

# **Exploring Social Media and the Fear of Missing Out**

A Research Paper submitted to the Department of Engineering and Society

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

**John Nguyen**

Spring 2023

On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Advisor

Richard D. Jacques, Department of Engineering and Society

## **Introduction**

With the rise of the digital age and the ever-growing advancements in technology, people have been able to communicate and connect with one another on a scale that has never been seen before. Various social media platforms such as Facebook, Twitter, Instagram, and Snapchat have allowed people to not only maintain their current relationships, but to form new ones as well. Since its inception, the popularity and impact of social media has been rapidly expanding. In less than two decades, Facebook has gone from a small website made for college students to interact, to one of the leading faces in Big Tech, boasting 2.8 billion monthly users by the end of 2020 (Richter, 2021). Furthermore, in 2019, 70% of adults in the United States said that they used social media, a number strikingly higher than the 5% who did so in 2005 (Allen, 2019). This exponential growth in popularity has also come with an increase in influence. From homemade YouTube videos blasting a then 13-year-old Justin Bieber into global stardom (Rizzo & Schollenberger, 2021), an ice bucket challenge raising \$115 million dollars for the ALS association (ALS Association, n.d.), and now the meteoric rise of TikTok; there is no denying that the impact of social media will continue to snowball.

As previously mentioned, almost three-quarters of adults today are on some form of social media. Even so, the percentage of teenagers on social media is even higher than that of adults. Surveys have shown that 90% of teenagers have used social media, of which 75% are active and 51% use it daily (American Academy of Child and Adolescent Psychiatry, 2018). Additionally, the teenage years are often considered some of the most impressionable years of one's life. Coupling this with daily and long-term use of social media, there is a great cause for concern in regard to time spent on social media and its effects on self-perception and mental health. As social media continues to grow and become more ingrained in people's daily lives, it

is crucial to understand the harmful effects it can have and ways to prevent them. Through this paper I hope to clearly frame the relationship between social media and the fear of missing out, also known as FoMO. In doing so, I will analyze the current social media landscape and FoMO, discussing the link between the two, and then present ways in which social media companies and their users can help protect themselves from FoMO.

## **Social Media Landscape**

To understand how social media and FoMO are connected, it is necessary to first discuss the landscape of social media. While the original goal of social media sites was to allow people to keep up with friends and family around the world, modern-day social media culture has shifted away from candid life updates to “highlight reels,” i.e., a collection of someone’s greatest moments (Maples, 2022). Not even accounting for social media, people are more inclined to tell their friends and family about good experiences and moments they are proud of. Naturally, this is even more so the case on social media platforms, where users can portray themselves however, they choose to. In determining whether this “highlight reel” culture is a positive or negative aspect of social media; it mainly depends on the point of view being looked at. There are two points of view to consider. The first being of the poster themselves, i.e., the person behind their own account, choosing which moments of their life to share. The second perspective is that of the audience, which in most cases is friends and family of the poster.

This act of presenting only one’s best self on social media can be boiled down to a form of selective self-presentation (Kim & Baek, 2014). A study conducted by Gonzales and Hancock (2011) took 63 university students, split them into three groups and had them fill out a survey. All three groups were sat at a computer desk, but the first group had the computer on and opened to their Facebook profile, the second group had a mirror on the desk, and the third group had the

computer off and no mirror. The results of Gonzales and Hancock (2011) found that the exposure to one's own Facebook profile had a positive effect on reported self-esteem when compared to the mirror group. These results also suggest that there is a positive correlation between selective self-presentation and self-esteem in individuals (Gonzales & Hancock, 2011). Therefore, there is a great benefit to this highlight reel culture in the eyes of the poster. It is understood that reflecting on your best moments feels much better than looking back on any negative experiences.

On the other hand, when considering the perspective of the viewer, highlight reel culture can have a negative effect on mental health. If someone is consistently exposed to curated feeds of others living what seem to be the "perfect" life, it can create thoughts of doubt concerning happiness and fulfillment in their own life. Most often, this doubt takes the form of upwards social comparisons, where people begin to compare their day-to-day lives with what they see on social media (Samra et. al, 2022). Over time, enough of these comparisons could have negative effects on one's own self-perception and well-being. In fact, one survey found that passive social media usage, viewing other people's photos, comments, updates, and etc., does have a positive correlation with upward social comparisons among users and their friends, which in turn is correlated with lower self-esteem (Wang et al., 2017).

