

# The Effects of the COVID-19 Pandemic on Social Media Usage and Body Image Perceptions in Young Adults

Magda Wojtara\*

---

The coronavirus pandemic resulted in wholly unprecedented shifts in daily life and routine. This included more individuals working from home, utilizing video chatting software daily, and increased social media usage (SMU) during lockdowns. SMU has consistently been shown to increase during crises. Social media and video chat usage are on the rise, but many do not acknowledge the negative impacts of high usage. However, high SMU has been associated with negative body image perception and reduced self-confidence. It has also been associated with the development of other disordered behaviors and conditions such as eating disorders and anxiety. Through a comprehensive literature review of recently published studies, there appears to be a strong association between young adults who increased their SMU during the pandemic and suffered from a negative body image perception and reduced self-confidence. As an example, adding more body-positive programming aimed at improving body image perceptions and self-confidence will likely contribute to a reduced chance of developing associated behaviors. Furthermore, mitigation strategies such as mindfulness, cognitive reappraisal, and dialectical thinking should be encouraged and widely accessible in the United States regardless of insurance coverage. However, further research will be needed to determine if these effects will persist post-pandemic and which mitigation strategies are most effective.

---

## Keywords

social media usage • covid-19 • body-image perception • young adults

## Introduction

The COVID-19 pandemic, a massive crisis, led to increased social media usage (SMU). The unprecedented nature of the pandemic led to many schools, organizations, and workplaces going fully

---

\*University of Michigan, wojtaram@umich.edu

doi: 10.3998/ujph.2321

Conflicts of interest:

The author has no conflicts of interest to disclose.



remote. Many individuals may have been motivated to use social media to “maintain relationships” and “pass time” (Bowden-Green, Hinds, & Joinson, 2021). Indeed, as many individuals suddenly returned to their homes and altered their routines, social media proved to be one constant. It also led to COVID-19-related stress responses (i.e., stress caused from hearing news about the pandemic), which are believed to be associated with SMU. This is because social media became flooded with celebrities, and common folk alike, posting about their time in isolation and new news updates. Findings from a study showed that COVID-19 stress was positively associated with tendencies toward addictive SMU and that individuals with higher levels of COVID-19-related stress are at an increased risk of addictive SMU (Zhao & Zhou, 2021). In addition to increased stress, individuals often reported high levels of loneliness due to forced isolation. In another study, participants found that they spent more hours/day on social media during the pandemic and that perceived feelings of loneliness predicted both social media use and anxiety (Boursier, Gioia, Musetti, & Schimmenti, 2020). Therefore, SMU seems to potentially mediate negative health outcomes.

Young adults, including college students, are believed to be an already vulnerable population for mental health concerns. In several studies with a college student sample, there was a pronounced rise in the prevalence rates of mental health problems (45%) such as acute stress (34.9%) and depressive (21.1%) and anxiety symptoms (11.0%) (Ma et al., 2020). Students who had more than three hours/day of social media coverage of COVID-19 were also 2.13 times more likely than students with less than one hour/day to have acute stress symptoms (Ma, Zhao, Li, Chen, Wang, Zhang, Yu, Jiang, Fan, & Liu, 2020). Overall, remote work and life during COVID-19, in addition to the stress of living through a pandemic, correlated to increased SMU.

## Methods

This literature review was conducted through a comprehensive search of the most recent and up-to-date literature using PubMed and Google Scholar. The search yielded many relevant articles dating back to 2016. Besides two articles that generally explored the relationship between social media and perception, the rest of the sources were from 2019 to 2021 and focused on this relationship during the pandemic. The key search terms used include “social media usage,” “covid-19,” “mental health,” “body image,” “depression,” “self-confidence,” “effects,” and “mitigation strategies.” The articles found utilized a variety of methods including clinical trials, mixed methods, meta-analysis, systematic reviews, and more. Future papers should further explore the impacts of other factors such as race, ethnicity, geography, and more on this phenomenon.

