Other studies have focused on the mechanisms of social media influence on eating perceptions and behaviors. For example, a study of women aged 18-35 years found that the influence of social media on eating perceptions and behaviors was achieved primarily through attention to and comparison of body image and body shape. In addition, some studies have found that social media advertising and marketing may also promote unhealthy eating behaviors by creating body dissatisfaction and anxiety in people. In summary, the impact of social media on eating disorders is complex and diverse, and further research is needed to better understand the mechanisms and influences. To prevent and treat eating disorders, we need to educate people on the proper use of social media, encourage healthy eating and lifestyles, and provide professional psychological support and treatment services.

Therefore, it is imperative to analyze the relationship between social media and eating disorders and to offer interventions to prevent further harm. The objective of this essay is to demonstrate how social media can contribute to the risk factors of eating disorders, including negative body image, low self-esteem, and feelings of self-dissatisfaction. A number of interventions will also be discussed, including media literacy, increasing body acceptance, developing a positive body image, and curating social media.

Social media causes eating disorders by internalizing body image messages

A considerable number of studies indicates that social media engagement is associated with negative body image (Marks et.al, 2020). While engaging in social media, a continuous flow of personalized information can reinforce, even unconsciously, the internalization of a thin body image. Messages about body ideals may be internalized through interactions with friends, and the media (Marks et.al, 2020). An individual's body image refers to how the person perceives, thinks, and feels about the way they look. Social media has been shown to predict negative body image (Vandenbosch et al., 2022), which could lead to the development of eating disorders. Social media messages further stress thin body standards, self-objectification, and deepens body image concerns. The thin ideal is still the mainstream appreciation of beauty and sometimes accompanies excessive exercise behaviors. There has been a substantial body of evidence that suggests exposure to "thinspiration" content is detrimental to body image in several correlational and experimental studies (Marks et al., 2020). The objectification theory was first proposed by Fredrickson and Roberts (1997). In self-objectification, women are taught to internalize the viewpoint of an observer as their primary perspective on their physical appearance. As a result of this perspective on self, habitual body monitoring can lead to a variety of mental health risks, such as eating disorders (Fredrickson & Roberts, 1997). Social media allows the visualization of thin body standards and further deepens women's self-objectification.

Dietary disorders refer to the situation where the dietary behavior of the individual does not match physical health. There are many factors that affect dietary disorders, including but not limited to the following aspects: (1) Biological factors: including the physiological conditions of the body, genes, hormones, and metabolic rates. For example, some diseases (such as thyroid diseases, diabetes, etc.) will affect the metabolism of the body, causing dietary disorders. (2) Psychological factors: including factors such as stress, anxiety, depression, inferiority, and self -evaluation. Some people may relieve their emotions by eating, or cause loss of appetite or overeating due to excessive psychological pressure. (3) Environmental factors: Including food accessibility, nutritional value, food culture, food

advertising and other factors. For example, individuals may increase food because of the seductive food temptation in the surrounding environment, or because the socio -economic conditions they live are poor, they cause insufficient foods with insufficient nutrition. (4) Social and cultural factors: Including cultural traditions, family education, media influence, circle of friends. For example, some cultures may emphasize a plump figure more beautiful, which prompts individuals to increase the amount of food intake; while certain social platforms may use the thin body standards, resulting in a restricted diet.

While early research focused only on overall time spent on social media, a growing body of research indicates that appearance-based activities are more important than total time spent. Excessive use of social media may cause physical problems, such as eye fatigue, cervical pain, obesity, etc. This is caused by staring at the screen for a long time, causing eye fatigue, improper head posture, causing pain in cervical spine, and sedentary caused by obesity. In addition, social media use may affect people's sleep quality. Studies have shown that using social media at night will cause people to fall asleep, and will destroy sleep quality, making people feel fatigue and weak the next day. In addition to physical problems, social media use may also have a negative impact on mental health. Some studies have found that excessive use of social media will increase loneliness and depression symptoms, reduce self -esteem and happiness. This may be because social media use can cause people to be disconnected from the real world. Too much attention to the virtual world and the lives of others, making them lose contact with the people and things around.Cross-sectional research has revealed that engagement with photo-based social media sites, such as Instagram, is associated with poor body image and causes body image concern. A studies has demonstrated that posting selfies on social media negatively affects women's body image, including their perception of thinness, physical attraction, and body size attraction (Lonergan et al., 2020). A study conducted by Lonergan (2020) involved 5,075 Australian adolescents from 13 public and private schools. The male participants' age ranged from 12-18 years, and the female participants' age ranged from 11-19 years. The participants who identified their gender as "other" were excluded from the data. In the final sample of 4,209 participants, 21.6% met the criteria for at least one eating disorder, which was measured by the Eating Disorder Examination Questionnaire (EDE-Q). Moreover, an investigation was conducted to determine to what extent participants avoided posting selfies on social media; the extent of participants' effort in choosing a selfie to post to social media and monitoring responses to photos; the extent to which participants edited the selfies before posting them on social media; and the extent to which participants carefully checked the selfies of others, including comments and the number of "likes" themselves and other people received. According to the study, greater avoidance of posting selfies, investment in photos, manipulation of photos, and investment in others' selfies were associated with greater odds of meeting the criteria for all eating disorders. The findings confirmed that overvaluation potentially manifests behaviorally within a social media environment. For instance, avoidance of posting selfies could reflect body avoidance in real life that could further prevent objectively assessing their own bodies, which was typically observed as one symptom in anorexia and bulimia nervosa. Adolescents may take many selfies but avoid posting them on social media because they worry about negative feedback from others, which reflected weight and shape concerns in adolescents with eating disorders (Lonergan et al., 2020).

