

Effects of TikTok on Adolescent Mental Health and Wellbeing

Erica Bahnweg¹ & Hatim Omar¹, MD

Section of Adolescent Medicine, Lehigh Valley Reilly Children's Hospital, 3080 Hamilton Blvd, Allentown, USA.

Correspondence: Prof Hatim Omar: 1958baladna@gmail.com

Received: 17/03/2023; **Revised:**27/3/2023; **Accepted:** 17/4/23

Key words: TikTok, mental wellbeing, internet, social media

[citation: Bahnweg, Erica & Omar, Hatim (2023). Effects of TikTok on Adolescent Mental Health and Wellbeing. DHH, 10(1):https://journalofhealth.co.nz/?page_id=2905].

Introduction

With over 1 billion active users monthly, TikTok is undoubtedly one of the most widely used social media platforms. The video-sharing app allows users to create, share and watch short videos, which range in content from singing and dancing to recipes and home renovations. TikTok uses an algorithm to track the content that users browse and interact with and then recommends similar content on the "For You Page." TikTok is currently the most widely used social media app among young people aged 12 to 17, with more than one-quarter of daily users being under the age of 14 and nearly 50% being under the age of 29 (1). In 2021, the World Health Organization produced data showing that 1 in 7 adolescents between the ages 10 to 19, which accounts for a large portion of TikTok's users, were struggling with mental health challenges, such as depression, anxiety, and behavioral disorders (2). The question arises as how much of the mental illness in young people is due to social media such as TikTok.

There are several aspects that exacerbate the mental health issues in young people. The first main issue is the adolescent brain. That is, biologically, the prefrontal cortex of the brain, which regulates our thoughts, actions and emotions, is not fully developed in young people until the age of 24-26 (3). It is highly plausible that unsupervised exposure without a responsible input/guidance to unregulated online behaviour can make young people particularly vulnerable.

The issues are further complicated with a lack of trust between adolescents and their adult networks, including parents, teachers and counselors, which makes them more reliant on peer advice and often peer pressure (4). This dependency has been made much easier with social media apps including TikTok. Moreover, for some adolescents digital technology provides the perfect environment where they can express themselves without fear of immediate audience backlash. However, it can also be a perfect environment for some to harass and bully others without being seen, and identified to the victims. There is ample evidence to suggest that digital technology can also be an unsafe and harmful environment (4).

TikTok can serve as a source of entertainment and create a sense of community during isolation and lockdown periods as a result of Covid-19. However, in the absence of physical contact with peers TikTok could lead to adverse health and social outcomes in young people. In particular, those aged 11 to 17 are susceptible to social influences, and the content they are exposed to on TikTok can lead them down a slippery slope (5).

It is likely, therefore, that peer pressure, a lack of trust and/or guidance, and uncritical use of unregulated online material can affect mental wellbeing of young people. In this article we list some of the potential adverse effects of *uncritical* over exposure to content generated and viewed by TikTok users.

Mental Health, Self-harm, and Suicide

For some adolescents, TikTok may be the place where they are introduced to mental health topics. There are several barriers to mental healthcare for young people, including the stigma attached to mental illness, a lack of trust in healthcare professionals, and not knowing where to turn for help (6). Furthermore, parental and cultural beliefs may also prevent adolescents from discussing their issues with their families (6). Therefore, they may turn to social media for support and answers rather than seeking medical attention.

A common feature of social media is to measure positive reactions to posts by the number of followers and the number of likes attached to a post. Such measures influence self-esteem and confidence and may lead to feelings of inadequacy (7). The reverse may also be true; those with lower self-esteem and confidence may feel more comfortable using digital media due to a lack of direct face to face and physical contact. Nevertheless, failing to amass followers and score a high number of 'likes' may further exacerbate their feelings of unease about themselves. Several studies have been published which have found that high levels of social media use is associated with increased feelings of anxiety and depression in middle and high school youths (7).

In order to obtain some insight into how TikTok content can influence self-harm and suicide, Byrne (8) created a fake account of a 13-year-old user in order to see what kind of content the average 8th grader is exposed to. Within two days of creating the fake account, Byrne was exposed to suicide attempt material, including the image of a person on a building ledge with the caption "give up", and teens sharing their suicide attempts, and adolescents discussing methods that they've used for self-harm such as 'cutting' (8).

The "live video" option on TikTok and other social media often escape the restrictions on content. Live streaming of socially unaccepted events such as attempted suicide can be particularly gruesome and traumatising on the one hand, and on the other hand can mitigate the normalisation of suicide. Adolescents are specifically vulnerable when exposed to adverse events. For example, in 2021, Luo Xiao Maomao, a Douyin user (Chinese version of TikTok) invited her 760,000 followers to a live streaming of her suicide attempt (8). [Initial reports suggest that the comments during the live streaming ranged from urging her to carry out the suicide, to "Good for you", to condemnation, to "Oh my God"](#) – but none of the viewers attempted to use the technology to call for help and intervene and stop her suiciding. According to the report, Lou stopped the live streaming and called for an ambulance herself; she died the following day.