Keeping this highlight reel culture in mind, its common knowledge that social media is designed to be addictive. Social media companies are always trying to figure out how they can keep the average user on their platform for as long as possible. One approach many platforms have taken is enabling users to "like" posts. People can say that they like a post by tapping a "like" button, which will then increment the like counter on the post. When someone sees that their post is being liked by a lot of people, their brain releases dopamine causing them to feel

good (Mcnamara, 2021). In essence, we now have social media culture that permeates the illusion of people living “perfect” lives paired with a liking feature that is known to produce dopamine in individuals who receive them. This combination can result in people spending increased time on social media, which can then turn into social media addiction. Moreover, studies have shown that social media addiction can increase the likelihood of developing mental health disorders such as depression (Addiction Center, 2023).

### **The Fear of Missing Out**

The fear of missing out, or FoMO, can be described as the feeling of anxiety or envy caused by the belief that others are living better lives than you are (Scott, 2022). The rise of social media has played a significant role in bringing awareness to FoMO, in part, due to the fact that social media is often said to exacerbate FoMO in its users. Scheinfeld and Voorhees (2022) cites social media as the reason many people were still experiencing FoMO during the COVID-19 pandemic, despite the isolation measures put in place. While it may be surprising to hear that people were still experiencing FoMO during a time where people were told to stay inside, much less partake in large social gatherings, the reason for it is just that. Because of the pandemic, one of the only ways people could stay updated with one another was through social media. This led to increased social media usage across all major platforms (Dixon, 2022). With this increase, you saw many people watching their friends get together, i.e., despite the restrictions, which garnered even more intense feelings of FoMO because, in a way, people felt like they were being punished for being responsible (Scheinfeld & Voorhees, 2022). Scheinfeld and Voorhees (2022) also mention that this could have reduced the willingness in some people to follow safety protocols because they felt like they were being excluded because of them. This helps to illustrate just how

much of an impact FoMO can have on someone, given that some would consider risking their health and the health of others because of it.

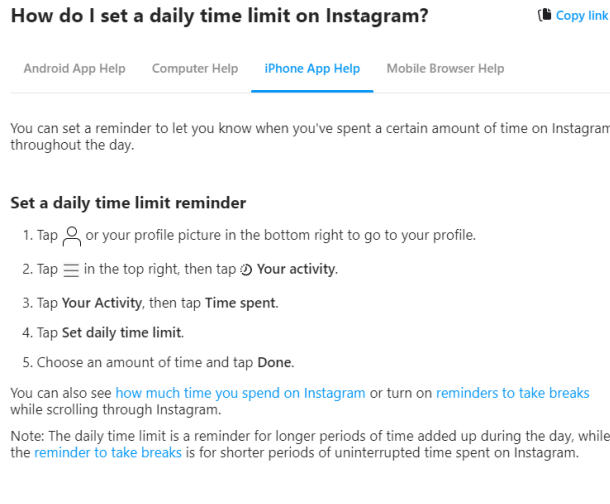
While awareness of the term FoMO is in large part due to the growth of social media over the past two decades, the core feeling of wanting to be included has been felt by people every day, predating social media (Parmar, 2022). Laurence (2023) states that it is an innate human desire to feel like you belong somewhere; people want to feel that they have a connection with others. This is part of the reason some people will choose to go to events that they are invited to but might not really want to go to (Laurence, 2023). Then, when social media is added on top of this, you now have people seeing pictures and reading about events that they might not have even been able to attend. In turn, this can cause people to spend even more time on social media in order to feel like they are staying up to date and in the mix with what other people are doing. A study published in 2021 found that there is a positive correlation between FoMO and both social media use and problematic social media use, i.e., extensive, and uncontrolled use (Fioravanti et al., 2021). This means that the more time someone spends on social media, the higher the likelihood is that they will experience FoMO. Likewise, experiencing FoMO may also lead to spending more time on social media.