## High SMU

High SMU has been commonly associated with negative self-perception of body image along with other health concerns. SMU provides an opportunity for social comparison and exposure to unrealistic beauty expectations. It has also been shown that body dissatisfaction is likely to result from frequent use of social media (Mills, Musto, Williams, & Tiggemann, 2018). Among women, high body dissatisfaction is also known as a primary risk factor for the development of eating disorders and is correlated with lower self-esteem and even depression (Mills et al., 2018). Disordered behaviors occur from a plethora of combined contributing causes, yet there have been significant correlations found between media usage and disordered eating. For instance, disordered eating attitudes

have been linked to lower self-esteem ( $p < 0.001$ ), worse body image ( $p < 0.001$ ), body desired to achieve ( $p < 0.001$ ), and the use of social media ( $p < 0.001$ ) (Aparicio-Martinez et al., 2019).

Social media volume and frequency is another consideration as a higher frequency of use has a stronger association with behaviors such as disordered eating. Compared with those in the lowest quartile, participants in the highest quartiles for social media volume and frequency had significantly greater odds of having eating concerns (adjusted odds ratio 2.18, 95% CI 1.50–3.17 and adjusted odds ratio 2.55, 95% CI 1.72–3.78, respectively) (Sidani, Hoffman, Hanmer, & Primack, 2016). Another health concern is that increased media usage has been associated with a higher risk of miscarriage (Zhang, Liu, Han, & Yin, 2021). This has been postulated to be due to the increased stress inadvertently caused by using social media. Furthermore, nighttime-specific SMU predicted poorer sleep quality even after controlling for anxiety, depression, and self-esteem (Woods & Scott, 2016). Therefore, high levels of SMU contribute to negative health outcomes such as disordered eating, poor sleep, miscarriage, and body dissatisfaction.

While increased SMU can worsen mental health, it can also serve as a mediator for stress. Despite constant and important discourse on burnout, it is also important to consider that high SMU can be attributed to positive perceived impacts for individuals. Individuals with serious mental illness have long reported benefits from interacting with peers online, such as greater feelings of group belonging, social connectedness, and the ability to cope with day-to-day challenges (Naslund, Aschbrenner, Marsch, & Bartels, 2016). Another consideration is also what type of social media one chooses to engage with and look at with more frequency. For example, looking at positive news and body-positive influencers may, in fact, potentially contribute to a more positive impact. According to previous research, media is an important component for coping if it provides support and connection through the dissemination of factual and positive information while avoiding the overflow of sensational and false news (Pahayahay & Khalili-Mahani, 2020). Therefore, it is important to recognize that SMU can also have some positive contributions to mental health and overall health.

## Zoom and Body Image

The use of videoconferencing platforms has skyrocketed due to restrictions from the COVID-19 pandemic; however, this extended use may have negative effects on body image. Constantly staring at your virtual image may have a negative impact. To understand potential impacts, it is important to first liken using videoconferencing to staring at a mirror for several hours a day. More than a third of participants in an Australian study identified new appearance concerns while on video, and those individuals also reported an increased interest in obtaining future beauty treatments and aesthetic procedures (Pikoos, Buzwell, Sharp, & Rossell, 2021). Nearly 81% would cite that the pandemic caused a decline in their body image perception (Padley & Pace, 2021). In a survey of dermatologists, 86% indicated that patients referenced videoconferencing as a reason for new cosmetic concerns and procedures (Rice, Siegel, Libby, Graber, & Kourosh, 2021).

However, some other factors for an uptick in beauty treatments and aesthetic procedures may be that working from home provides more downtime to heal from treatments and elective procedures were on pause for part of the pandemic. Due to this uptick, many healthcare professionals are discussing ways to help patients make informed choices in aesthetic procedures. An example mitigation technique includes encouraging physicians to counsel patients on the impacts of mirror-gazing behavior, which is exacerbated by videoconferencing (Daar, Chiodo, & Rohrich, 2021).

Other questions should also be addressed, such as how much videoconferencing is needed for the patient's occupation and potential symptoms of body dysmorphic disorder (BDD; 15% of plastic surgery cosmetic patients have BDD) (Daar et al., 2021). Another consideration is that unlike selfies on platforms like Snapchat where users are somewhat privy to the changes it makes to their features, videoconferencing platforms project an unknowingly distorted image. This is because many front-facing cameras distort facial proportions, and a bad angle can only worsen this perception. It is important to candidly discuss the impacts of increased use of videoconferencing on self-perception.