TikTok challenges have also promoted self-harm to young people around the world. In 2022, the [#LabelloChallenge](#) was seen in France and Belgium, where adolescents were to remove a piece of their Labello lip balm each time they felt sad. When the lip balm was empty, they were meant to take part in self-harm (9). Though the app has responded to some of these harmful challenges, new ones continue to pop up at an alarming rate, making it difficult to control.

Other features of social media are that they allow users to leave comments about other users posts and share with their followers. Experience suggests that some comments have been negative, unpleasant or loathsome which can mentally scar vulnerable adolescents and amount to cyberbullying (10). Some comments have also been shown to encourage self-harm and suicide, which is detrimental to developing young people (10).

Body Image Issues, and Eating Disorder

Body image is an important issue, during adolescence. The media's treatment of this important issue has led to the socially acceptable (desire for) 'unrealistic' body image standards (11), which have over the years led to negative physical and mental health outcomes (11). The application of digital technology such as FaceTune further exacerbate feelings of unease with own body shape. For example, photoshop apps such as FaceTune allow users to edit, enhance, and retouch photos or videos at the click of a button. Within a culture that promotes competitiveness and rivalry, subjective beauty will adversely exacerbate mental health and social behavior.

In addition to beauty filters and edited videos, there is a large amount of TikTok content that focuses on fitness challenges, weight loss, and even eating disorders. Though some of the material may seem harmless, content on "what I eat in a day" can lead the algorithm to show videos on "what I eat in a day: binge eating" or "what I eat in a day in anorexia recovery." (12). This can be detrimental to those who are struggling with body image or eating disorders, as well as impressionable adolescents who may be exposed to these topics for the first time (12).

Though TikTok has made efforts to filter some of the content being shared, it is not a perfect system. In one case study, a 14-year-old girl reported seeing several videos on "anti-anorexia" content (13). She became inspired by teens who were sharing their experiences of deep suffering with eating disorders and wanted to try to emulate such an "extreme experience." Her intent was to restrict food intake, become hospitalized, and demonstrate to others the difficulties of her condition. Many users of the app have stated that people are more or less competing with one another in an attempt to prove they are in the worst condition, or that they are the most resilient. This suggests that, despite content filtering, teenagers may still be exposed to inappropriate materials leading to a paradoxical effect (13).

Some of the trends and challenges on TikTok have also centered around looks or body image. In one trend, TikTok subscribers first show images of themselves looking "unattractive," for example photos of them with acne. The video then shows conventionally "attractive" image of the same individual without acne (14). Though these videos may have harmless intentions, they too can lead to feelings of inadequacy, especially among adolescents. One challenge surrounding body image was the "A4 waist challenge," where individuals would show that their waist is less than the width of a vertical A4 piece of paper (12). This was followed by the "headphone challenge," where individuals judged their waist size based on how many times they could successfully wrap headphone wires around their waists (12).

In recent years, there has been more of a push towards body positivity, with some TikTok subscribers solely focusing their content on this. Though this may seem like a step in the right direction, it has been hypothesized that these videos can still have a harmful effect. One study that included college-aged females found that exposure to body positive social media was indeed harmful due to the fact that it caused an increase in body surveillance and comparison (15).

Self-Diagnosis

The internet is frequently used to look up symptoms for the purpose of matching them to a health condition, often leading to a misdiagnosis (16, 17). For example, searching the symptom “fatigue” can lead to an individual arriving at the conclusion that they have a terminal illness. This concept of self-diagnosis is now being seen on TikTok, where users are being flooded with a variety of videos on physical and mental health disorders. It is plausible that some young people may identify with some of the symptoms and diagnose themselves with a condition that they may not even have. Thus, overexposure may make it easy or “trendy” to identify with a diagnosis (18).

In recent years, there has been an uptick in the number of teens and young adults diagnosing themselves with various illnesses after learning about them online (19). On TikTok, some users list their symptoms and diagnosis to popular music and dance. It is often unclear whether medical professionals were involved or not. Adolescents and young adults will inevitably identify with the diagnosis even if only one or two of their symptoms match and may follow an inappropriate and possibly harmful remedy (19).

Some of the more common disorders that are being self-diagnosed via TikTok include ADHD, OCD, and autism. One TikTok influencer can be seen dancing in a video labeled “things I didn’t know were my autistic traits” with the hashtag #autism, where she lists things such as “listening to the same song on repeat” as being one of her symptoms (20). Oftentimes these posts are flooded with comments from young individuals saying things such as “I can relate!” or “This sounds like me.” Other videos can show users stating that if you are organized and like structure, you must have obsessive compulsive disorder (OCD), not realizing that those who truly have OCD are often unable to function because of their compulsions (19). One study that evaluated the accuracy of information regarding ADHD in TikTok videos found that 52% of the content was misleading (21).

