



Link between excessive social media use and psychiatric disorders

Ujala Zubair, MD^{a,*}, Muhammad K. Khan, MBBS^a, Muna Albashari, MD^b

Abstract

Mental health disorders are an emerging challenge with the progressively increasing usage of social media platforms. Social media use is the second leading cause of disability among psychiatric disorders. A great deal of literature has tried to establish links between social media exposure and mental health diseases. However, there is a need to discuss the current literature that presents crucial perspectives on social media-induced psychiatric disorders to establish a holistic, evidence-based approach for their prevention and treatment. The use of social networks is strongly correlated with the development of anxiety and other psychological problems such as depression, insomnia, stress, decreased subjective happiness, and a sense of mental deprivation. The majority of the cited literature predicts that the likelihood of social media-induced mental health problems is directly proportional to the amount of time spent on these sites, the frequency of usage, and the number of platforms being used. Various possible explanations have been implicated, including a negative impact on self-esteem through unhealthy comparisons, social media burnout, stress, lack of emotional regulation due to social media preoccupation, and development of social anxiety due to decreased real-life social interactions. It has been postulated that increased social media use is driven by preexisting anxiety and is a coping strategy. This era of progressively increasing digitalization, the recent trend of a dramatic shift toward online social life, and the desire to get social attention is expected to take a gruesome toll on the population's mental health, which therefore warrants more attention to mental health care.

Keywords: addictive disorders, adult psychiatry, anxiety, depression, psychosocial disorders

Introduction

Mental health disorders are a common emerging healthcare problem in the United States, with adulthood being the most vulnerable age group^[1]. These are the second most prevalent cause of compromised living^[2]. Anxiety disorders can be associated with medical and psychiatric comorbidities, leading to severe functional impairment in social and occupational aspects of life^[3]. With the advent of the internet, social media platforms were introduced shortly thereafter. These platforms have revolutionized communication by making it faster and easier and abolishing all existent physical distances, dispensing information at just one finger touch within a fraction of a second. However, unrestrained use of social media can lead to the development of many psychosocial

HIGHLIGHTS

- The trend of excessive social media use is rising.
- Social media-related mental health disorders are a major consequence which can put individuals at risk of physical illnesses and a poor lifestyle.
- We found out that the risk of developing a mental health disease is directly linked to the duration, frequency, and number of social media platforms being used.

problems, such as disturbed sleep^[4-6], decreased subjective happiness^[7], and poor academic performance^[8,9], in addition to anxiety and depression^[6,10].

A massive rise in the usage of social media has been seen in adolescents and teens, ranging from 12% in 2005 to 90% in 2015^[11]. Social media usage has especially spiked in the past year due to lockdowns during the coronavirus disease 2019 (COVID-19) pandemic. A survey carried out in April 2020 on a group of Belgian individuals reported increased use of social networks in lockdowns as a coping strategy for feelings of loss, social isolation, and anxiety^[12]. Although social media can promote identity formation and development of virtual connections regardless of physical distance, at the same time, they also have the tendency to negatively impact self-esteem and self-image through unwanted feedback, not receiving enough social validation, or unhealthy competition and comparisons^[13]. Therefore, we consider it extremely crucial to recognize and address the growing number of mental health issues that come up with the increasing use of social networks and digitalization and review the literature on this significant association.

^aDow University of Health Sciences, Karachi, Pakistan and ^bCollege of Medicine, Alfaisal University, Riyadh, Saudi Arabia

Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.

*Corresponding author. Address: Dow University of Health Sciences, Baba-E-Urdu Road, Karachi 74200, Pakistan. E-mail address: ujalazubair17@gmail.com (U. Zubair).

Copyright © 2023 The Author(s). Published by Wolters Kluwer Health, Inc. This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

Annals of Medicine & Surgery (2023) 85:875–878

Received 20 September 2022; Accepted 22 December 2022

Published online 28 March 2023

<http://dx.doi.org/10.1097/MS9.000000000000112>

Scroll time and severity of disease

A study involving Norwegian individuals ranging from 16 to 88 years of age reported a more frequent association of anxiety with addiction to social media use^[14]. Similarly, another U.S.-based study involving 563 adults aged 18–22 showed that the amount of time spent using social media was directly related to the incidence of dispositional anxiety but was not related to any recently developed anxiety^[15]. Moreover, participants who spent more time daily using social media scored higher than the clinical anxiety cutoff score, indicating the development of possible underlying clinical anxiety disorders.

Effects on mental satisfaction and well-being

The use of social networks has also been reported to be associated with lower self-esteem, a decreased sense of subjective well-being shortly after its use, and a decrease in the levels of satisfaction with life in the long run. This was demonstrated by Kross *et al.*^[16] on a sample of 82 participants in their late teens or early 20s from different ethnic backgrounds in the U.S. However, the predisposition to poor self-esteem is just one of the so many other psychosocial concerns that arise from the excessive use of social networks.

