

The Influences of Social Media on Eating Disorder Risk

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Abstract. As a society, people are approaching an informational age, a period where people are in constant communication through various applications and platforms. One emerging tool is social media, an online platform that can be used to communicate, post information, share opinions, and document photos. As more people use social media, there are risks of misinformation and triggering content being spread. This phenomenon is beginning to affect its users' mental health, such as mood regulation and eating behaviors. Eating disorders are becoming more prevalent, especially in adolescents and teenagers. Researchers have conducted studies analyzing the influences social media has on users' mindsets and eating behaviors. They found that social media has contributed to the rise of eating disorders by fostering unhealthy peer comparisons, promoting an unhealthy ideal body, and normalizing disordered eating patterns. The content the users' view online affects their mental functioning and leaves them more susceptible to developing an eating disorder to achieve a societal standard at any cost. To combat this dilemma, psychologists have started focusing on social media usage related interventions to minimize the risk factors contributing to eating disorders. These interventions consist of social media literacy campaigns, raising awareness about the influence of social media, and developing a growth mindset. Changing the way the user uses social media is how psychologists are attempting to solve this issue. Future research should focus on long-term benefits of these interventions and continue focusing on ways to decrease the negative impacts of social media on individuals' mindset and behaviors.

Keywords: Eating Disorders; Social Media; Body Image; Social Media Literacy Intervention.

1. Introduction

Social media is defined as computer-mediated communication that allows people to interact virtually [1]. Social media offers a variety of functions for the users to experiment with, such as messaging, posting, tweeting, chatting, and more. Users also can "post" anonymously, making it easier for them to discuss controversial topics behind a screen. Eating disorders are severe mental illnesses that affect millions of people globally [2]. There are many subcategories of eating disorders, with the most common ones being anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED). Across the world, an estimated 9% of people have an eating disorder [3]. This rate is increasing rapidly, as in 2018, the prevalence was only 7.8% [4]. Similarly, the use of social media is rising as well, with 59.9% of the world's population utilizing the various sharing platforms [5]. With both these trends rising rapidly, it is important to understand the effects of social media on eating disorders. Understanding this phenomenon further is vital for developing prevention strategies regarding eating disorders, primarily in adolescents and teens.

Social media has both its benefits and its drawbacks. Bayer and his colleagues outline four main elements associated with social media: the profile, the network, the stream, and the message [1]. "The profile" refers to one's own self-perception and the way they portray themselves online which gives way to the problem of legitimacy. When given the ability to create an online profile, individuals can alter some details to make themselves their "ideal" version. "The network" describes the social aspect of social media, which connects individuals to others who share similar interests or live in the same area. This concept facilitates social capital, i.e., the interplay individuals obtain through social relationships and knowledge gained from other sources of information. The third element is "the stream" which describes the constant influx of posts and information displayed on a media platform. This widespread content, available at all times to users, enables more social comparisons and promotes jealousy among individuals. The last element, "the message", involves the process social

connectedness that allows people to communicate and feel closer across great distances. However, this process can bring a variety of problems, with the key issue being distraction. Too much messaging can lead to “messaging and connection overload” online, which either came as a result of or resulted in disconnectedness in real life. Social media changes and fluctuates with time and as more and more users join. It is the biggest issue researchers have when faced with psychological issues regarding social media: the platform content is never the same for each individual.

As people rely on social media more, disordered eating behaviors have risen multifold in the past few years. In a comprehensive review done by Schaumberg et al., they analyzed nine “truths” about eating disorders [2]. These truths refer to common phrases regarding the development of eating disorders and their treatments. EDs are not developed purposefully, rather they result from various biological, psychological, and social factors. They also often coincide with other mental disorders, such as OCD, which increase risk factors for developing disordered eating. Eating disorders also cause physical problems, ranging from milder digestive issues to severe cardiovascular problems and sometimes even death. Anorexia nervosa, a common eating disorder in adolescents and teenagers, has one of the highest morbidity rates for these ages’ groups out of all psychological disorders. EDs also have social impacts, where they can impair both intrapersonal and interpersonal functioning. Social relationships can be affected negatively by eating disorders and can also serve as a critical source of support during recovery. Treatment for eating disorders commonly include addressing all biopsychosocial aspects. This includes refeeding and weight restoration to replenish the body and cognitive behavioral therapy to address the underlying causes behind the eating disorder.

