The Increased Reliance on Social Media During COVID-19 Affects Individuals' Mental Well-being

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Abstract. With the surging development of technology and the omnipresence of online platforms, investigating how social media applications influences individuals' mental well-being has become a major research area for many researchers. During the COVID-19 pandemic, policies limited face-to-face contacts, and individuals are more prone to choose social media as an alternative to relationship maintenance and informational exchange. The purpose of this paper is to examine the negative effects that growing reliance on social media during the COVID-19 epidemic has on individuals' mental health. An overall negative association has been supported by previous empirical evidence, suggesting an increased use of social media would impair individuals' mental well-being, including increased depressive symptoms and anxiety, decreased level of self-esteem and so on. Moreover, social comparison as well as passive social media use are two fundamental mechanisms that underlie such negative influence. Specifically, during the epidemic, increased reliance on social media use had caused an uptick in passive social media use and social comparison, resulting in an increased feeling of frustration, anxiety, depressive symptoms, stress, and fear. While such impact is exacerbated during the epidemic. This paper provides a reference for research in related fields.

Keywords: Social media use; Mental well-being; COVID-19; Social comparison; Passive social media use.

1. Introduction

In this paper, social media is conceptualized as clusters of online applications which enable connections between friends or families, access to information change and creation through the content users generate. A survey was conducted by Asur and Huberman [1], which found that, on average, approximately 83% of US and European adults are engaged in using social media. Due to the nature of easy access, as well as the surging development in technology and applications, social media has become much more prevalent and mundane in life, dominantly controlling the political, environmental and entertainment agendas in public. Surprisingly, contributing roles have been found from various psychological factors that exert influence on user behaviour, as well as consequences of social media use. Three personality traits are categorized as dominating social media use, including openness to experience, neuroticism, and extraversion [2]. To exemplify, individuals who display a high level of openness to experience or neuroticism are more prone to social media use. Therefore, with the upheaval and the identified psychological factors in such phenomenon, current psychologists have focused on investigating the potential impact social media usage could bring on one's mental well-being.

Individuals' mental well-being (referenced from the World Health Organization [3]) is comprised of two distinct dimensions: mental disorder and mental health. Mental health allows individuals to display awareness of personal competence, ability to cope with regular life stresses, work productivity and contribution to one's community. Whereas mental disorder is a clinical symptom in which individuals' cognitive ability, emotion regulation ability and behaviours are affected by significant impairments, reflected in their developmental, physiological as well as psychological processes behind mental functioning. As this paper aims to discuss how the adverse impact of social media engagement is strengthened by the COVID-19 epidemic on individuals' mental well-being, the phrase "mental well-being" will be used and indicated through both mental health (e.g., stress, self-esteem, life satisfaction) and mental disorder (e.g., depressive symptoms, anxiety) to avoid confusion or misunderstanding.

With the substantial quantity of literature examining the relationship between individuals' mental well-being and online platforms, an overall negative influence possessed by social media use is found on mental well-being. Nevertheless, such effects are somewhat overlooked in the environment of COVID-19 and call for more examination. In early 2020, the occurrence of COVID-19 has been considered a public emergency internationally, with millions of people being affected, and showing severe respiratory symptoms. In response to the pandemic, safety precautions have been implemented to reduce the transmission rate, including social distancing maintenance, physical contact, and social gathering avoidance. Such policy has led to an increased level of loneliness, lack of support and companionship reported by citizens. In order to reduce such negative affect, individuals have switched to online platforms - social media as a way to relieve such stress. Therefore, the question has been posed: will the detrimental cause of social media engagement on people's mental well-being be further exacerbated with an increased reliance on social media platforms during the epidemic? As an attempt to add further information to the contemporary literature, this paper aims to probe in what ways an increasing reliance on social media affects individuals' mental well-being. In the following sections, the relationship between the two will be first identified, and two underlying mechanisms of the relationship (social comparison and passive social media use) will be outlined, and subsequently discussed under the situation of the COVID-19 pandemic. Discussion of such concern would have a real-life indication as by raising such issues, psychologists could identify the potential risk being brought by the higher frequency of social media use during a sensitive period, thus creating interventions to reduce such negative effects on citizens' mental well-being. In addition, authorities could implement regulations on digital technologies to bridge social distance and reduce citizens' feelings of fear, anxiety, or loneliness in order to provide the most appropriate social support for individuals who are currently suffering from lockdown [4].

