



The Role of TikTok in Students' Health and Wellbeing

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Abstract

Students are exposed to various academic, financial and psychosocial stressors while studying at a university, and have increasingly turned to social media to alleviate stress and access social support. While evidence suggests that social networking sites may promote health awareness and health-protective behaviours, little research has explored TikTok, a relatively new platform with over 800 million active users. Seven university students (6 females, 1 non-binary; all White British; mean age = 20.57) were interviewed about their experiences on TikTok, their motivations behind using it and its effects on their psychological wellbeing. A thematic analysis of this data revealed that while TikTok use temporarily relieved academic stress, it also encouraged addictive behaviour and upward social comparisons. These differential effects were largely mediated by TikTok's algorithm, which recommended content based on users' previous interactions.

Keywords Students · Social media · TikTok · Wellbeing · Algorithm

Poor mental health continues to be a prevalent issue for students across the globe, with more than 35% of students meeting diagnostic criteria for at least one common psychiatric disorder (Auerbach et al., 2016). While university attendance is often considered a driver of human growth and development, it is also associated with a plethora of negative outcomes, a likely consequence of the academic, financial and psychosocial stressors experienced by students (Gardani et al., 2022; Li et al., 2022; Sheldon et al., 2021; Wang & Biro, 2021). The extreme financial strains associated with tuition fees, for example, may inflate the risk of anxiety and alcohol dependence (O'Neill et al., 2018; Richardson et al., 2018; Sverdlik et al., 2018), while increased academic demands share a strong link with the onset of depression (Barker et al., 2018; Liu et al., 2019). Moreover, the transition to university life and living away from the family can also be harmful to students' mental health (Devoe et al., 2022; Sheldon et al., 2021).

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Public health emergencies are also closely linked to poor psychosocial outcomes in students (Meo et al., 2020; Zhou et al., 2020). The recent COVID-19 pandemic, in particular, saw more than 68% of young people experience a deterioration in their mental health (Chang et al., 2021; Holm-Hadulla et al., 2021; Mind, 2021). Beyond the illness itself, the mass home-confinement directives and social distancing measures imposed during the COVID-19 lockdown exacerbated students' feelings of loneliness, low mood and social isolation (Holm-Hadulla et al., 2021; Tinsley, 2020). Lieneck et al. (2021), for example, found that the lack of social contact during the pandemic was highly implicated in the onset of several psychiatric disorders, such as depression, anxiety and stress, which persisted even after quarantine had been lifted. Similarly, Monahan et al. (2020) and Szilagyi and Olezeski (2021) demonstrated that students presented more depressive symptoms and suicidal ideations following a period of social isolation. In stark contrast, however, peer support and social media usage both served as protective factors for students' wellbeing during the pandemic (Mandolesi et al., 2018; Scharpf et al., 2021; Young et al., 2017).

Nevertheless, this high prevalence of poor mental health and wellbeing is alarming, especially since most students transition to university during early adulthood, when the onset of psychiatric disorders is more strongly associated with chronicity and treatment non-response (Bladek, 2021; Brown, 2018; Duffy et al., 2019). Furthermore, as wellbeing and learning are linked (Akhtar et al., 2020), mental health issues may negatively affect educational outcomes, resulting in poor academic achievement, increased drop-out rates and reduced employment prospects (Alonso et al., 2018; Breslau et al., 2008; De Luca et al., 2016). In contrast, however, university attendance also marks a key developmental period of psychological resilience, where students can learn to overcome stress and difficult situations (Conley et al., 2013; Maccagnan et al., 2019; Zautra et al., 2010; Mojtabai et al., 2015). By nurturing resilience, students could better manage academic pressures and adapt to university life (Bastamini et al., 2016; Idris et al., 2019), setting a life-long foundation for their health and wellbeing (Franzidis & Zinder, 2019).

This high prevalence of mental illnesses and poor wellbeing among students is alarming, especially since most students transition to university during early adulthood, when the onset of psychiatric disorders is more strongly associated with chronicity and treatment non-response (Bladek, 2021; Brown, 2018; Duffy et al., 2019). Furthermore, as wellbeing and learning are linked (Akhtar et al., 2020), mental health issues may negatively affect educational outcomes, resulting in poor academic achievement, increased drop-out rates and reduced employment prospects (Alonso et al., 2018; Breslau et al., 2008; De Luca et al., 2016). In contrast, however, university attendance also marks a key developmental period of psychological resilience, where students can learn to overcome stress and difficult situations (Conley et al., 2013; Maccagnan et al., 2019; Zautra et al., 2010). By nurturing resilience, students could better manage academic pressures and adapt to university life (Bastamini et al., 2016; Idris et al., 2019), setting a life-long foundation for their health and wellbeing (Franzidis & Zinder, 2019).