## Impacts and Prevalence of Image Retouching and Editing

In an increasingly social media-centered world, there has been a rise in usage of social media and a correlated rise in retouching and editing of images. It has been estimated that two-thirds of all photos on social media have been edited in some way (Spector, 2017). Furthermore, 46% of individuals doubt social media images, and 58% distrust dating sites due to edits (Spector, 2017). Therefore, the rise in retouching is also impacting, in addition to ourselves, our perceptions of each other. Image retouching and editing, although common, have detrimental negative effects on an individual's well-being. Simply taking and editing a selfie can result in a more negative mood and facial dissatisfaction (Tiggemann, Anderberg, & Brown, 2020). Taking it a step further, even viewing selfies online has been shown to have negative impacts on well-being and body confidence. This is because seeking and placing importance on feedback from others is another harmful component of selfie practices and a potential mechanism linking selfie engagement to well-being and body confidence (McLean, Jarman, & Rodgers, 2019). Although these effects are commonly spoken about for women, other studies have noted similar negative effects for men. For instance, a recent study suggested manipulation and concern about selfies posted may be risk correlates for body dissatisfaction for both men and women (Lonergan et al., 2019).

Digital manipulations in advertising and daily life have had detrimental public health effects, and therefore strategies must be put in place to mitigate harm. Many individuals (personal brands) and companies utilize social media advertising practices that feature edited photos. A way to incentivize change on a policy level may be via tax incentives combined with corporate social responsibility initiatives to reduce the use of digitally altered images (McBride, Costello, Ambwani, Wilhite, & Austin, 2019). However, other findings signal that disclaimer labels (i.e., this image has been edited) on digitally modified images are not as helpful for body images as images departing from thin-ideal (Giorgianni, Danthinne, & Rodgers, 2020).

## Discussion

The COVID-19 pandemic has contributed to increased SMU and video chat usage due to the added stressors and more time at home. Eighty one percent of studied individuals cited that the pandemic caused a decline in their body-image perception (Padley & Pace, 2021). The frequency and volume of SMU has furthered the already negative impacts of altered and edited images. Therefore, we can consider the pandemic as a contributing factor to increased negative self-perception and reduced self-esteem in young adults. Increased usage has also been shown to contribute to other disordered behaviors such as eating disorders and anxiety as well as other negative health outcomes like diminished sleep and miscarriages (Sidani, Hoffman, Hanmer, & Primack, 2016).

Many young adults are especially vulnerable at this critical time in their lives, education and careers. The shift to relative social isolation and minimized in-person interaction has, of course, impacted the mental and emotional well-being of these individuals. Given that these are unprecedented times, individuals may feel the pressure to not contribute their own worries and concerns to others that they live and work with.

It can be difficult for individuals to identify and treat disruptions in behavior and the detrimental effects of SMU. Although mental health programs have risen in prominence, many cultural and religious communities still stigmatize mental illness. Many individuals may not think their condition warrants seeking out help or may reach out to close friends and family who may dismiss their concerns. In the United States, it is also difficult to find mental health services that are accessible and take the appropriate health insurance. Telehealth visits are an attempt to broaden accessibility and provide services even if a provider is far away, but these visits can still be quite costly and require a stable internet connection. Unlike other behaviors, it is incredibly difficult to completely “disconnect” when many aspects of work and education depend upon the utilization of social media and the internet. Even now, there is also very real stigmatization for mental health that is still prominent for individuals pursuing careers in healthcare. This can also be a roadblock to people who want to seek out help but fear it may be a “black mark” on their record.

In addition to a rise in usage, many companies and individuals are developing robust social media platforms in order to market themselves or their products. This increased exposure to constant editing and advertising is another potential contributing factor to worsening mental health. Just as food commercials were known for many years to use fake food and embellishments that looked more visually appealing, a similar process is occurring with social media branding. Given the fact that two-thirds of all photos on social media have been edited in some way, it is an exceptionally prevalent phenomenon (Spector, 2017). Therefore, it is crucial that this phenomenon is recognized by the healthcare and political community to mitigate its detrimental impacts on self-perceptions.