FoMO has also been linked with a variety of negative emotions and behaviors. Those who have FoMO may experience difficulties with sleeping, isolation from others, sadness, and depression (Laurence, 2023). A research study by Baker et al. (2016) had college students complete the Fear of Missing Out Scale (Przybylski et al., 2013), the Physical Symptoms Checklist (Pennebaker, 1982), the Center for Epidemiologic Studies Depression Scale (Lewinsohn et al., 1997 as cited in Baker et al., 2016), and the Mindful Attention Awareness Scale (Brown & Ryan, 2003 as cited in Baker et al., 2016). Additionally, the study asked

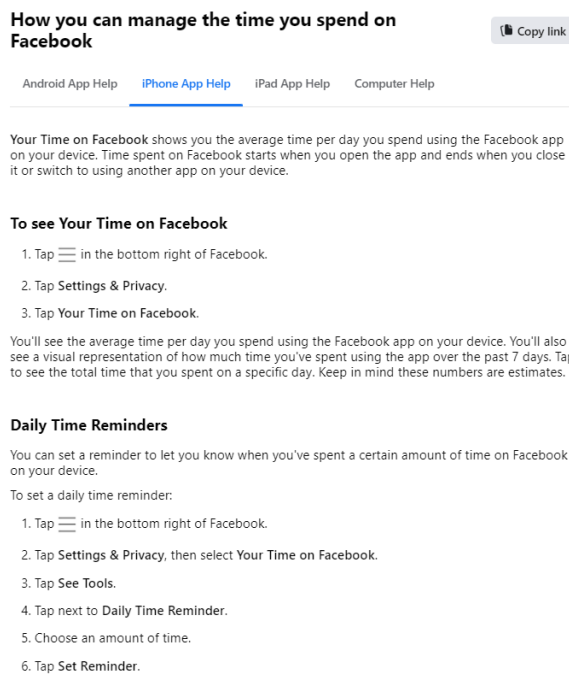
participants questions regarding their social media use, e.g., how much time they spend on social media daily. In short, by assessing how students rated themselves on each of these items, Baker et. al (2016) were able to conclude that people with higher levels of FoMO also exhibited more negative physical and depressive symptoms, as well as less mindful attention. Knowing how serious the consequences of FoMO can be, it is quite alarming to see just how many social media users have experienced it. In 2013, a survey found that 56% of social media users had experienced FoMO at some point (Mashable, 2013). This means that number of people who had experienced FoMO on social media was greater than the portion who had not.

## **Mitigation**

It has been established that there is a definitive link between social media, FoMO, and negative effects on someone's well-being. But what can be done to help prevent social media users from feeling FoMO? One thing that users can do for themselves is set daily time limits on the social media platforms they use. Currently, some of the major social media platforms already have a built-in feature that allows users to set a daily time limit for themselves. Once they reach the time limit, they will receive a notification in the app. The three figures below show how to set a daily time limit on Instagram, Facebook, and TikTok.



**Figure 1.** Instagram's guide on setting a daily time limit (Instagram, n.d.).



**Figure 2.** Facebook's guide on setting a daily time limit (Facebook, n.d.).



### What is daily screen time on TikTok?

Daily screen time is a screen time management setting that allows you to manage your app usage. It lets you set a daily screen time limit so that you get notified when you reach that time on TikTok. You can turn this setting on and off at any time. If you're aged 13 to 17, the setting is turned on by default to 1 hour.

To manage daily screen time:

1. In the TikTok app, tap **Profile** at the bottom.
2. Tap the **Menu** button at the top.
3. Tap **Settings and privacy**.
4. Tap **Screen time**, then tap **Daily screen time**.
5. Follow the steps in the app to set or edit a daily time. You can choose from several options or set a custom time.

You'll be notified if you reach your daily screen time and you can choose to close the app or enter a preset passcode to return to TikTok.

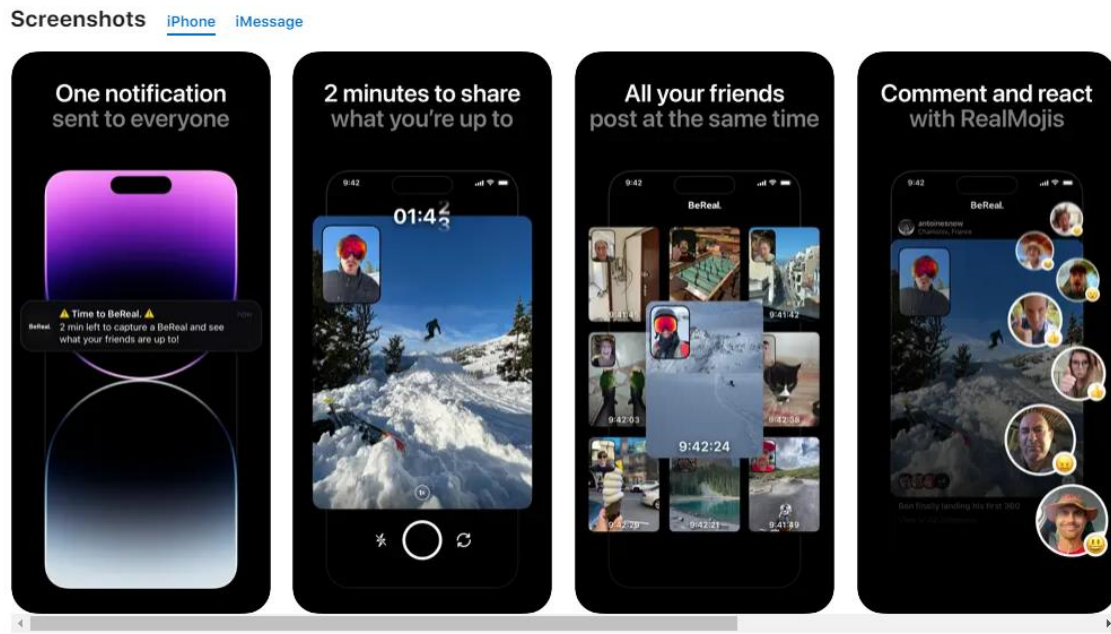
Daily screen time is also available in [Family Pairing](#).