Social media fatigue

A study conducted on adolescent social media users in India attempted to assess the relationship between psychosocial well-being and social media fatigue. The results reported that compulsive use of social media instigates a phenomenon called ‘social media fatigue,’ which is the burnout or exhaustion that comes from its excessive usage. Later in the results, it was found that this caused elevated levels of anxiety and depression among the participants^[17].

Account count and risk of mental illness

Primack *et al.* surveyed a sample of 1787 U.S. young adults in the age group of 19–32 years. Participants who used a lesser number (0–2) of social media platforms were found to be less likely to have elevated levels of anxiety and depression compared to those participants who used a greater number (7–11) of social media platforms. Hence, the incidence of social media-induced anxiety and depression was found to be directly related to the number of social media networks being used^[18].

Appearance-related unhappiness

Social networks can make people more conscious and sensitive about their appearances by creating an atmosphere of social comparisons. This appearance-related preoccupation inflicted by social media has been found to be directly proportional to its usage, as shown by Hawes *et al.*^[19]. The results also revealed an association of social media with depression, social anxiety, appearance-related anxiety, and sensitivity to appearance rejection.

Pandemic-related social media abuse

Social media use increased dramatically during the COVID-19 pandemic due to lockdowns and quarantine. During the COVID-19 outbreak in 2020, an online study was conducted over a nationally representative sample of Chinese citizens from 31 different provinces to assess any mental health problems potentially associated with social media exposure. More than 80% of the total participants reported frequent exposure to social networks. The results revealed that 48.3% of the participants were found to have depression, 22.6% suffered from anxiety, and 19.4% had both. Moreover, more frequent exposure to social media was found to be linked to higher odds of anxiety and ‘combined anxiety and depression’^[20].

Uncontrolled emotional behavior

Many people use social media to escape their negative emotions, not knowing that this strategy distracts them from regulating their emotions. Emotional regulation is extremely crucial for balancing mental health, and its avoidance by the substituted use of social networks renders them more vulnerable to anxiety, depression, and other mental health dysfunctions. In addition to this, people who prefer digital socialization over in-person social interactions have the potential to develop social anxiety and worsening any preexisting social anxiety disorder. Concerns about being inadequately connected and cyberbullying can also be other reasons for emerging anxiety and depression from the use of social networking sites^[21].

Social media-related stress

A study conducted on a sample of 466 young Lebanese adults showed that problematically excessive use of social networks is related to a higher incidence of depression, anxiety, and insomnia, while stress was found to be the main implicating mediator behind this^[22]. Hughes^[23] conducted a survey of 73 participants selected by convenient sampling. The data analysis demonstrated a strong positive association of social media use with depression, anxiety, and stress. Participants who spent comparatively more time on social media or used more social media platforms scored higher on the depression, anxiety, and stress scale.

Activity profile is the user’s mental health profile

Few studies suggest that mental health concerns over social media usage do not arise from the mere usage of these platforms but from certain behaviors exhibited on these. For example, posting unreal statuses which are indicative of false emotional and personal state. These behaviors have been found to be associated with suicidal ideation, which could be implicating serious underlying mental health problems^[24].

Preexisting anxiety can provoke social media abuse

Although many studies have shown that the use of social media leads to the development of anxiety, Dutta *et al.*^[25] revealed a unique association between preexisting anxiety and online social interaction. According to them, individuals with anxiety are likely to seek more online interactions through social media,

although these social ties might still be weak. The possible reason appears to be the fact that weak virtual ties help people in getting emotional support while being least concerned about their appearance and impression. This surprisingly eccentric finding suggests that anxiety can lead to increased use of social networks, contrary to the popular belief that goes vice versa. This can spark up an interesting debate of research among the research community and can be an interesting angle to further investigate things.

Internet use and sexual behavior in adolescents

The excessive use of the internet can induce negative effects on the sexuality of adolescents. A study reported that the use of the internet and the practice of sexually explicit sites could lead to early sexual behavior in adolescents. The prevalence of internet use was significantly inclined toward males, who also reported a more positive attitude toward pornography from an early age than females. Females were more likely to react negatively toward such exposure, and frequent users reported intentional visits to sexually explicit sites^[26]. Another study reported frequent use of the internet for accessing sexually explicit content to be a predictor of increased sexual activity and the likelihood of having multiple sexual partners^[27].

Social media use and depressive symptoms

Social media websites provide users with a wide spectrum of features, and it is often observed that people adapt to a specific pattern of usage. The most common set of actions, such as stalking other users' photos or scrolling through the latest newsfeed, has been defined as passive social media use. It is evident from recent research that these behavioral patterns and depression are interlinked to each other. Passive social media use can induce mood disorders and depressive symptoms like loss of interest or personal ill-being^[28-31]. Excessive social media use is a predictor of depression and poor social connection with both friends and family^[32]. This can also happen indirectly through mediators such as decreased emotional connection with fellow beings, which increases the levels of loneliness, ultimately causing depression^[28,30,33].