Medical professionals have also seen a rise in the number of teens presenting with involuntary movements and vocalizations reminiscent of Tourette syndrome, with the majority being teenage girls (22). After ruling out other explanations, a group of neurologists found that these tics were related to hours spent on TikTok watching videos of people who report having Tourette syndrome (22). Several terms have been used to define adolescents presenting en masse with symptoms acquired from viewing illness-related content, such as Sociogenic Illness, Mass Psychogenic Illness, and Mass Social Media Induced Illness (23). In one particular office, a group of patients with these new-onset tics were advised to take two weeks off of TikTok coupled with individualized treatment plans. At the end of the two weeks, the tics were gone (5).

In another case, a 17-year-old female discussed her experience with self-diagnosis at the beginning of the pandemic. As a result of her school courses being online and having less interaction with her peers, she began to spend several hours of her day on TikTok. She then began to experience anxiety, headaches, poor sleep, and the feeling that she was living outside of her body. It was around this time that she started seeing videos about depersonalization disorder and diagnosed herself as having the disorder. After she was able to return to school and continue normal interactions with her peers, all of her symptoms went away (19). Adolescents have also approached medical professionals with concerns that they may have diagnoses such as dissociative identity disorder, anxious attachment, borderline personality disorder, bipolar disorder, and misophonia, all due to videos they’ve seen on TikTok (19). Thus, the *uncritical* use of TikTok (and social media) by adolescents to navigate

their social standing with peers and in society can be another source of anxiety for adolescents (21).

Discussion and Conclusion

A major problem with social media and the internet is that they are unregulated and are used not only to provide information but also for individuals to express themselves. Therefore, one must have the skills necessary to distinguish between real evidence as opposed to opinions, attitudes and perceptions. Thus problems arise with the public's *uncritical* use of such resources. A grassroots approach is essential in which communities (e.g. parents, schools, GPs) are involved in developing policies that assist young people to critically navigate through masses of unregulated online information (24).

To reduce exposure to undesired content, TikTok has made an effort by installing filters and providing parental control. Furthermore, there has been a push to emphasise the positive aspects, such as body positivity. However, such behaviour directs focus onto the body positive or negative and is not likely to address self-esteem, confidence, and mental wellbeing. Without addressing the issue of trust between adolescents and their parents, it is simply not enough to restrict viewing duration, or to allow parents to place restrictions on adolescent users' accounts.

To mitigate the safety of children and adolescents there needs to be an ongoing conversation with representatives from social media developers, educationalists, parents, politicians, medical professionals, and in particular the public and end-users of social media. The debate or conversation must include the regulation of social media apps, strategies to foster a trusting relationship between adolescents and their adult networks, creation of a safe environment for end-users of social media apps, improved awareness of medical professionals about the harmful side effects of over exposure to both the technology and the content it provides.

Internet link used:

<https://news.yahoo.com/douyin-users-criticize-baiting-crowd-202154006.html>

References

1. Tiktok and Youth Mental Health: Weighing the pros and cons. Depression and Bipolar Support Alliance. (2022, July 25). Retrieved from <https://www.dbsalliance.org/education/newsletters/tiktok-and-youth-mental-health/>
2. Mental health of adolescents. (2021, November 17). World Health Organization. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>
3. Arain, M., Haque, M., Johal, L., Mathur, P., Nel, M., Rais, A., Sandhu, R., & Sharma, S. (2013). Maturation of the adolescent brain. *Neuropsychiatric Disease and Treatment*, 449. <https://doi.org/10.2147/ndt.s39776>
4. Pappas, S. (2015, June 23). *Social media cyber bullying linked to teen depression*. Scientific American. Retrieved from <https://www.scientificamerican.com/article/social-media-cyber-bullying-linked-to-teen-depression/>
5. Olsson, R. (2021, November 2). TikTok and the Dangers of Self-Diagnosing Mental Health Disorders. Retrieved from <https://www.bannerhealth.com/healthcareblog/advise-me/tiktok-self-diagnoses-on-the-rise-why-its-harmful>

