TikTok use and body image issues: A review on algorithm and interface design tactics that promote disordered eating in adolescents

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Abstract

TikTok is a social media platform that has gained popularity in the past years (Kaufman, 2020) for its short form content that is personalized to each user. However, along with its rise in popularity has come a rise in criticism for its potential negative impact on its users' mental health, specifically its younger demographics (Kaufman, 2020). This review paper explores how the features of the TikTok recommendation algorithm and user interface contribute to the promotion of eating disorders in their adolescent users. First, it will touch on the main features of the user interface and recommendation algorithm that have the largest impact on users. Then, it will examine how these features contribute to a push in unhealthy content towards young adults, which may distort their perceptions of reality. Specifically, it will explore how the addictive nature of the algorithm contributes to body dysmorphia, memory loss, attention span issues, depression, and anxiety, and why companies continue to use these harmful algorithms. Possible solutions for both users and app developers will also be discussed.

Introduction

TikTok's popularity has soared in the past few years, with it exceeding over 2 billion downloads (Chapple, 2020). Some users have reported that the app has led them to develop body image and eating issues similar to other social media apps, such as Snapchat and Instagram. Although TikTok's community guidelines ban pro-anorexia and dangerous weight loss content, diet and exercise information and jokes continue to run rampant throughout the app (Kaufman, 2020).

This is especially concerning, considering that in the last decade, social media use has increased significantly among children and adolescents (Xu et al., 2023), who tend to be more impressionable to online content (Krosnick & Alwin, 1989). As of 2023, nearly two-thirds of teens ages 13-17 report that they use TikTok (Anderson et al., 2023). Furthermore, teenage girls, who are especially sensitive to social comparisons (Jones, 2001), are significantly more likely to report using TikTok "almost constantly" when compared to teenage boys (Anderson et al., 2023). This increased use can contribute to lower sleep quality, impaired social functioning, and boredom intolerance. Multiple studies also show that higher screen time is associated with greater symptoms of attention-deficit/hyperactivity disorder (ADHD), anxiety, depression, social isolation, and lower self-esteem. These adverse effects are being seen in younger and younger children as they begin to use social media, and are not taught proper, healthy use (Xu et al., 2023).

Due to this, this review paper will explore how TikTok's algorithm is effective at promoting unhealthy eating and body image issues. To do this, the features of TikTok's interface and algorithm that make it addictive and detrimental to its users will be discussed. Then, TikTok's effect on body dysphoria will be explored, followed by its effect on depression and anxiety, memory loss, and attention span. In the end, recommendations will be given.

Interface design

TikTok has a unique interface design that fulfills the basic requirements that allow users to become easily "addicted," though many in the scientific field hesitate to use this term "because the internet, if used effectively and with limits, was not merely useful but also essential to everyday life" (Richtel, 2023). To keep users on the app for as long as possible, TikTok includes specific features that exploit natural psychological processes, specifically through the Laws of User Experience (UX). For example, through its swiping feature, it follows Fitt's Law, which states that closer, bigger targets are easier for users to touch (Yablonski, 2024). This feature gives users a large target (swiping anywhere on screen) to easily get to the next video, promoting binge watching, where users watch many videos in succession. Additionally, its simple user interface does not give users many choices to click on, and everything can be chosen within a few clicks. This gives it a frictionless design, following Hick's Law concerning analysis paralysis, which states that providing users with too many choices actually leads to no choice being made (Yablonski, 2024). Further, TikTok's main functions of liking, commenting, and sharing are easy to do, and placed conveniently next to users' thumbs. As a result, interacting with TikTok does not require much mental effort (Cheung, 2023).

Another aspect of TikTok's interface design is its use of gamification, which takes advantage of how dopamine is released in the brain. On TikTok, users can endlessly swipe and as Roberts and David (2023) wrote, "TikTok users also reported higher levels of the flow dimensions 'enjoyment' and 'time distortion.'" With every swipe, there is something new and exciting, leaving users curious for more. This cycle of anticipation, reward, and curiosity drives users to keep scrolling by triggering the release of dopamine, a neurotransmitter associated with pleasure and reward. How users interact with the app through likes, comments, and shares also gamifies TikTok, and aids in TikTok's app growth as users are encouraged with social validation and recognition to create and share their own content (Lopez, 2023).