Social Media and Mental Wellbeing

Given the marked deterioration in students' mental health and wellbeing over recent years (Auerbach et al., 2016; Holm-Hadulla et al., 2021; Tinsley, 2020), health professionals have turned to social media to educate people on various aspects of healthcare (Stellefson et al., 2020; Ventola, 2014). Broadly defined as any platform that enables users to share

content and connect with one another (Farsi, 2021; Szeto et al., 2021), social media has become strongly integrated into societies around the world, with more than three billion people using at least one form of social media in 2018 (Debord et al., 2019). The COVID-19 pandemic further inflated its use (Chen & Wang, 2021), with lockdown restrictions and physical distancing measures forcing students to rely on social media to access information and remain connected to each other (Limaye et al., 2020; O'Sullivan et al., 2022; Szeto et al., 2021).

Evidence suggests that social media use is especially prevalent among students, who are particularly appreciative of the availability of information and the opportunities to learn how to improve their wellbeing (Lupton, 2021; Tasswe, 2020). Accordingly, public health practices have increasingly used social media to promote health-related information, encourage health-protective behaviours ((De La Garza et al., 2021; Hou et al., 2019; Vasconcelos Silva et al., 2020) and respond to particular health concerns (Gatewood et al., 2020; Sadagheyani & Tatari, 2021; William & Suhartono, 2021). Such platforms have even proven beneficial for raising students' mental health awareness in the online community, helping to challenging sociocultural norms that promote unrealistic ideals towards mental illnesses (Branley & Covey, 2017; Lamarre & Rice, 2017; Smethurst & Kuss, 2018).

When used within learning contexts, social networking sites may facilitate communication and collaboration between students (Balcihanli, 2015; Chugh & Ruhi, 2018; Farsi et al., 2021), helping them to access support and build emotional connections with each other (Whittaker et al., 2014). However, researchers have also highlighted the extreme prevalence of negative social comparisons across social media, as well as increased health-destructive behaviours after viewing unpleasant content (Brown et al., 2017; Jacob et al., 2017; Wenninger et al., 2019), both of which have been associated with psychological distress (Krasnova et al., 2015; Kross et al., 2021). VanDoom and Eklund (2013) even suggested that social media could facilitate discrimination against mature-age students, who may lack the same technological expertise as their younger peers.

Furthermore, information shared across social media can often be inaccurate or misleading, transmitted by users without any expert knowledge of a given field (Hagg et al., 2018; Yeung et al., 2022). Celebrities, political figures and other highly prolific users with large followings can be particularly influential in spreading false information and encouraging unhealthy behaviours in students (Braunberger et al., 2017; Sierro et al., 2020; Szeto et al., 2021). These adverse effects are only exacerbated by a general lack of monitoring and accuracy verification across social networking sites, allowing individuals to easily claim to be health professionals without sufficient evidence (Gupta & Ivanova, 2021; Schuster et al., 2020; Shive et al., 2013).

TikTok and its Influence on Mental Health and Wellbeing

A relatively new social media platform, TikTok permits users to create and share short videos with various effects as well as "heart" and comment on others' posts (Anderson, 2020; Darvin, 2022). Combined with other signals of engagement, these interactions contribute to a personalized "For You" page, populated by videos that align with users' interests (Marengo et al., 2020; Montag et al., 2019; Szeto et al., 2021). As such, TikTok focuses on promoting the imitation and replication of content instead of on messaging and following other users, as is common with other social media platforms (Anderson, 2020; Bhandari & Bimo, 2020; Zulli & Zulli, 2020).

With approximately 1218 million monthly active users, TikTok has rapidly become one of the most popular social media platforms worldwide, surpassing Snapchat (750 million monthly active users), X/Twitter (666 million monthly active users) and Pinterest (465 monthly active users; Kemp, 2023). Despite its global success, however, understandings of students' motivations behind using the platform remain largely ambiguous (Darvin, 2022; Montag et al., 2021; Roche et al., 2021). Having said that, Omar and Dequan, (2020) proposed five key motives behind TikTok usage, based on an adapted Instagram use measure: social integration; self-expression; archiving; escapism; and peeking. Similarly, Falgoust et al. (2022) identified six gratification niches motivating students to use the platform: entertainment; convenience and utility for widespread communication; increasing social interaction; finding social support; seeking and sharing information; and escaping from everyday life.