6. Pugle, M. (2022). Young People Are Using TikTok to Diagnose Themselves With Serious Mental Health Disorders. What's Behind This Trend? *Everyday Health*. Retrieved from <https://www.everydayhealth.com/emotional-health/young-people-are-using-tiktok-to-diagnose-themselves-with-serious-mental-health-disorders/>
7. Is social media threatening teens' mental health and well-being? Columbia University Irving Medical Center. (2022, April 22). Retrieved from <https://www.cuimc.columbia.edu/news/social-media-threatening-teens-mental-health-and-well-being>
8. Byrne, J. (2021, October 28). #Paintok: The bleak universe of suicide and self-harm videos TikTok serves Young Teens. *Raw Story*. Retrieved from <https://www.rawstory.com/paintok-tiktok/>
9. Walfisz, J. (2022, May 23). Should parents be worried about a new self-harm Tik Tok 'challenge'? *Euronews*. Retrieved from <https://www.euronews.com/culture/2022/05/20/a-new-self-harm-tik-tok-challenge-is-worrying-france-but-is-the-panic-missing-the-point>
10. Kuntz, L., & Blotcky, A. (2022, March 21). *Tiktok: Biggest concerns for children and adolescents*. *Psychiatric Times*. Retrieved from <https://www.psychiatristimes.com/view/tiktok-biggest-concerns-for-children-and-adolescents>
11. Choukas-Bradley, S., Roberts, S.R., Maheux, A.J. *et al.* The Perfect Storm: A Developmental–Sociocultural Framework for the Role of Social Media in Adolescent Girls' Body Image Concerns and Mental Health. *Clin Child Fam Psychol Rev* **25**, 681–701 (2022). <https://doi.org/10.1007/s10567-022-00404-5>
12. Pruccoli, J., De Rosa, M., Chiasso, L., Perrone, A., & Parmeggiani, A. (2022). The use of Tiktok among children and adolescents with eating disorders: Experience in a third-level public Italian center during the SARS-COV-2 pandemic. *Italian Journal of Pediatrics*, 48(1). <https://doi.org/10.1186/s13052-022-01308-4>
13. Logrieco, G., Marchili, M. R., Roversi, M., & Villani, A. (2021). The paradox of Tik Tok anti-pro-anorexia videos: How social media can promote non-suicidal self-injury and anorexia. *International Journal of Environmental Research and Public Health*, 18(3), 1041. <https://doi.org/10.3390/ijerph18031041>
14. Liu, J. (2021). The influence of the body image presented through TikTok trend-videos and its possible reasons. *Advances in Social Science, Education and Humanities Research*. <https://doi.org/10.2991/assehr.k.210609.072>
15. Bissonette Mink, D., & Szymanski, D. M. (2022). Tiktok use and body dissatisfaction: Examining direct, indirect, and moderated relations. *Body Image*, 43, 205–216. <https://doi.org/10.1016/j.bodyim.2022.09.006>
16. Shahtahmasebi, S. (2016). Editorial: Everyone's an expert! *Dynamics of Human Health (DHH)*, 3(1), http://journalofhealth.co.nz/?page_id=107.
17. Sadhir, M; Stockburger, S; and Omar, HA (2016) Challenges of internet and social media use in adolescents. *Dynamics of Human Health (DHH)*, 3(1), http://journalofhealth.co.nz/?page_id=759
18. 8 pros and cons of TikTok on Kids' Mental Health. (2022, July 8). *Cyberwise*. Retrieved from <https://www.cyberwise.org/post/8-pros-and-cons-of-tiktok-on-kids-mental-health>
19. Caron, C. (2022, October 29). Teens turn to TikTok in search of a mental health diagnosis. *The New York Times*. Retrieved from <https://www.nytimes.com/2022/10/29/well/mind/tiktok-mental-illness-diagnosis.html>

20. Teitell, B. (2022, November 15). Teens and young adults are self-diagnosing mental illness on TikTok. What could go wrong? BostonGlobe.com. Retrieved from <https://www.bostonglobe.com/2022/11/15/metro/teens-young-adults-are-self-diagnosing-mental-illness-tiktok-what-could-go-wrong/>
21. Frey, J., Black, K. J., & Malaty, I. A. (2022). Tiktok Tourette's: Are we witnessing a rise in functional tic-like behavior driven by adolescent social media use? *Psychology Research and Behavior Management*, Volume 15, 3575–3585. <https://doi.org/10.2147/prbm.s359977>
22. Shmerling, R. (2022, January 18). Tics and TikTok: Can social media trigger illness? Harvard Health. Retrieved from <https://www.health.harvard.edu/blog/tics-and-tiktok-can-social-media-trigger-illness-202201182670>
23. Giedinghagen, A. (2022). The TIC in TikTok and (where) all systems go: Mass social media induced illness and Munchausen's by internet as explanatory models for social media associated abnormal illness behavior. *Clinical Child Psychology and Psychiatry*, 28(1), 270–278. <https://doi.org/10.1177/13591045221098522>
24. Shahtahmasebi S (2013) De-politicizing youth suicide prevention. *Front. Pediatr.* 1:8. doi: 10.3389/fped.2013.00008, URL: <http://journal.frontiersin.org/article/10.3389/fped.2013.00008/abstract>.