Alcohol abuse and addiction

The social environment has been divided into offline and online components. It is important to understand the role of social media in conveying information related to drugs and addictive substances. Alcohol overuse has been observed to be linked with watching a higher number of alcohol-related posts, although heavier consumers tend to gradually lose the habit of posting over time^[34]. A study reported that binge drinkers have also been found addicted to social media usage^[35].

Self-harm and suicide ideation

The mental health of the young population is severely affected. Self-harm is an important consequence of psychiatric problems in the younger population, which can lie on a continuum between nonsuicidal self-injury and suicidal ideation^[36]. Social media usage can increase the probability of self-injury by conveying

different methods of self-mutilation, a sense of competition, and contagion, but these sites are also an important source of online emotional support^[37]. A study reported that adolescents often utilize social spaces to share their suicidal ideation and self-harming intentions directly or by describing hopelessness, helplessness, and despair^[38].

Conclusion

The use of social networks is strongly correlated with anxiety and other psychological disorders such as depression, insomnia, and stress. Throughout the literature that has been cited in this paper, these associations were found to be directly linked to the duration, frequency, and number of social media platforms being used. Increased social media usage can cause alcohol abuse disorder among individuals and affect the sexuality of adolescents. We also found that preexisting anxiety can induce social media addiction which can, in turn, cause more anxiety. The review identifies the paucity of high-quality evidence on the association between social media use and psychiatric disorders. There is a dire need for the establishment of awareness programs to educate the general population about the harmful effects of increased social media usage on their health and lifestyle.

Ethical approval

Not required as publicly available data were used.

Consent

Not required.

Sources of funding

None.

Author contribution

U.Z., M.K.K., and M.A.: conception or design of the manuscript; M.K.K.: acquisition of the data; U.Z. and M.A.: drafted the manuscript. All authors critically revised the manuscript, gave final approval, and agreed to be accountable for all aspects of the work, ensuring integrity and accuracy.

Conflicts of interest disclosure

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Research registration unique identifying number (UIN)

None.

Guarantor

Ujala Zubair and Muhammad Khuzzaim Khan.

Data availability statement

Publicly available data was used on *pubmed.gov*.

Acknowledgments

None.