While several psychological processes relating to negative affect have been implicated with TikTok use, including upward social comparisons, loneliness and the fear of missing out (Elhai et al., 2020; Kross et al., 2021; Smith & Short, 2022), TikTok may still provide a potent channel for promoting health-related information, encouraging health-protective behaviours and alleviating stress (Comp et al., 2021; Gu et al., 2021; Scherr & Wang, 2021). These effects are likely to be especially pronounced in younger audiences, such as students, who engage more with the platform (Auxier & Anderson, 2021).

Rationale

Despite evidence that social media is effective at improving mental health awareness and encouraging health-protective behaviours (De La Garza et al., 2021; Hou et al., 2019; Yang & van Stee., 2019), research on TikTok is limited due to it being a relatively new platform. As social media use is especially prevalent among students, a population characterised by poor mental health and a higher susceptibility to developing psychiatric illnesses (Chekole & Abate, 2021; Junco et al., 2010), the present study aimed to determine whether TikTok was beneficial or detrimental to students' wellbeing. Specifically, we hypothesised that using TikTok would improve students' mental health awareness and facilitate positive behaviour changes.

We also aimed to establish whether TikTok use promoted psychological resilience and reduced loneliness. As indicated by research on several other platforms, using social media can support individuals to build connections with peers and obtain a sense of social belonging (Chugh & Ruhi, 2018; Farsi et al., 2021; Whittaker et al., 2014; Young et al., 2017), which in turn may reduce feelings of isolation (Hancock et al., 2022; Huang, 2017; Li et al., 2015). We anticipated that similar effects would be observed in the present study.

Method

Participants

A total of eight university students were interviewed in this study. However, one participant's interview could not be accurately transcribed, and was thus excluded from the data. Accordingly, data from seven participants (six females, one non-binary; all White British; mean age=20.57) were included in the analysis (refer to Table 1 for sample characteristics). Using a purposive sampling method, individuals were recruited via social media (one

Table 1 Characteristics of the participants

Pseudonym	Age	Gender	Ethnicity
Natalya	18	Female	White British
Iris	24	Female	White British
Hannah	19	Female	White British
Eloise	20	Female	White British
Ruth	19	Non-binary	White British
Abi	20	Female	White British
Rachel	24	Female	White British

participant) and via SONA (six participants), a research participation platform where students could register to take part in studies in exchange for credits. Recruitment continued until data saturation had been reached, when conducting additional interviews produced little to no new information that addressed the research question. Evidence has suggested that seven interviews may produce sufficient data to capture the majority of themes around a phenomenon (Guest et al., 2020).

Procedure

Prior to participant recruitment, a pilot interview was conducted to assess the relevance and appropriateness of the interview guide. Following this, the study was advertised to students on social media and on SONA.

Once participants had registered for the study, read the information sheet and provided informed consent, they each attended an interview on Zoom with the principal investigator (author 1). A semi-structured approach to interviewing was taken, in which participants were asked a series of questions pertaining to their experiences on TikTok (for example, “Have you come across mental health content on TikTok? If yes, tell me about that”), their motivations behind using the platform (for example, “For what reasons do you use TikTok?”) and its effects on their wellbeing (for example, “How do you think TikTok impacts your wellbeing?”). Together with their well-established effectiveness in capturing individuals’ experiences and beliefs (Lambert & Louiselle, 2008), semi-structured interviews were considered appropriate for collecting data as they would allow researchers to clarify information and probe for deeper understandings of specific phenomena (Kakilla, 2021; Turner, 2010). Interviews lasted between 15 and 40 min, were audio-recorded and transcribed verbatim, with participants’ own language used in transcriptions to reflect what they wanted to say. Debrief forms were provided upon completion of each interview, and all interview recordings were destroyed once the final research report had been submitted.

Data Analysis

After interviews had been transcribed, data was analysed thematically according to Braun and Clarke’s (2006) six stages of thematic analysis, a useful technique for investigating shared experiences and perspectives across the sample (King, 2004; Nowell et al., 2017). A thematic analysis would allow the researcher to explore semantic meanings within data and the underlying assumptions of what had been explicitly stated, which could then be linked to broader theoretical and contextual issues (Braun & Clarke, 2006, 2012). The

researcher began by thoroughly reviewing interview transcripts, in order to gain familiarity with the data and identify items of interest. After these items had been coded semantically and deductively, codes were collated into themes and sub-themes to represent meaningful patterns across the data, such as repeated ideas and phrases relevant to the research topic. Once themes had been labelled and reviewed, a thematic map and thematic table were created to visualise the relationships between themes and sub-themes.