The unpredictable nature of TikTok's content also drives users to keep scrolling. Although sometimes users will see content they like, sometimes they are shown content that they do not like as well. Similar to gambling, this random reinforcement releases dopamine in users' brains (Koetsier, 2020). This aspect of the "magical maybe" also applies to the idea that someone may or may not find a notification when they look on their phone, contributing to a large increase in dopamine when a notification is seen. However, this dopamine hit disappears quickly, and the brain searches for dopamine again by repeatedly looking at the phone screen in hopes of more notifications (Macit et al., 2018). Again, this sense of social validation from likes, follows, and comments releases feel-good neurotransmitters (Vishwakarma, 2022).

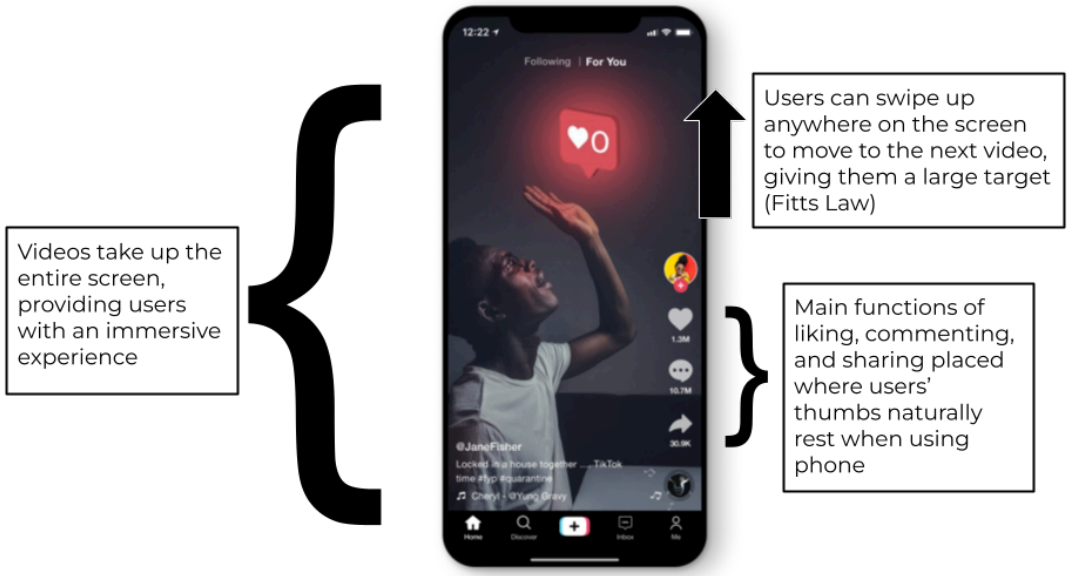

Figure 1. Example of TikTok UI. The main functions of liking, commenting, and sharing are all easily accessible on the side, where users' thumbs naturally rest. The app automatically puts users in full-screen mode, providing a more immersive experience. Moreover, users are not given many app functions to choose from, preventing analysis paralysis. (iPhone image adapted from Lopez 2024.)

Algorithm Design

User Theories of TikTok's Algorithm Design

Since TikTok's algorithm has been identified as addictive (Koetsier, 2020), there have been many user folk theories hypothesizing how it works. For example, some people believe that video engagement plays a large role in whether or not the algorithm will boost a video. Factors such as comments, likes, shares, and play count are all believed to impact how much the algorithm will favor a video. Some users and creators also believe that posting at a certain time of day, when more people are on TikTok, allows videos to gain more popularity. Using and piling hashtags such as *#foryou* (i.e., a user's curated feed that is presented when they first enter the app) is also believed to help boost videos (Klug et al., 2021). Overall, most people have a basic awareness of how the algorithm works, understanding that anyone can manipulate the TikTok algorithm. Specifically, Issar (2023) found that the majority of participants agreed that "the content presented to you is a function of the TikTok algorithm's idea of who you are." In fact, users even felt that the algorithm was so accurate that it knew their sexual orientations. Lastly,

some users had a level of “rhetorical awareness,” as they believed that certain metrics of user engagement mattered more than others, the algorithm was constantly evolving, and it could be trained.