2. The influence of Social Media on Mental Health and Its Mechanism

2.1 Impact of Social Media on Mental Well-being

Because of the omnipresence of social media, psychologists started to examine how mental well-being is affected by social media use. As suggested by Kennedy [5], several negative influences of social media use have been highlighted. As evidenced by numerous works of literature, the duration of social media engagement is positively correlated with depressive symptoms, suicidal risks, as well as the level of anxiety. In a longitudinal study conducted by Shakya and Christakis [6], self-reported data were collected over three years at a fixed interval, 10680 participants were recruited and completed all three intervals. The survey included measures on Facebook use, self-evaluated life satisfaction and mental health. The results displayed a significantly negative association between mental well-being, satisfaction in life, and frequency of Facebook use, indicating social media use could be considered a contributing factor to negative mental well-being.

2.2 Social Media and Social Comparison

2.2.1 Pre-COVID

The underlying mechanism of most social media, including Facebook and Instagram, is that opportunities are given to individuals to manage the way they present themselves. In order to enhance the visual appeal and receive positive feedback from others, individuals are engaged in ways including choosing the filtered picture of life, photoshopping original pictures in the most idealized way, as well as adding humorous or wise comments to the pictures. The flourish of social media provides a new, and more accessible platform for social comparisons to emerge, as comparison targets that are identified as similar to oneself become more available. Social comparison, a cross-cultural phenomenon, described by Festinger [7], suggests there is an evolutionary tendency for people to perceive other individuals as sources of information to evaluate how one should perform under the norm (known as opinion compassion) and how well themselves are doing compared to the rest (also

known as ability comparison). It is believed that such comparisons can satisfy individuals to be enriched with information regarding performances, societal status, and abilities, allowing one to adjust to the social world. The central concept of the social comparison process is the evaluation of the comparison target, which guide people to perform behaviours toward upward targets (the superior others) and against the downward targets (the inferior others). Such a process can also work conversely (i.e., presenting positive attitudes with downward targets and negative attitudes with upward targets). As predicted by Yang et al. [8], it is more likely for upward social comparisons to occur in social media as the users are frequently shown the illusory success of online connections rather than actual failures. Yang et al. [8] recruited 219 university students with a mean age of 18.29 years to complete sets of questionnaires. 83 participants were excluded due to incomplete responses. In the study, different clinical scales were adopted and revised to measure well-being, including self-esteem, psycho-social stage, and social comparison frequency. The findings revealed that comparisons within social media displays a significant correlation with lowered self-esteem and identity clarity.

2.2.2 During COVID

During the COVID-19 period, with the implementation of policies to reduce transmission, individuals have been requested to maintain social distancing and avoid social contact, the lack of face-to-face interactions has forced individuals to shift into online interactions, significantly more frequent in engaging in social media, especially during the lockdown period. As Wheaton et al [9] suggested, during the pandemic, individuals display the tendency to post an increased quantity of idealized images of the "current situation" on social media due to significantly changed life circumstances). Thus, individuals who are currently suffering from the pandemic due to a lack of social contacts or support would be prone to engage in adopting social media for interactions and information maintenance, to be exposed to such idealized images of others could facilitate upward social comparison (comparing with the inferior others), leading to feelings of frustration, anxiety and lowered self-esteem. With a mean age of 38.99 years, Yue, Zhang and Xiao [10] recruited 1131 individuals from China and invited them to respond to an online survey. The survey comprises several measurements to assess the level of stress, social comparison frequency and intensity. The findings provided further evidence to the hypothesis by demonstrating a negative correlation between mental well-being and social comparison (especially upward), indicating the significant role of social comparison in social media engagement on one's mental well-being.

2.3 Passive Social Media Use And Mental Well-being

2.3.1 Pre-COVID

Passive social media use, characterized by online social behaviours that are not intended for social exchange, such as browsing social media for new feeds is also considered to have a negative correlation with mental well-being, especially depressive symptoms. In the network perspective of psychopathology, a complicated and dynamic interaction takes place between symptoms that spark each other in depression. Initial morbidity is elicited by external conditions (stress) and further engages in the activation process of subsequent symptoms [11]. According to this perspective, passive social media behaviours could act as a contributing factor if it triggers external conditions or depressive symptoms that could reinforce subsequent symptom development. It has been corroborated that passive social media use has several ways to worsen symptoms, including the increasing level of loneliness, decreasing the level of belongingness, or directly undermining mental well-being [11]. In the experiment conducted by Aalbers et al [12], participants were instructed to complete a brief questionnaire for two weeks, seven times per day, at fixed time intervals. The brief questionnaire contains twelve items, measuring participants' reports on passive social media usage, depressive symptoms, stress, and loneliness level. 132 undergraduates were recruited, with a mean age of 20.44 years. The results demonstrated that during the experiment, symptoms including loss of interest, concentration failure and tiredness did arise with passive social media use.