Social media affects many psychological and social processes, such as self-perception, social connections, access to constant information, and social communication. People are heavily influenced by the content they view online, and this can affect their thoughts and actions. Meanwhile, eating disorders are derived from biological, psychological, and social factors that work in turn to manifest as a mental illness in an individual. These disorders are best treated by addressing the mentalities behind the dysfunctional eating and restoring the patient to a healthy weight. Since social media has such large psychological and social influences, i.e., a defining cause behind eating disorders, there is a large possibility that social media has been contributing to the rise of eating disorders.

2. Social Media, Body Image, and Disordered Eating

2.1. The Effects of Different Social Media Exposures

Three popular social media apps (Facebook, Snapchat, and Instagram) have large influences on adolescent and teen lives and behavior. Due to this, they are also thought to have profound influence on the sociocultural risk factors in developing eating disorders. Determining the causes behind the high prevalence can better prevent the rise of eating disorders. A study done by Saunders and Eaton aimed to understand how these social media platforms might influence eating disorders through effects on body image and peer comparisons [6]. Participants completed questionnaires about their social networking site satisfactions and usage, body surveillance, social comparisons, body discontent, and eating pathology. The study’s findings showed that constant exposure to unrealistic photos and increased pressure to conform to beauty standards leads to body dissatisfaction. Peer comparisons exacerbated feelings of inferiority, low self-confidence, and still body dissatisfaction. Seeking validation through likes and comments reinforced these negative reactions. These all contributed to the development of disordered eating, due to social media platforms’ focus on appearance and peer behavior which led to more normalization of disordered eating. Thus, it is important to educate social media users on proper ways to effectively support body image positivity and raise mental health awareness in young women. As social media was found to be a crucial component in the development of eating disorders, more attention should be put on these platforms to reduce the spread of dangerous messages that can harm adolescents’ eating behavior and mental well-being. By identifying the unhealthy parts of social media that contribute to EDs, better prevention techniques can be developed to encompass this newer development.

Twitter, another popular social media platform in older individuals, features “tweets” for their users to discuss various topics and share their opinions. These tweets may seem harmless, but in fact, the thoughts behind them can still have large impacts on people’s thoughts and behaviors. Humans, social beings, are still easily influenced by other people’s opinions and ideas. To ascertain the effect of tweets on disordered eating behaviors, Cavazos-Rehg and her colleagues analyzed tweets related to eating disorder symptoms, specifically the desire to be skinny [7]. The researchers collected a random sample of 3000 tweets and assessed them for expressions of irregular eating behaviors to determine the psychological and sociocultural factors behind such expressions. The study results showed that most of the tweets expressed a strong preference to attain a “thin” body, often positively correlated with negative self-perception and disapproval of one’s current appearance. The most common themes present were found to be related to body dissatisfaction, self-criticism, peer comparisons, and the use of unhealthy weight loss strategies. These results indicate the need for awareness around the commonality of these symptoms and more immediate action to be taken to address this issue before it does more harm to individuals using the platform. As consistent with Saunders and Eaton’s study, addressing the unhealthy messages present on social media can help mitigate the negative effects contributing to the development of eating disorder.

Even though previous studies outlined the negative side of social media influence on eating disorders, there are still some positives that have been found. These positives, if amplified, could be beneficial to users who are struggling with disordered eating behaviors. Recently, due to the increased routine usage of social media, Cavazos-Rehg and other psychologists examined the benefits and drawbacks of social networking on body image and EDs [8]. They questioned participants about personal experiences involving social networking tasks such as participating in online chatrooms and communities. As a result, it was discovered that these individuals found benefits in connecting with others such as finding support, accessing information, and raising awareness. However, these participants also said that they were exposed to triggering content, negative influences, misinformation, and even cyberbullying. These damaging aspects could make the participants more susceptible to eating disorders. A lack of scientifically supported information is endangering to individuals online as well because the misleading knowledge can spread quickly and reach more people before it is corrected. This study reveals the large impact social media has on people’s daily lives and how it can deeply affect their mindset and behavior. Further precautions should be taken to reduce the adverse aspects of social media to promote a more positive and inclusive environment to reduce the prevalence for eating disorders.