Another study by Karizat (2021) surveyed participants and found that users believed that the algorithm suppresses content about race and by people of color, while amplifying White voices. They also believed that the algorithm valued content made by those of a higher socioeconomic class by boosting videos with backgrounds or environments and aesthetics that displayed a wealthy lifestyle. The “default” algorithm was believed to not include LGBTQ+ creators. Participants also believed creators who fit the conventional beauty standard and are able-bodied had content boosted. All this contributes to the Identity Strainer Theory, which states that “users believe an algorithm filters out and suppresses certain social identities” (Karizat, 2021). Two consequences of this are algorithmic privilege, in which certain users benefit from algorithms because of their identities, and algorithmic representational harm, in which users experience harm when they do not have algorithmic privilege and are subjected to algorithmic symbolic annihilation. In summary, users believe that the TikTok algorithm “suppresses content related to marginalized social identities based on race and ethnicity, body size and physical appearance, ability status, class status, LGBTQ identity, and political and social justice group affiliation” (Karizat, 2021).

Overall, the majority of people believe that TikTok “knows” them well, and is good at showing the right things to catch their attention. They are aware of how TikTok profiles and surveillances them (Schellewald, 2022).

Actual Algorithm Design

Many of these aforementioned ideas that people have endorsed believing overlap with how the TikTok algorithm actually works. Video engagement through comments, likes, shares, and high play count all positively correlate with the number of video plays. Additionally, trending videos were mostly posted at a specific time, between 6AM-4PM UTC. However, there was no obvious relationship found between the total popularity of hashtags put on a single video and the play count (Klug et al., 2021).

In addition, Zhao (2020) identified the specific processes that TikTok’s algorithm goes through to determine “good” content. It found that TikTok is “largely dependent on the powerful AI algorithms and content distribution strategies.”

In terms of launching new content, TikTok uses partitioned data buckets. This is done by dividing users into multiple small batch buckets randomly. When new content is released, it is first released to one bucket in order to test the recommendations’ effects. Views, likes, replays, shares, and completion rates are recorded, though each of these are given different weights of importance. If the video is identified to have the potential to be popular, it is sent into a medium bucket, and the process is repeated. This process is continued until the content is released to larger and larger buckets, and eventually, the entire app (Zhao, 2020).

Another factor that contributes to TikTok’s success is its extensive number of genres, a “full coverage of users’ interest.” TikTok’s parent company, ByteDance, applied for an invention patent for “A Global Interest Discovery Recommendation Method and Device,” which systematically categorizes a large amount of content to better fit the interest of users through hierarchical tree diagrams of interest labels. This allows each user to receive fully personalized video feeds based on their personality, content labels, and characteristics of their environment.

This begins by sorting the user's information and labeling them through interest characteristics, identity characteristics, and behavioral characteristics (Zhao, 2020).

For example, when signing into the app, logging in using a third-party social account allows the algorithm to mine existing users' data and historial social behavior from external data to analyze their habits. The basic identity information TikTok collects is users' gender, age, location, and occupation, all of which can be predicted by the algorithm (Zhao, 2020). User location can be found from users authorizing access to location information. Through traditional clustering methods (finding the center of the cluster), the user's residence can be found. From there, their workplace, business trip location, and travel locations can all be found. Further, behavioral characteristics are found when users use and interact with the app. For example, if a user uses TikTok very often but for a short time each time, then the algorithm may recommend shorter videos. These updates are all done in real time (Zhao, 2020).

This data has a large impact on what videos users are shown. In particular, research found that the location of users strongly impacts the posts they are shown by the app (Boeker & Urman, 2022). For example, U.S. users have more overlapping posts with each other than when compared to other countries, like Canada. Language does not influence the recommendation system as strongly as the location does. Understandably, accessing TikTok from a certain location also affects the language of the content presented. For instance, accessing TikTok from the U.S. shows English content more than content of any other language, regardless of the user's language settings (Boeker & Urman, 2022).

Additionally, hashtags and likes diverge users' feeds, allowing the recommendation algorithm to infer what type of content they like and personalize it more. Following certain content creators also influences the recommendation algorithm, as users who follow similar people have similar feeds. Moreover, the longer users watch a video, the stronger the influence is on the algorithm's recommendations. Of these elements, following specific content creators is considered the strongest factor, followed by watching certain videos for a longer period of time, and liking specific posts. Lastly, the video view rate, and like features also impact what will be shown to users (Boeker & Urman, 2022).