2.3.2 During COVID

During the period of the pandemic, the behavioral frequency of passively using social media (i.e., browsing for news) has surged significantly because social media serves an important role in exchanging urgent information under a crisis of collective traumatic events, such as COVID-19. Garfin et al [13] explained that compared to traditional media (television), social media has a substantial number of users, and individuals are more likely to use the platform to search for pandemic-related content. Exposure to social media during disasters might elicit negative mental well-being due to rumours, misinformation or merely false personal interpretation that could arouse states of anxiety, panic as well as fear. In the early stage of the pandemic, 705 university students were recruited in the study of Zhao and Zhou [14], a questionnaire assessed media use relating to COVID-19, the stressor of COVID-19 and mental well-being (anxiety, negative affect, and depression). The results showed that passively using social media is inversely connected with mental well-being, supporting its detrimental effects. In addition, distinct influences have been found between media types, with social media presenting much more intense influences compared to traditional media. Furthermore, regarding passive social media use, it has been suggested that the behaviour of passively browsing others' posts on social media serves a contributing role in the social comparison process as the tendency to present the idealistic self on social media is potentially hampered by the universal stressor of the pandemic [15]. Thus, it could be concluded that, although passive social media use is not a robust contributor to depressive symptoms, a high frequency of such behaviour could still exert influence in increasing the susceptibility towards depression both in clinical and non-clinical individuals.

3. Limitation and Further Direction

Despite the negative influence that has been supported by empirical evidence and the facilitating role of the pandemic, resulting from the self-report techniques used in all the above-mentioned studies, the estimated effect of social media may be misreported by participants on their perceived mental well-being. It is possible that some participants exaggerated their reported mental well-being due to demand characteristics or minimized their reported change of mental well-being due to social desirability bias, thus hampering the estimated influence of social media engagement. Similarly, as the behaviour of passively using social media is habitual in nature, it is likely that little or no awareness was initiated during the performance, reducing the actual frequency of passive social media uses being reported, thus undermining the reflectiveness of the results. If that is the case, a significantly higher engagement in passive social media use might be reported and indicating a clear and significant correlation, or direction of causality. Future studies could benefit from a change in data obtainment method, for example, instead of asking subjects to report mental well-being themselves, clinical psychologists who received standardized training could be used to assess subjects' mental well-being against clinical scales. Similarly, instead of asking subjects to recall social media usage, a more objective method should be used, such as checking the usage time against phone settings to reduce recall bias.

In addition, although an association has been identified [16], the level of significance is questionable. One reason for such conflicting results could be that the subjects recruited were non-clinical individuals, thus showing different interpretations and evaluations of symptoms compared to clinical individuals (those who already received a diagnosis of depression). A comparison should be drawn between both clinical and non-clinical samples, and extraneous variables need to be controlled under a standardized experimental setting. Another way to improve the validity of the results would be to conduct longitudinal studies, in which the direct effect of social media contributing to mental well-being could be examined through different points: pre-COVID, during COVID and post-COVID, by comparing the same participants across three stages, a more comprehensive dataset could be obtained and used to assess the effect.

Furthermore, the representativeness of the sample included in the above-mentioned studies requires scrutiny. The intensity of the epidemic varies in each country, with some showing only a mild contagious trend either due to the strict policy being implemented or lack of population (countries that do not rely on tourism and where the population is relatively stable). Therefore, it is likely that the participants examined came from different cultural backgrounds, and have different experiences with the pandemic, affecting their perceived mental well-being and frequency of social media engagement. Similarly, the level of strictness of policy implemented may also possess an impact on individuals' reported data, for example, for those who live in China, where lockdown and quarantine are more frequent compared to Western countries, individuals may display a significantly higher frequency of social media use, or they might be used to the quarantine situation and found it less frustrating. Therefore, to improve the population validity of the results and obtain more comprehensive data, meta-analysis or cross-cultural studies should be included in future research in order to remove the confounding variables brought by different cultural backgrounds.

4. Summary

Although a substantial number of literatures evidenced the adverse impact of frequently engaging in social media on mental well-being, limited experiments have examined such association under the newly emerged context of the COVID-19 epidemic. This paper aims to probe in what ways an increasing reliance on social media affects individuals' mental well-being. Social comparison and passive social media use proposed in this paper are two mechanisms underpinning the use of social media. Both mechanisms have been surged during the pandemic since due to a collective traumatic experience of international crisis, resulting in the feeling of anxiety and fear from information overload. Therefore, it could be concluded that under the COVID-19 epidemic, when individuals are required to withdraw from face-to-face contact, the negative correlation between mental well-being and social media use is reinforced in two ways: increased frequency of upward social comparison and passive social media use. Discussion of such concern would have theoretical and practical implications, allowing psychologists to identify the potential risk being brought by the higher frequency of social media use during a sensitive period, thus creating interventions to reduce such negative effects on citizens' mental well-being.

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