2.2. The Role of Gender in the Relationship

While social media has proved to influence eating disorders, its influences vary in terms of gender. Male and female minds and bodies are drastically different, and eating disorders affect each in very divergent ways. A study done by Lonergan and her colleagues investigated photo based social media influence on adolescent development of eating disorders [9]. They used four different items of photo-based influence: photo investment, investment in others’ selfies, posting selfies, and photo manipulation. The researchers also identified participants who fulfilled eating disorder criteria based on the participants’ self-reports. The researchers then categorized each participant in seven groups: clinical and subclinical binge-eating disorder, clinical and subclinical anorexia nervosa, clinical and subclinical bulimia nervosa, purging disorder, unspecified feeding or eating disorder (UFED), and no disorder. It was found that adolescent girls had far more avoidance of the four photo items than did adolescent boys. However, the boys had a much higher chance of meeting the night eating syndrome criteria while the girls were more prone to meet all other eating disorder criteria. Overall, each social media behavior item was found to positively correlate with a higher possibility for developing one of more eating disorders. Gender differences in eating disorders are very prominent but that does not change the influence that social media has on eating disorders regardless of the gender. Social media usages and behaviors negatively affect both male and female mindsets and increase the prevalence of EDs.

3. Relevant Factors in the Relationship

To address the drawbacks of social media on eating disorders, researchers have begun experimenting with various theories. To do this, they tried to change their approach to social media into a healthier one that does not harm the users' mentality. Saunders, Eaton and Aguilar focused on the transition from the "self-objectification" of selfies to self-empowerment [10]. To analyze the role of selfies, they used a photo-elicitation method and semi-structured interviews. The researchers found that selfies and photos can benefit the eating disorder recovery process by allowing individuals to challenge beauty standards and "reclaim" their bodies. These selfies and online posts act as a tool for self-expression and liberation, letting people claim control over their own image and promote body positivity. Sharing the photos between other online users provides social support, validation, and a sense of community. However, there are still drawbacks, as there is with every social media venture, which is why a balanced approach should be recommended to regulate negative responses. Altogether, selfies can be a positive tool in eating disorder recovery, fostering self-esteem, connection, and acceptance. To ensure the most effectiveness, people should use social media responsibly and positively to enhance recovery from eating disorders and foster online support. There will always be risks regarding social media and its influence on people's mindsets and behaviors, but there are ways to reduce those threats and promote an inclusive online space.

Another potential factor in the large influence of social media is the user's mindset: a mental attitude that determines how a person interprets and responds to a situation. Two types of mindsets are fixed mindsets (a belief that abilities and traits are fixed and unchangeable) and growth mindsets (a belief that abilities can be grown and enhanced through effort and learning). Eating disorders have large psychological contributors, and social media impacts those causes and amplifies them to make them more severe. To investigate this phenomenon, Lee-Won and other psychologists explored the relationship between female Instagram users, their mindset, and the risk of developing disordered eating behaviors [11]. The researchers used an online survey to collect data. They discovered that participants with a fixed mindset were more likely to retouch their selfies, which was also associated with a higher risk of developing disordered eating patterns. This suggests that individuals with a fixed mindset may be more susceptible to unrealistic beauty standards that are furthered by social media, leading to a negative self-perception and more symptoms of eating disorders. The study prioritizes the importance of developing a growth mindset. This mentality may make people more resistant against the pressures and harms of social media. To do this, there are many different interventions and strategies such as increasing awareness of general social media influences and fostering resilience against image discrepancies. This way, individuals can develop a growth mindset and overcome the disadvantages of social media.

The stress of social media also impacts neurological functions. This heightened sense of awareness and tenseness can cause an individual to cope in positive and negative ways. Most often, the associated stress of social media results in maladaptive coping mechanisms (i.e., eating disorders). White and her colleagues examined this relationship to understand the effects of both daily and momentary associations of media exposure on disordered eating behaviors in women with anorexia nervosa [12]. Participants filled out a two-week assessment that covered reports on exposure to food, their body, weight-related media, accompanied stress, and eating behaviors. They discovered that higher levels of media exposure are associated with increased stress levels and greater eating pathology in these women. Both daily factors and momentary factors (immediate effects of media exposure and stress on disordered eating patterns within specific moments or situations) need to be considered to understand the complex interplay between media, stress, and eating disorders. The study's findings emphasized the need for targeted interventions and treatment strategies that address both media influences and stress management in afflicted individuals. By understanding the intricate dynamics between media exposure, stress, and eating pathology, psychologists and other professionals can develop more specific and effective treatments to support patients with anorexia nervosa during recovery. To further promote healthy body ideals and support users' mental health, media literacy and stress management are key.