All these algorithmic parts contribute to TikTok's addictiveness. TikTok's short videos kill fragmentary time, leading to users consuming much more media than they may have initially intended. Further, TikTok puts users in a state of extreme passive acceptance by recommending things to users rather than giving them options to choose from. In addition, the user experience is fully immersive, since users simply must swipe up for the next video, and are automatically put in full screen autoplay. This pushes users to only make judgments of whether or not they like the content, rather than make choices, which can be bothersome and painful (Zhao, 2020).

The largest feature of TikTok's algorithm driving users to use it instead of other social media like Facebook is the aspect of escapism it provides. Compared to other apps, there is lower user effort required to escape reality (Rach & Peter, 2021).

Body Dysmorphia

Overall, the push in unhealthy content by TikTok's algorithm results in users having a distorted view of reality. As a result, many users have reported signs of body dysmorphia, eventually leading to eating disorders (Gak et al., 2022). However, it is important to note that this feeling was self-reported, and does not follow the DSM (Diagnostic and Statistical Manual of

Mental Disorders) handbook used by medical professionals to diagnose body dysmorphia, which defines it as a “distressing or impairing preoccupation with an imagined or slight defect in one’s physical appearance” (Phillips et al., 2008). TikTok’s algorithm is personalized based on pre-existing vulnerabilities, found through sensitive personal data. Their relevance models are over-simplified, targeting particular groups, despite the health risks (Gak et al., 2022).

Specifically, TikTok targets users who are already insecure, and are likely to compare themselves to what they see online (Padín et al., 2021). This process of users comparing their lives and bodies to those they see online involves social comparison theory, which was popularized by psychologist Leon Festinger in 1954. This theory states that “there is a primitive drive within individuals to compare themselves with others in order to evaluate their own opinions and abilities” (Powdthavee, 2014). Social comparison online leads to user body dissatisfaction when users realize they cannot achieve an unrealistic ideal, thin body. In fact, more time spent on image-related social media is associated with more problematic eating behaviors. As a result, social media influences adolescents’ sense of identity (Padín et al., 2021). TikTok use is indirectly related to body dissatisfaction by leading users to upward state appearance comparisons, in which users compare themselves to people they believe are better than them. Eventually, this leads to more body surveillance and, subsequently, body dissatisfaction (Mink & Szymanski, 2022).

However, users compare themselves to false realities. Images on social media are known to be highly edited and carefully selected, leading people to believe that others’ lives are happier, more successful, and overall better than they really are (Padín et al., 2021). This edited and filtered content is often due to software programs, contributing to the unrealistic standards of beauty. However, many influencers even claim that they achieve their edited bodies through diet and exercises, or products they are paid to promote (Harriger et al., 2022), which further fuels distorted perceptions of reality for users.

In addition, social media platforms are known to rabbit hole users into “emotionally extreme content and edited bodies that may prompt mental health risks such as appearance-related concerns, eating disorders, and body dysmorphia” (Harriger et al., 2022). TikTok in particular rabbit holes users into more extreme and niche content, more quickly. It does this in hopes of increasing the amount of time users spend on the platform (Harriger et al., 2022).

Even content geared towards promoting health and wellness rather than thinness can have negative effects on users. While much of this research has been about Pinterest and Instagram, it is possible that these same effects are able to be generalized to TikTok, although more research in this area is needed. Content depicting “excessively thin bodies, glorification of extreme caloric restriction and associated thinness-oriented dieting behaviors, and emotional support and validation for individuals struggling to maintain their thinness-oriented attitudes and behaviors” is known as thinspiration, or “thinspo” (Griffiths, et al., 2018). On the other hand, content depicting “overtly fit and lean bodies with visible muscle tone” is known as fitspiration, or “fitspo” (Griffiths, et al., 2018). One study found that more exposure to both thinspiration and fitspiration was associated with more appearance comparisons and eating disorder symptoms (Griffiths, et al., 2018). Still, thinspiration exposure had stronger associations than fitspiration exposure, meaning that fitspiration was a lot less harmful. However, researchers found that exposure to fitspiration led to muscle dysmorphia, also referred to as “reverse anorexia”, where people are preoccupied with their level of muscularity. This has been argued to be an eating disorder of its own as well (Griffiths, et al., 2018).