**Figure 3.** TikTok's guide on setting a daily limit (TikTok, n.d.).

As of 2022, the average social media user spends 147 minutes on social media each day (We Are Social et al., 2022). This number is more than four times the 30-minute limit suggested by Hunt et al. (2018). Hunt et al. (2018) conducted a study in which University of Pennsylvania students were split into two groups, one tasked with restricting their use of Facebook, Instagram, and Snapchat to 10 minutes per platform, totaling 30 minutes total per day, and the other group acting as the control, using social media as normal. The study ran over the course of four weeks with a survey being sent out to the participants at the end of each week. The survey was meant to examine the well-being of each participant through the use of various scales and questionnaires relating to mental health. This survey was similar to the one used by Baker et al. (2016) given that both used the Fear of Missing Out Scale (Przybylski et al., 2013), as a way of measuring FoMO. After the four weeks were over, the results found that the strict 30-minute daily limit had a profound impact on levels of FoMO, loneliness, and depressive symptoms. When looking at FoMO specifically, the results showed a large decline in both groups. In fact, one participant said

that the study made them feel “a lot more positive about themselves” and that not comparing their life to others had a “much stronger impact” than they initially expected. While the 30-minute daily limit used in this study is by no means an end all be all, it does reinforce the idea that reducing your time spent on social media can be greatly beneficial to your mental health and reduce FoMO.

With the approach of limiting your time spent on social media, the responsibility falls on the user to adhere to the limitations they have set. However, social media companies themselves can also introduce new features on their platforms that would help safeguard users from FoMO. One approach would be to implement functionality that encourages users to be more authentic, thus helping to reduce highlight reel culture. An example of this would be the app, BeReal, which refers to itself as: “A new and unique way to discover who your friends really are in their daily life” (BeReal, n.d.). Launched in 2020, the app functions differently than traditional social media sites like Facebook, Instagram, or Twitter (Cavender, 2022). The entire focus of BeReal is to, like its name suggests, “be real.” According to the app’s store page, at a random time each day, the app sends out a notification that it is “Time to BeReal” (BeReal, 2023). Users are then given 2 minutes to take a photo, which are then all posted at the same time, allowing them to see what all of their friends are doing at that exact time (BeReal, 2023). The figure below is a screenshot taken from BeReal’s page in the App Store, which provides a visual on how the app actually looks.



**Figure 4.** BeReal visualization taken from the App Store (BeReal, 2023).

Unlike other social media sites, BeReal offers no editing tools and does not even allow users to post photos taken from outside the app (Cavender, 2022). This means that anything posted on the platform is a glimpse into that person’s “real life.” Furthermore, the app does not allow any passive social media usage, i.e., you must post your own photo before being able to see anyone else’s (Cavender, 2022). This is another benefit because as mentioned earlier, passive social media usage does tend to cause upward social comparisons, which then have a correlation with lower self-esteem (Wang et al., 2017). BeReal’s authentic approach towards social media has garnered them a lot of success. Since the beginning of 2022, BeReal’s number of monthly downloads jumped from 760 thousand in January 2022 to 14.7 million in September 2022 (Sensor Tower, 2022). This proves that there is a very real desire among social media users for more features that promote “real life” on these platforms. Not only that, but this type of

functionality can work towards promoting positive mindsets among social media users, rather than inducing more social comparisons.