How SMU impacts other age groups beyond college-age individuals, as well as various gender identities and ethnic and racial groups, is still an area of research that requires further study. Many of the existing studies found were sampled from predominantly white women. Furthermore, many of the sampled individuals may have had preexisting conditions that could confound the results. Some of the studies indicated that this was controlled for, but it is a potential confounding factor for other findings. In order to gain a more representative and comprehensive understanding of how COVID-19 impacted different groups' self-perceptions, it is necessary to collect more diverse and representative samples. That information will prove to be a valuable tool for determining other potential confounding factors and how differences in the environment and other factors contribute to this phenomenon.

If the uptick in elective procedures is somehow attributed to an increased virtual presence, then it may make sense for providers to suggest mitigation measures and to identify any abnormalities in patient habits that could be a cause for concern. Providers should inform patients of potential aesthetic procedures on mental health and worsening self-perception due to SMU and the pandemic. By identifying problematic habits, providers can predict whether a patient should seek additional help from another professional provider or other programs. Having several resources and options available allows the patient to choose one that they are most comfortable with, such as a peer support group. It is especially helpful for providers to allow for and promote programs that specifically uplift individuals who face community mental health stigmas. These types of programs can

be advertised in a variety of routes whether during a follow-up appointment or via informational postings in community spaces.

## Conclusion

The detrimental effects of high SMU are an area of research that should continue to be of emphasis and pertinence during and following the COVID-19 pandemic. Low self-perception and diminished self-esteem can be the root causes of a myriad of other disordered behaviors and thoughts such as eating disorders and anxiety. Further research should be conducted to see what other impacts, confounding variables, or effects may take place for other demographic groups and whether these changes continue post-pandemic. As mental health continues to be stigmatized in many communities, it is important that this issue is addressed and not taken lightly. Mitigation strategies should include programming that is helpful for diverse groups of participants. Given that some individuals cite social media as a coping strategy for stress and an outlet that provides a sense of community, it may make sense to bring mitigation strategies directly to social media. Providers will play a crucial role in informing the patient of potentially problematic behaviors and all the options available to them. From a broader standpoint, destigmatizing mental illness and promoting body-positive movements are both good avenues for reducing these detrimental impacts on young adults.

## References

- Aparicio-Martinez, P., Perea-Moreno, A. J., Martinez-Jimenez, M. P., Redel-Macías, M. D., Pagliari, C., & Vaquero-Abellan, M. (2019). Social media, thin-ideal, body dissatisfaction and disordered eating attitudes: An exploratory analysis. *International Journal of Environmental Research and Public Health*, *16*(21), 4177. <https://doi.org/10.3390/ijerph16214177>
- Boursier, V., Gioia, F., Musetti, A., & Schimmenti, A. (2020). Facing loneliness and anxiety during the COVID-19 isolation: The role of excessive social media use in a sample of Italian adults. *Frontiers in Psychiatry*, *11*, 586222. <https://doi.org/10.3389/fpsyg.2020.586222>
- Bowden-Green, T., Hinds, J., & Joinson, A. (2021). Personality and motives for social media use when physically distanced: A uses and gratifications approach. *Frontiers in Psychology*, *12*, 607948. <https://doi.org/10.3389/fpsyg.2021.607948>
- Daar, D. A., Chiodo, M. V., & Rohrich, R. J. (2021). The zoom view: How does video conferencing affect what our patients see in themselves, and how can we do right by them?. *Plastic and Reconstructive Surgery*, *148*(1), 172e–174e. <https://doi.org/10.1097/PRS.00000000000008031>
- Giorgianni, F., Danthinne, E., & Rodgers, R. F. (2020). Consumer warning versus systemic change: The effects of including disclaimer labels on images that have or have not been digitally modified on body image. *Body Image*, *34*, 249–258. <https://doi.org/10.1016/j.bodyim.2020.07.007>
- Loneragan, A. R., Bussey, K., Mond, J., Brown, O., Griffiths, S., Murray, S. B., & Mitchison, D. (2019). Me, my selfie, and I: The relationship between editing and posting selfies and body dissatisfaction in men and women. *Body Image*, *28*, 39–43. <https://doi.org/10.1016/j.bodyim.2018.12.001>
- Ma, Z., Zhao, J., Li, Y., Chen, D., Wang, T., Zhang, Z., Chen, Z., Yu, Q., Jiang, J., Fan, F., & Liu, X. (2020). Mental health problems and correlates among 746 217 college students during the