Comparably, individuals who followed more fitness boards on Pinterest were found to be more likely to report intentions to perform extreme, unhealthy weight loss behaviors (Lewallen & Behm-Morawitz, 2016). Pryde and Prunchard (2022) found that exposure to fitspiration TikTok videos led to an increased negative mood and state appearance comparison. This leads to body dissatisfaction and decreased appearance self-esteem. These unintended consequences are attributed to social comparison (Tiggemann & Zaccardo, 2015). On Instagram, a study found that higher use was associated with greater tendency towards orthorexia nervosa (i.e., obsession with eating healthily) (Turner & Lefevre, 2017). This may be due to the image-focused nature of Instagram. Also, social media in general encourages and allows selective exposure, as users will be continually exposed to content from specific people they follow. This leads users to believe that certain behaviors are more normal than they actually are, eventually leading them to conform to these behaviors (Turner & Lefevre, 2017). Evidently, this can be problematic when these behaviors are unhealthy and overly restrictive.

Depression and Anxiety

In addition to eating and body issues, many studies have found that TikTok addiction is positively linked to high rates of depression and anxiety (Sha & Dong, 2021). However, it is unknown whether TikTok is the cause of this, or simply increased usage is a behavior that results from these disorders. For example, Maguire and Pellosmaa (2022) found that females and people with severe depression, anxiety, and stress used social media more than males and those with average levels of depression, anxiety, and stress. Similarly, Yao et al. (2023) found that “participants who were younger, less educated, and spent more time on TikTok had higher severity of problematic TikTok use.” They also found that “depression and social anxiety had significant indirect effects on problematic TikTok use severity through distress intolerance.”

Similarly, negative relationships between TikTok use and anxiety, depression, and body image among college students have been found. This included significant, positive associations between TikTok quantity of use and body image issues, shared context anxiety, and depression (Carpenter, 2023). Conversely, Lambert et al. (2022) found that taking a 1-week break from social media in general (Facebook, Instagram, Twitter, TikTok) led to significant improvements in wellbeing, anxiety, and depression.

Indeed, while social media use can be a helpful coping mechanism for self-expression and socialization, its overuse may lead to harmful effects for well-being and mood. Time spent on social media is related to poor psychological well-being, as well as symptoms of depression and anxiety. Even brief exposure to image-centric apps (e.g., TikTok, Instagram) negatively impacts well-being and mood. In the end, participants became annoyed and frustrated with themselves after realizing that they were not able to concentrate properly, wasted their time, and were unproductive (Kohler, 2023).

In one study with 1,346 adolescents, Chao et al. (2023) found that, those who exhibited addictive levels of TikTok use had worse mental health, including higher levels of depression, anxiety, stress, loneliness, social anxiety, attention span issues, lower life satisfaction, and lower sleep quality. In school, they struggled with more academic stress, lower academic performance, and more bullying victimization. At home, they experienced worse relationships with their parents. Overall, across many studies, TikTok has repeatedly been shown to worsen measures of depression and anxiety in its users.

Memory Difficulties

Besides depression and anxiety, TikTok use has also been found to worsen memory. Sha and Dong (2021) found a partial mediation effect of depression and anxiety between increased TikTok use and performance on the forward digits span task, which they used to measure memory difficulties. In other words, increased TikTok use was positively linked to depression, anxiety and stress, and depression, anxiety, and stress were positively linked to decreased memory performance.

In the short term, TikTok worsened users' performances of previously planned tasks, as it served as an interruption. In general, delays and interruptions prevent people from performing intended actions, affecting their prospective memory, or "the ability to remember to perform a previously planned action at a precise moment in time or following a specific event while one is engaged in performing another activity" (Chiossi et al., 2023). However, social media is a more frequent, more complex, and less predictable interruption as opposed to regular workplace interruptions. Features such as autoplay, pull-to-refresh, infinite scrolling, and recommendations all are designed to maximize engagement and attention, creating an immediate reward loop in users' brains. Overall, social media has made the world more fast-paced, as algorithms contribute to frequently switching between topics, short videos, and emotional content, increasing attentional disengagement. Still, social media apps such as Twitter and YouTube do not have the same effect as TikTok, whose "short videos and rapid context-switching impairs intention recall and execution" (Chiossi et al., 2023). In fact, behavioral accuracy dropped for the prospective memory task only for TikTok. This is because "short-form videos represent multimodal and emotional stimuli, whose content is often tailored to their consumer," making them larger interruptions that "quickly divert attention" (Chiossi et al., 2023).