## **Conclusion**

The creation of social media has provided countless people with a way to maintain their connections with friends and family in a way that they otherwise could not do without. For many, social media has become a part of their daily lives. Each day millions of people login to their various social media profiles and check for updates from people that they know. While there is no denying the benefits that social media provides, there is a very real concern regarding the current social media landscape and the fear of missing out (FoMO) in its users.

The research in this paper has shown that the current “highlight reel” culture present in social media can have wide-ranging effects on its users. On one hand, highlight reel culture has been shown to improve the self-esteem of the poster. But on the other hand, highlight reel culture has been shown to cause users to compare their lives to what they see on their feeds. This, in turn, has the potential to induce FoMO in social media users. Over time, elevated levels of FoMO can lead to unhealthy social media usage and other negative effects on one’s well-being such as depression. Both social media companies and its users have a responsibility to themselves to work towards preventing FoMO. For example, users can take on this responsibility by being cognizant of the time they spend on social media, setting limits on themselves when it begins feeling like too much, and social media companies can work to introduce features that help users to do this. Additionally, social media companies can create features that promote more authenticity, which would help to reduce the pressure to portray a “perfect” life.

In short, the goal of this paper was to present the relationship between the two in such a way that is easily understandable, while also placing emphasis on the need for solutions. I think that the relationship between social media and FoMO is one that is particularly important, but in my experience, not often discussed. As someone who has grown up during the rise of social media, I have seen and experienced firsthand, just how much of an effect FoMO can have on the way someone views themselves. Because of that, this topic was especially important to me, and I hope to see more efforts made to reduce FoMO in the future.

## References

- Addiction Center. (2023, April 3). *Social Media Addiction*. Addiction Center.  
<https://www.addictioncenter.com/drugs/social-media-addiction/>
- Allen, S. (2019, September 20). *Social media's growing impact on our lives*. <https://www.apa.org>.  
<https://www.apa.org/members/content/social-media-research>
- ALS Association. (n.d.). *ALS Ice Bucket Challenge Commitments*. The ALS Association.  
<https://www.als.org/IBC>
- American Academy of Child and Adolescent Psychiatry. (2018, March). *Social Media and Teens*.  
[https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Social-Media-and-Teens-100.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx)
- Baker, Z., Krieger, H., & LeRoy, A. (2016). Fear of missing out: Relationships with depression, mindfulness, and physical symptoms. *Translational Issues in Psychological Science*, 2, 275–282.  
<https://doi.org/10.1037/tps0000075>
- BeReal. (2023, April 5). *BeReal* (Version 0.36.1) [Mobile app]. App Store.  
<https://apps.apple.com/us/app/bereal-your-friends-for-real/id1459645446>
- BeReal. Your Friends for Real*. (n.d.). <https://bere.al/en>
- Cavender, E. (2022, April 6). *BeReal is what "casual Instagram" wants to be*. Mashable.  
<https://mashable.com/article/bereal-photosharing-app>
- Dixon, S. (2022, October 18). *Topic: Social media use during coronavirus (COVID-19) worldwide*. Statista. <https://www.statista.com/topics/7863/social-media-use-during-coronavirus-covid-19-worldwide/>