Social network involvement is also associated with increased social comparison, which could lead to people's dissatisfaction with their bodies. Social media allows people to acquaint trends around the world. The increased exposure of users makes individuals end up making upward comparisons with users worldwide, by which they consider themselves deficient, leading to self-dissatisfaction (Marks et al., 2020). For adolescent girls, the increasing use of social networking sites and posting photos on social media is associated with and most likely contributes to the development of risk factors for eating disorders, such as body dissatisfaction, internalization of thinness ideals, drive for thinness, and dietary restraint (Mclean et al., 2017). The pressures social media places on body dissatisfaction and disordered eating are unique due to its highly visual environment in which appearance ideals and the pursuit of thinness are promoted. The interactive feature of social

networking provides infinite chances for appearance comparisons and appearance-related interactions with peers.

There is a close relationship between low self-esteem and social media. include: If the individual's self-esteem is relatively low, seeing the beautiful life displayed by others may cause them to derogate themselves and have a sense of inferiority. In addition, there are various negative remarks, cyberbullying and other problems in social media, which can easily lead to injury of individual self-esteem. Individuals who are inferior to cyber violence may feel negative emotions such as inferiority, helplessness, and loneliness. And social relationships on social media may also affect individual self-esteem. For those who are social anxiety, social activities on social media may increase their sense of insecurity, causing them to have more doubts and self-denial of themselves. Eating disorders have also been associated with low self-esteem. Positive self-esteem helps young people to have better psychological adjustment. In addition, self-esteem may be associated with the forming of individuals' body image, which is a mediating factor for eating disorders. In a study conducted by Frieiro (2021), 721 Spanish students aged between 12-18 years old finished Eating Attitudes Test-26 to identify the symptoms of eating disorders and Rosenberg Self-Esteem Scale to identify their self-esteem. Participants with low self-esteem had more diet-related and food preoccupation problems, which suggests that self-esteem affects eating disorders.

To solve the influence of social media on body dissatisfaction, it is important to consider that social media often include appearance focus, peer comparisons, and online conversations about appearance. An intervention approach that combines media literacy and peer components for the social media context may offer an appropriate method for prevention. To improve critical thinking and skepticism about media, and to increase proficiency in constructing media, media literacy aims to reduce the persuasive influence of media. Critical thinking can help understand motivations for peers' and celebrities' postings. Peer approaches aim to reduce pressure to adhere to appearance ideals. After conducting investigations of the effectiveness of social media literacy intervention on 101 Australian adolescent girls by giving three 50-minute interactive lessons about challenges posed by social media, McLean finds that the self-esteem of intervention groups and their realism skepticism have improved significantly. Mclean (2017) suggests that a combined approach combining media literacy and peer influence can help address the appearance pressures that young people experience due to the unique context of social media in which peer interactions and a highly visual and readily accessible format are the main features. Body acceptance is a crucial element to have a positive body image. It consists of taking on a functional appreciation of one's body and filtering incoming messages about appearance in a protective way.

Numerous studies have demonstrated that body acceptance interventions enhance people's capacity to insist on positive health behaviors. A clinical trial that lasted for six months was conducted among 78 white female dieters whose ages ranged from 30 to 45 years old, and the results showed that the encouragement of size acceptance was associated with long-term positive changes in health (Marks et.al, 2020). An individual with a positive body image holds a positive view of themselves and respects their body and resist the pressure to internalize stereotyped perceptions of beauty imposed by society. Studies of adolescents have revealed that positive body image was associated with greater self-esteem, and body satisfaction, as well as less self-objectification and less thin-ideal body image internalization (Jankauskiene & Baceviciene, 2022).

Internet screening is another method of intervention. Based on Lonergan's (2020) findings, social media posts may be used to screen individuals for potential eating disorders and to provide them with assistance. Current research also presents that clinicians may consider the assessment of appearance-related social media behaviors in the maintenance of eating disorder symptoms among adolescents in treatment settings. Clinicians themselves may benefit from training to identify harmful social media behaviors (Lonergan et al., 2020). Although this method is currently proven to be valid, this requires a lot of labor costs and higher requirements for doctors. This requires doctors to have a deep understanding of the social environment, growth environment, and the cultural background of the case.

What's more, a pilot study has provided a new idea for interventions for eating disorders by curating individuals' social media content. With a sample of 140 eligible Australian university students aged 17-25 years old, the study asked the participants to receive psychoeducation in modules every week, considering the idealistic condition social media brought and social media's impact on mental health. Following the curation of social media, there was a significant reduction in appearance comparisons (de Valle &Wade, 2022).

3. Conclusion

In conclusion, the essay illustrates how social media influences the risk factors associated with eating disorders, such as negative body image, low self-esteem, and feelings of dissatisfaction with one's own appearance. This essay also presents interventions that include media literacy, body acceptance, developing a positive body image, and curating social media. After sorting out and summary of past research, we found that through the cooperation of force in various fields, the correlation between social media and dietary disorders and the reasons are basically clear. The essay mainly focuses on women and adolescents; however, social media also plays a role in influencing the eating disorder factors of queer men. What's more, the impact of "fitspiration" on factors of eating disorders, a new trend on social media, should also be introduced.

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