Altogether, the creation of the internet has overall decreased memory and attention processes, as it has provided users with an "endless, always available, source of external memory storage" (Firth et al., 2020). This over-reliance on the internet, a "superstimulus for transactive memory," increases behavioral impulses towards internet use by impacting brain regions involved in attention, reward, and inhibitory control. Indeed, internet searching leads to reduced activation in brain regions associated with working memory, as well as alterations in functional connectivity of memory retrieval circuits. Large amounts of internet use is associated with reduced volume of brain regions associated with cognitive control, possibly because there are high levels of flicking between multiple information sources (Firth et al., 2020). Conversely, in older adults, more internet activity led to greater memory recall: "Internet-based information retrieval uses greater amounts of neural circuitry than text-based information, specifically in regions implicated in multiple higher-level cognitive functions, including decision-making and complex reasoning." (Firth et al., 2020).

Attention Span

Similarly, TikTok and Internet use have been found to shorten users' attention spans. With the development and engagement of social media, media multitasking, or using multiple social media platforms and tasks at once, has become more common (Siehoff, 2023). As a matter of fact, most students indicate that growing up with technology has allowed them to focus on several tasks at once without it having negative effects on academic performance (Siehoff, 2023). Yet, media multitasking is inversely connected with cognitive skills (e.g., memory/attention), as those with higher levels of media multitasking showed increased

distractibility and greater difficulty with cognitive control (Siehoff, 2023). Physically, high media multitasking is associated with reduced gray matter in the anterior cingulate cortex and other prefrontal areas responsible for sustained attention and ability to ignore external-distracting stimuli (Bulut, 2023).

Specifically with TikTok, heavy users had greater problems maintaining attention while being distracted and diverting their attention from distractions than light users, and seemed to comprehend information worse than light users (Siehoff, 2023). This may be due to the fragmentation pattern of short-form videos, in which informative, brief, uncorrelated, varied features increase rapid dissemination of information, allowing users to quickly explore desired content. This increases stimulation of the brain's pleasure center, leading to a substantial release of dopamine in a brief timeframe. Gradually, over time, this lowers users' attention spans (Kohler, 2023).

Because of this, the correlation between TikTok/Internet addiction and ADHD is being studied. Adolescents with ADHD were the group most likely to be addicted to the Internet, and symptoms of ADHD were found to be more severe in those addicted to the Internet (Bulut, 2023). In addition, people with Internet Use Disorder (IUD) have a 3 times higher likelihood of being diagnosed with ADHD than control groups of those without IUD. However, it is not known whether excessive internet use is a causal factor for ADHD or if individuals with ADHD are more susceptible to excessive internet use (Firth et al., 2023).

Instant Gratification

Part of TikTok's effects in shortening attention span relates to its ability to meet the gratifications of users very quickly. In general, social media provides visual gratification and self-validation (van Oosten et al., 2023). Unfortunately, as mentioned above, this may lead to body dissatisfaction, appearance consciousness, self-esteem issues, and depressive symptoms in users (van Oosten et al., 2023).

In addition, Vaterlaus and Winter (2021) found that TikTok also met the following gratifications in users: "realism, coolness, agency-enhancement, community building, bandwagon, interactivity, browsing/variety seeking, and play/fun." Users in the study reported that TikTok met entertainment gratifications because it was "fun," "enjoyable," and seen as a positive use of time when they were "bored" and needed to "pass the time." Moreover, the basic features of the app (viewing, liking, commenting, scrolling) are easy to use, allowing the app to be addictive. Further, social connection gratifications were met by TikTok, as viewing and sharing videos enhanced participants' relationships, and they were able to develop communities and make new friends. Vaterlaus and Winter write, "Participants perceived that the relational 'closeness' developed as co-viewing or sharing videos provided entertainment (e.g., 'laughing together') and an opportunity for 'connection' over shared interests. TikTok also enhanced relationships because it allowed participants to have common or 'more things to talk about,' including keeping people current regarding what is 'trendy' or 'popular.'" Nonetheless, TikTok could be a distraction in some relationships if someone became "obsessed" (Vaterlaud & Winter, 2021).