- Facebook. (n.d.). *How you can manage the time you spend on Facebook* / Facebook Help Center.  
[https://www.facebook.com/help/www/1737706169659354?paipv=0&eav=Afb2BtzR7DFGuYE8njGZbceTsDQ8bHxpaC2mLtpzumRxG1OtSZiIRKn4GyamPytblt0&\\_rdr](https://www.facebook.com/help/www/1737706169659354?paipv=0&eav=Afb2BtzR7DFGuYE8njGZbceTsDQ8bHxpaC2mLtpzumRxG1OtSZiIRKn4GyamPytblt0&_rdr)
- Fioravanti, G., Casale, S., Benucci, S. B., Probst, A., Falone, A., Ricca, V., & Rotella, F. (2021). Fear of missing out and social networking sites use and abuse: A meta-analysis. *Computers in Human Behavior*, 122, 106839. <https://doi.org/10.1016/j.chb.2021.106839>
- Gonzales, A. L., & Hancock, J. T. (2011). Mirror, Mirror on my Facebook Wall: Effects of Exposure to Facebook on Self-Esteem. *Cyberpsychology, Behavior, and Social Networking*, 14(1–2), 79–83. <https://doi.org/10.1089/cyber.2009.0411>
- Hunt, M., Young, J., Marx, R., & Lipson, C. (2018). No More FOMO: Limiting Social Media Decreases Loneliness and Depression. *Journal of Social and Clinical Psychology*, 37, 751–768. <https://doi.org/10.1521/jscp.2018.37.10.751>
- Instagram. (n.d.). *How do I set a daily time limit on Instagram?* / Instagram Help Center.  
[https://help.instagram.com/2049425491975359/?cms\\_platform=iphone-app&helpref=platform\\_switcher](https://help.instagram.com/2049425491975359/?cms_platform=iphone-app&helpref=platform_switcher)
- Kim, Y., & Baek, Y. M. (2014). When Is Selective Self-Presentation Effective? An Investigation of the Moderation Effects of “Self-Esteem” and “Social Trust.” *Cyberpsychology, Behavior, and Social Networking*, 17(11), 697–701. <https://doi.org/10.1089/cyber.2014.0321>
- Laurence, E. (2022, September 30). *The Psychology Behind The Fear of Missing Out (FOMO)*. Forbes Health. <https://www.forbes.com/health/mind/the-psychology-behind-fomo/>
- Maples, D. S. (2022, May 25). *Don't Let the Highlight Reel Fool You*. Medium.  
<https://betterhumans.pub/dont-let-the-highlight-reel-fool-you-14f9053fe63d>

- Mashable. (2013, July 9). *U.S. social networks who suffer from FOMO as of June 2013*. Statista.  
<https://www.statista.com/statistics/262138/percentage-of-us-social-networks-who-suffer-from-fomo/>
- Mcnamara, B. (2021, November 10). *The Science Behind Social Media's Hold on Our Mental Health*. Teen Vogue. <https://www.teenvogue.com/story/the-science-behind-social-medias-hold-on-our-mental-health>
- Parmar, R. (2022, October 6). *Understanding the Fear of Missing Out*. Psychiatric Times.  
<https://www.psychiatrictimes.com/view/understanding-the-fear-of-missing-out>
- Pennebaker, J. W. (1982). *The Psychology of Physical Symptoms*. Springer.  
<https://doi.org/10.1007/978-1-4613-8196-9>
- Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841–1848. <https://doi.org/10.1016/j.chb.2013.02.014>
- Richter, F. (2021, February 4). *Infographic: Facebook Keeps On Growing*. Statista Infographics.  
<https://www.statista.com/chart/10047/facebooks-monthly-active-users>
- Rizzo, P., & Schollenberger, K. (2021, November 1). *How old was Justin Bieber when he got famous?* The US Sun. <https://www.the-sun.com/entertainment/1834463/justin-bieber-teenage-fame-pop-star-married/>
- Samra, A., Warburton, W. A., & Collins, A. M. (2022). Social comparisons: A potential mechanism linking problematic social media use with depression. *Journal of Behavioral Addictions*, 11(2), 607–614. <https://doi.org/10.1556/2006.2022.00023>



Scheinfeld, E., & Voorhees, H. L. (2022). How Social Media, FoMO, and Isolation Influence Our Perceptions of Others Who “Break the Rules.” *Social Media + Society*, 8(2),

20563051221103840. <https://doi.org/10.1177/20563051221103841>

Scott, E. (2022, July 19). *Do You Have FOMO? Here Is How to Cope*. Verywell Mind.

<https://www.verywellmind.com/how-to-cope-with-fomo-4174664>

Sensor Tower. (2022, October 11). *BeReal downloads worldwide 2022*. Statista.

<https://www.statista.com/statistics/1338262/bereal-app-downloads-worldwide/>

TikTok. (n.d.). *Screen time | TikTok Help Center*. [https://support.tiktok.com/en/account-and-](https://support.tiktok.com/en/account-and-privacy/account-information/screen-time)

[privacy/account-information/screen-time](https://support.tiktok.com/en/account-and-privacy/account-information/screen-time)

Wang, J.-L., Wang, H.-Z., Gaskin, J., & Hawk, S. (2017). The Mediating Roles of Upward Social Comparison and Self-esteem and the Moderating Role of Social Comparison Orientation in the

Association between Social Networking Site Usage and Subjective Well-Being. *Frontiers in*

*Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.00771>

We Are Social, DataReportal, & Hootsuite. (2022, January 26). *Global daily social media usage*

2022. Statista. <https://www.statista.com/statistics/433871/daily-social-media-usage-worldwide/>