References

- [1] Kessler RC, Petukhova M, Sampson NA, *et al*. Twelve-month and lifetime prevalence and lifetime morbid risk of anxiety and mood disorders in the United States. *Int J Methods Psychiatr Res* 2012;21:169–84.
- [2] Whiteford HA, Degenhardt L, Rehm J, *et al*. Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet* 2013;382:1575–86.
- [3] Costello EJ, Egger HL, Angold A. The developmental epidemiology of anxiety disorders: phenomenology, prevalence, and comorbidity. *Child Adolesc Psychiatr Clin N Am* 2005;14:631–48.vii.
- [4] Garrett R, Liu S, Young SD. The relationship between social media use and sleep quality among undergraduate students. *Inf Commun Soc* 2018;21:163–73.
- [5] Xanidis N, Brignell CM. The association between the use of social network sites, sleep quality and cognitive function during the day. *Comput Hum Behav* 2016;55:121–6.
- [6] Woods HC, Scott H. #Sleepy teens: social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *J Adolesc* 2016;51:41–9.
- [7] Uysal R, Satici SA, Akin A. Mediating effect of Facebook addiction on the relationship between subjective vitality and subjective happiness. *Psychol Rep* 2013;113:948–53.
- [8] Sobaih AE, Moustafa MA, Ghandforoush P, *et al*. To use or not to use? Social media in higher education in developing countries. *Comput Hum Behav* 2016;58:296–305.
- [9] Junco R. Too much face and not enough books: the relationship between multiple indices of Facebook use and academic performance. *Comput Hum Behav* 2012;28:187–98.
- [10] Seabrook EM, Kern ML, Rickard NS. Social networking sites, depression, and anxiety: a systematic review. *JMIR Ment Health* 2016;3:e50.
- [11] Perrin A. Social media usage: 2005–2015. *Pew Res Center* 2015;125:52–68.
- [12] Caubergh V, Van Wesenbeeck I, De Jans S, *et al*. How adolescents use social media to cope with feelings of loneliness and anxiety during COVID-19 lockdown. *Cyberpsychol Behav Soc Netw* 2021;24:250–7.
- [13] Nesi J, Prinstein MJ. Using social media for social comparison and feedback-seeking: gender and popularity moderate associations with depressive symptoms. *J Abnorm Child Psychol* 2015;43:1427–38.
- [14] Schou Andreassen C, Billieux J, Griffiths MD, *et al*. The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: a large-scale cross-sectional study. *Psychol Addict Behav* 2016;30:252–62.
- [15] Vannucci A, Flannery KM, Ohannessian CM. Social media use and anxiety in emerging adults. *J Affect Disord* 2017;207:163–6.
- [16] Kross E, Verdun P, Demiralp E, *et al*. Facebook use predicts declines in subjective well-being in young adults. *PLoS One* 2013;8:e69841.
- [17] Dhir A, Yossatorn Y, Kaur P, *et al*. Online social media fatigue and psychological well-being: a study of compulsive use, fear of missing out, fatigue, anxiety, and depression. *Int J Inform Manage* 2018;40:141–52.
- [18] Shensa A, Sidani JE, Dew MA, *et al*. Social media use and depression and anxiety symptoms: a cluster analysis. *Am J Health Behav* 2018;42:116–28.
- [19] Hawes T, Zimmer-Gembeck MJ, Campbell SM. Unique associations of social media use and online appearance preoccupation with depression, anxiety, and appearance rejection sensitivity. *Body Image* 2020;33:66–76.
- [20] Gao J, Zheng P, Jia Y, *et al*. Mental health problems and social media exposure during COVID-19 outbreak. *PLoS One* 2020;15:e0231924.
- [21] Hoge E, Bickham D, Cantor J. Digital media, anxiety, and depression in children. *Pediatrics* 2017;140(suppl 2):S76–80.
- [22] Malaeb D, Salameh P, Barbar S, *et al*. Problematic social media use and mental health (depression, anxiety, and insomnia) among Lebanese adults: how mediating effect of stress? *Perspect Psychiatr Care* 2021;57:539–49.
- [23] Hughes S. Effects of social media on depression anxiety and stress. *Dublin Business School*; 2018.
- [24] Berryman C, Ferguson CJ, Negy C. Social media use and mental health among young adults. *Psychiatr Q* 2018;89:307–14.
- [25] Dutta S, Ma J, De Choudhury M. Measuring the impact of anxiety on online social interactions. In: Twelfth International AAAI Conference on Web and Social Media; 2018.
- [26] Arulogun OS, Ogbu IA, Dipeolu IO. Influence of internet exposure on sexual behaviour of young persons in an urban district of Southwest Nigeria. *Pan Afr Med J* 2016;25:261.
- [27] Asekun-Olarinmoye OS, Asekun-Olarinmoye E, Adebimpe WO, *et al*. Effect of mass media and Internet on sexual behavior of undergraduates in Osogbo metropolis, Southwestern Nigeria. *Adolesc Health Med Ther* 2014;5:15–23.
- [28] Hussain Z, Griffiths MD. Problematic social networking site use and comorbid psychiatric disorders: a systematic review of recent large-scale studies. *Front Psychiatry* 2018;9:686.
- [29] Frison E, Eggermont S. Exploring the relationships between different types of Facebook use, perceived online social support, and adolescents' depressed mood. *Soc Sci Comput Rev* 2016;34:153–71.
- [30] Aalbers G, McNally RJ, Heeren A, *et al*. Social media and depression symptoms: a network perspective. *J Exp Psychol Gen* 2018;148:1454–62.
- [31] Brooks S, Longstreet P. Social networking's peril: cognitive absorption, social networking usage, and depression. *Cyberpsychology* 2015;9:21–39.
- [32] Vannucci A, Ohannessian CM. Social media use subgroups differentially predict psychosocial well-being during early adolescence. *J Youth Adolesc* 2019;48:1469–93.
- [33] Van Rooij AJ, Ferguson CJ, Van de Mheen D, *et al*. Time to abandon Internet Addiction? Predicting problematic Internet, game, and social media use from psychosocial well-being and application use. *Clin Neuropsychiatry* 2017;14:113–21.
- [34] Steers MLN, Neighbors C, Wickham RE, *et al*. My friends, I'm #SOTALLYTOBER: a longitudinal examination of college students' drinking, friends' approval of drinking, and Facebook alcohol-related posts. *Digit Health* 2019;5:2055207619845449.
- [35] Spilkova J, Chomynova P, Csemy L. Predictors of excessive use of social media and excessive online gaming in Czech teenagers. *J Behav Addict* 2017;6:611–9.
- [36] Jacob N, Evans R, Scourfield J. The influence of online images on self-harm: a qualitative study of young people aged 16–24. *J Adolesc* 2017;60:140–7.
- [37] Marchant A, Hawton K, Stewart A, *et al*. A systematic review of the relationship between internet use, self-harm and suicidal behaviour in young people: the good, the bad and the unknown. *PLoS One* 2017;12:e0181722.
- [38] Cash SJ, Thelwall M, Peck SN, *et al*. Adolescent suicide statements on MySpace. *Cyberpsychol Behav Soc Netw* 2013;16:166–74.