On the other hand, non-TikTok users and past users reported failed gratifications of TikTok, including it being too juvenile/cringey, not being given enough agency on the app (privacy, censorship), as well as too much agency being given, allowing for things such as cyberbullying (Vaterlaud & Winter, 2021).

Conclusion

Some social media companies are aware of the harm their apps cause. For example, Meta documented the negative mental health effects of their products on young people (Harriger et al., 2022). Algorithms are specifically designed to keep users engaged with content that may be damaging, as emotionally triggering content is difficult to escape (Harriger et al., 2022).

As a result, it is ultimately the responsibility of corporations to protect the well-being of their users. One approach to this is regulating the use of algorithms. This can be done by getting Congress to pass a bill that holds corporations accountable for the content they amplify. Through this, Section 230 of the U.S. Communications Decency Act of 1996, which suggests that social media networks are not responsible for the content posted on their platforms, can be reformed. However, this must be done carefully so that the reform does not include restrictions in users' speech on these apps. Instead, Congress simply should remove protection companies have for "serving unrequested emotionally laden, and at times illegal content to users" (Harriger et al., 2022). This may incentivize companies to have a non-algorithmic feed, where users may have more control over what they see. Additionally, corporations may be required to "release details of their algorithms and core functions to be vetted by researchers," "disclose in users' news feeds why content was chosen," and "limit micro-targeting advertising messages, which use consumer data (e.g., gender, age) to choose which products to advertise to whom (e.g., diet products)" (Harriger et al., 2022). Moreover, social media companies should take on social responsibility, minimizing the harm that results from users engaging in content on their platforms. They can do this by working with body image and eating disorder experts to create voluntary codes of conduct (Harriger et al., 2022).

Unfortunately, these changes are unlikely to occur as user engagement generates these corporations profits. As an alternative, users can take actions to protect their mental health. Padín et al. (2021) writes that users can be "critical of SM [social media] content, hav[e] high self-esteem, and a lower tendency to engage in social comparisons buffers the effect of SM on body satisfaction." Additionally, users can decrease their consumption of social media, discuss the harm social media has with their communities, and mute, block, report, hide, and request not to see certain harmful ads (Gak et al., 2022). Seekis and Lawrence (2023) found that increasing exposure to body neutrality content also mitigated harm. Overall, users should educate themselves, achieving higher levels of social media literacy, the application of critical analysis of motivations behind social media posts. They must realize that social media is filled with unrealistic images, and think critically while scrolling (Paxton et al., 2021).

As for social media influencers, they must act consciously, realizing the role model position they fill for fans. Indeed, influencers should not represent companies that promote weight control products or other harmful ways to control weight, such as rigid dieting and excessive exercise. Instead, they can advocate for body-positive ideas, and against body shaming. In addition, influencers should speak out about filters, body positioning, editing, and other tactics used to alter their appearance on social media. For their own posts, they can upload more unfiltered, unedited, or no makeup images, and give disclaimers about their appearance (Harriger et al., 2022).

Researchers, educators, and clinicians can use their knowledge to create social media literacy programs that are designed, studied, and implemented by them. These programs can work with young adults and children to promote critical thinking about social media, helping them understand "motivators for, and techniques of, commercial images and advertising," and

"motivations for influencer and friend postings, the use of filters, and the selection and modifications of images users post" (Harriger et al., 2022).

Moreover, parents can examine how they engage with social media themselves and model healthy relationships with social media for their children (Harriger et al., 2022). This can include limiting the time they spend on social media and following body-positive content, among other behaviors. Besides this, parents can create rules and regulations for social media use for their children (Harriger et al., 2022).

All in all, awareness of the negative effects of TikTok and social media must grow as more and more people join these apps. In young, impressionable adults especially, it is important to mitigate these potential mental health risks, as this has already grown to be a large problem. In the future, social media apps must take a more active role in regulating the content their users are shown.

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