4. The Effectiveness of Social Media Related Interventions

To address the rising prevalence of eating disorders, psychologists have begun attempting to create treatment plans to reduce the risk factors associated with social media. One approach they have taken is a social media literacy intervention, whose effectiveness was evaluated in a pilot study by McLean and others in 2017 [13]. This intervention is used to change the individual user's mindset and approach to the information on social media. It focuses on enhancing the person's critical thinking skills and media literacy to promote healthier attitudes and behaviors towards body image and eating. The pilot study assesses the usefulness of this technique by measuring the participants' knowledge, attitudes, and behaviors before and after the intervention. The results suggested promising outcomes, showing that the intervention had a positive impact on participants' social media literacy and their ability to evaluate and ignore harmful body image related messages. They also reported an increased awareness of unrealistic beauty and body standards shown on social media and improved self-esteem and body satisfaction. Overall, the study highlights the large potential of social media literacy interventions in alleviating the negative influence that social media has on body image and eating behaviors. By implementing these interventions as a preventive measure in everyday life and promoting critical engagement with social media content, the harmful influence that social media holds over eating pathology can be lessened.

5. Conclusion

As both rates of social media and eating disorders have been rising, researchers analyzed their relationship. They discovered that social media has large influences on disordered eating behaviors and can amplify the effects of EDs in individuals. Social media platforms are mixing posts of false facts, body image ideals, peer comparisons, criticism, and unhealthy coping mechanisms. The online posts of one person are viewed by hundreds, if not thousands of other people, making it easy to spread not only misleading information but also hurtful comments that can easily change the mindset of anyone reading it. Social media as a collaborative space also furthers eating disorders, through users communicating with each other and normalizing their irregular eating behavior. Social media influences on eating disorders also have lots of variability. Individual differences and gender differences all contribute to the severity of the impacts. Some people are mildly affected while others are severely affected. Boys have a larger tendency to develop night eating syndrome while girls are more at risk for every other eating disorder due to social media influences. However, these platforms are not all bad. Social media has positive effects too, they are just overshadowed by the many negatives. People enjoy social media as an online discussion community that connects them with others, finds them support, and serves as a convenient and accessible space for them to express themselves. This positive aspect of social media is the side that researchers want to amplify, and in turn, they want to mitigate the negative effects. Researchers have developed various theories on how to reduce the effects of social media on users' dysfunctional eating behaviors. The methods include "reclaiming" social media and selfies for self-empowerment, developing a growth mindset to reduce society pressures present on online platforms, and using targeted interventions to reduce the stress related to media influences. By changing the way the individual views social media and its negative aspects, researchers can reduce the harms that social media poses.

The main issue found in treatment of eating disorders is the individual differences behind the causes of the eating disorders. More research and attention to the patient during treatment is recommended as well due to the high relapse rate. However, even with the commonness of eating disorders and the high morbidity rates, not nearly enough attention has been given to this area of research due to the high stigmatization. Public education and awareness play a fundamental part in reducing stigma and encouraging afflicted individuals to seek help and recovery. Most of the studies referenced have limited sample sizes and limited regions, which may have affected the results. The content gathered from various online platforms and social Medias are also of limited origin which could have contributed to biases in the researchers' findings. Plus, there has not been many

interventions developed and the long-term effectiveness of the available intervention has not been examined yet. While there has been known gender differences in social media influences on eating disorders, there have been no specific treatments tailored for that difference. Social media grows each day and changes each day. The information and posts cannot be predicted which makes it hard to prevent the triggering comments and discussions. In a year, social media will have transformed into something completely different than it is today. This means that its effects on each person will change as well. To ensure that the influence of social media is not increasing along with its users, future research should try to examine social media every few months or every year to keep treatment and intervention plans up to date. Social media also affects each person differently due to mentality, preference, background, and their online feed. This means that it is hard to create a treatment that works for everyone. To ensure the best outcome, interventions should be personalized, to account for the individual variability. This review can provide some guidance to the development of prevention and intervention programs for adolescents and young people at risk.

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