- coronavirus disease 2019 outbreak in China. *Epidemiology and Psychiatric Sciences*, 29, e181. <https://doi.org/10.1017/S2045796020000931>
- McBride, C., Costello, N., Ambwani, S., Wilhite, B., & Austin, S. B. (2019). Digital manipulation of images of models' appearance in advertising: Strategies for action through law and corporate social responsibility incentives to protect public health. *American Journal of Law & Medicine*, 45(1), 7–31. <https://doi.org/10.1177/0098858819849990>
- McLean, S. A., Jarman, H. K., & Rodgers, R. F. (2019). How do “selfies” impact adolescents' well-being and body confidence? A narrative review. *Psychology Research and Behavior Management*, 12, 513–521. <https://doi.org/10.2147/PRBM.S177834>
- Mills, J. S., Musto, S., Williams, L., & Tiggemann, M. (2018). “Selfie” harm: Effects on mood and body image in young women. *Body Image*, 27, 86–92. <https://doi.org/10.1016/j.bodyim.2018.08.007>
- Naslund, J. A., Aschbrenner, K. A., Marsch, L. A., & Bartels, S. J. (2016). The future of mental health care: peer-to-peer support and social media. *Epidemiology and Psychiatric Sciences*, 25(2), 113–122. <https://doi.org/10.1017/S2045796015001067>
- Padley, R. H., & Di Pace, B. (2021). The psychological impact of remote communication on body-image perception: Cosmetic surgery on the rise. *Aesthetic Plastic Surgery*, 1–3. Advance online publication. <https://doi.org/10.1007/s00266-021-02554-3>
- Pahayahay, A., & Khalili-Mahani, N. (2020). What media helps, what media hurts: A mixed methods survey study of coping with COVID-19 using the media repertoire framework and the appraisal theory of stress. *Journal of Medical Internet Research*, 22(8), e20186. <https://doi.org/10.2196/20186>
- Pikoos, T. D., Buzwell, S., Sharp, G., & Rossell, S. L. (2021). The zoom effect: Exploring the impact of video calling on appearance dissatisfaction and interest in aesthetic treatment during the COVID-19 pandemic. *Aesthetic Surgery Journal*, sjab257. Advance online publication. <https://doi.org/10.1093/asj/sjab257>
- Rice, S. M., Siegel, J. A., Libby, T., Graber, E., & Kourosh, A. S. (2021). Zooming into cosmetic procedures during the COVID-19 pandemic: The provider's perspective. *International Journal of Women's Dermatology*, 7(2), 213–216. <https://doi.org/10.1016/j.ijwd.2021.01.012>
- Sidani, J. E., Shensa, A., Hoffman, B., Hanmer, J., & Primack, B. A. (2016). The association between social media use and eating concerns among US young adults. *Journal of the Academy of Nutrition and Dietetics*, 116(9), 1465–1472. <https://doi.org/10.1016/j.jand.2016.03.021>
- Spector, N. (2017, May 30). *So it's fine if you edit your selfies . . . but not if other people edit theirs?* NBCNews.com. Retrieved October 5, 2021, from <https://www.nbcnews.com/business/consumer/so-it-s-fine-if-you-edit-your-selfies-not-n766186>.
- Tiggemann, M., Anderberg, I., & Brown, Z. (2020). Uploading your best self: Selfie editing and body dissatisfaction. *Body Image*, 33, 175–182. <https://doi.org/10.1016/j.bodyim.2020.03.002>
- Woods, H. C., & Scott, H. (2016). #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, 51, 41–49. <https://doi.org/10.1016/j.adolescence.2016.05.008>

- Zhang, X., Liu, J., Han, N., & Yin, J. (2021). Social media use, unhealthy lifestyles, and the risk of miscarriage among pregnant women during the COVID-19 pandemic: Prospective observational study. *JMIR Public Health and Surveillance*, *7*(1), e25241. <https://doi.org/10.2196/25241>
- Zhao, N., & Zhou, G. (2021). COVID-19 stress and addictive social media use (SMU): Mediating role of active use and social media flow. *Frontiers in Psychiatry*, *12*, 635546. <https://doi.org/10.3389/fpsyt.2021.635546>