Ethics

The present study aimed to adhere to the British Psychological Society code of ethics (Oates et al., 2021), and ethical approval was granted by the Bournemouth University ethics committee. Ethical training was also completed by the researcher prior to the study's commencement.

The interview schedule, as well as information, debrief and consent forms, all used clear and accessible language, to support those with limited vocabularies. As discussions around mental health had the potential to elicit psychological distress, all participants were explicitly informed of their rights to withdraw, and were provided with contact details for local counselling services and emergency helplines. Anonymity of participant identities was ensured via the use of pseudonyms, and all data was stored securely on a password-encrypted OneDrive folder. Once the research report had been submitted, all interview recordings were destroyed.

Results

A thematic analysis of the data generated four themes: building supportive communities; facilitating psychoeducation; a double-edged sword for mental wellbeing; and excessive and compulsive TikTok use. TikTok was revealed to exert a strong influence over students' welfare, with each theme pertaining to a different aspect of mental wellbeing. Themes are discussed and interpreted below.

Building Supportive Communities

For many participants, TikTok enabled them to build and foster social connections with other platform users, commonly referring to them as "supportive" and "accepting". Two participants expressed feeling a strong sense of connectedness with the TikTok community, which they attributed to TikTok's ability to visualise users' experiences:

Well it definitely feels more connected like on TikTok, because you can see them talking about it. You can hear like the different stories. Hannah

Participants tended to discuss these experiences in relation to the ease of finding others facing similar difficulties to them. Understandably, some participants felt less isolated and alone as a result:

Like you're not on your own, so it's good to see that other people are suffering with something as well if you are. Abi

Many students considered TikTok an invaluable tool for connecting to others with similar interests, especially for during the COVID-19 lockdown. The mass home-confinement

directives imposed by the government proved particularly challenging for many participants, adding to their mental suffering and forcing them to rely on TikTok to stay socially connected:

It's finding people with more similar interests to you, I guess. It's quite hard to do that in real life sometimes... Especially in the lockdown as well, a lot of people couldn't go outside. Ruth

In contrast, one participant advocated that one's sense of social connectedness on TikTok was limited, attributing this to a lack of emphasis placed on messaging and connecting with other users. Compared to other social media platforms with "more of a focus on the messaging part", such as Instagram, Iris argued that TikTok users were less able to interact with their friends' videos, as TikTok's algorithm decided on the content shown to them:

Because it's videos... people don't, well the message portion of TikTok people don't use... I know a lot of people don't use it. I never get messages on there from my friends. I get messages from my mum and my brother, and that's pretty much it. Iris

Taken together, these findings indicate that TikTok's supportive and accepting community contributed to improvements in participants' wellbeing. While little emphasis may be placed on messaging other users, the easy access to people with similar interests and experiences helped participants feel less isolated and alone, especially so during the COVID-19 lockdown.

Facilitating Psychoeducation

The efficacy of social media in raising health awareness has long been established (Branley & Covey, 2017). Consistent with this, most participants reported improvements in mental health awareness and understanding following TikTok use:

I've come across like crazes that are specifically for like how to cope with your mental health and like ways it can affect your life, the side of mental health that no one talks about. Hannah

Most participants highlighted the power of mental health content circulating TikTok. An abundance of information, such as people sharing their personal experiences with mental health recovery, was perceived to be especially useful for raising awareness and challenging sociocultural attitudes towards individuals with mental illnesses, such as being inferior, incompetent, crazy or even violent:

Because I think it's very important to spread awareness of things like mental health. But most of it is positive and it's never really like a negative side. It's people showing their mental health, which I think shouldn't be hidden from people. Because if it's hidden from people, it makes it out like a really awful thing. Abi

Exposures to previously invisible experiences of mental health proved to be particularly beneficial for most participants, enabling them to grow off others suffering from similar issues and feel less alone. Subsequently, participants felt more confident in managing and sharing their own problems, with some even developing self-management strategies for preserving their psychological wellbeing, such as purposely engaging with more positive content on TikTok:

Recently, I've been sort of struggling with anxiety quite a bit, and sometimes going on TikTok can help because you can find some coping mechanisms and things like that. Ruth

These exposures encouraged participants to research and better understand their own issues, even leading one individual to seek out and acquire a formal diagnosis of ADHD:

Going through the mental health side of TikTok, I realized I had ADHD and I actually received a formal diagnosis a couple of weeks ago. Iris

Despite having “learnt about it at university”, it only occurred to Iris that she might have ADHD when she “saw a TikTok saying ADHD presents very differently in females”. This suggested that through the promotion of health-related information, TikTok facilitated an increased self-understanding for Iris, prompting behavioural changes in the form of seeking and obtaining a clinical diagnosis. Conversely, most participants also acknowledged the extreme prevalence of self-diagnosing taking place on TikTok:

Sometimes, it can be more sort of negative or not the right information, and can make people think they like have things when they actually don't. Ruth

Participants considered it “difficult to access a diagnosis now without going private”, and many used TikTok as a means of inferring mental health conditions they might have, such as ADHD. The pervasiveness of medically inaccurate content across TikTok even caused some participants to misdiagnose themselves and develop health anxiety. Iris, for instance, recently convinced herself she had autism:

I convinced myself I had autism a couple of weeks ago. And you know, I had absolutely no idea. Iris

Despite these shortcomings, participants still believed that TikTok was important and useful for facilitating changes in societal attitudes towards mental health:

It's often people who are experiencing certain issues themselves that are talking about it. So I think it's definitely good to have that as a way of spreading information, because it can sometimes be more accurate. Ruth

TikTok users can easily share personal experiences with mental health recovery (Herrick et al., 2021), which may provide more accurate representations of the struggles associated with mental illnesses (Russell et al., 2021). Two participants endorsed this, referencing the recent body positivity movement in the TikTok community:

I've always had a bit of a thing with my image, as I think obviously most people do. It's becoming more accepted now, and I think there's been much more of a push on that movement that I've seen on TikTok. Rachel

Within the context of health and wellbeing, these findings indicate that the potency and accessibility of mental health content on TikTok may be beneficial for improving users' competency in managing and understanding their own issues. With individuals able to share personal experiences of recovery, TikTok may be a useful tool for promoting changes in societal attitudes towards mental illnesses. However, while the plethora of information available may help improve users' mental health awareness, there may be a strong tendency for individuals excessively self-diagnose medical conditions and subsequently develop health anxiety.

A Double-Edged Sword for Mental Wellbeing

As a source of entertainment, social media is designed to promote positive mood, alleviate stress and provide an escape from reality (Omar & Dequan, 2020; Shankleman et al., 2021; Throuvala et al., 2019). Indeed, most participants discussed feeling “better” and “relaxed” after using TikTok, suggesting that the platform had a calming influence and provided a distraction from the stresses of student life:

When I’m using it, it normally just makes me feel better. Like I said, it just kind of winds me down. Hannah

By temporarily distracting themselves, participants were able to regulate their emotions and better cope with academic pressures:

I guess I’ve been feeling a bit anxious about exams and stuff lately. So sometimes, like if I’m not wanting to revise, then I might go on TikTok just to distract myself a bit, and not have to worry about that as much. Ruth

Having said that, most students also reported adverse emotional experiences from using TikTok. One participant even described an occasion of using TikTok in an attempt to alleviate their anxiety, but feeling worse rather than better:

The reason I was sort of feeling anxious in the first place was to do with some other sort of health issues. And I was back home for a bit from uni, and feeling a bit anxious about that. So I went onto TikTok to try and help and it started making me feel worse. Ruth

Upward social comparisons were also commonly disclosed by participants, who frequently compared themselves to others perceived as better and more successful. Abi, for instance, reported crying and feeling sorry for herself after seeing that a TikTok users had done “a whole list of things before it’s even midday”, before she had even left her bed. In a similar fashion to Abi, many participants who made these comparisons described feeling inferior, “unsuccessful” and “rubbish”:

Because of my age, I see a lot of people bragging, saying “Oh I’m in my early twenties, I already have a house and I make six figured a year”. And I would say then, it makes you, I’m aware that’s unrealistic but it makes you feel unsuccessful. Iris

Similar effects on wellbeing were reported from viewing unpleasant and triggering content that participants did not want to see, including videos on trauma, eating disorders and weight loss journeys:

My For You page can sometimes be very therapy based. Or like around trauma and stuff like that. And then sometimes, that stuff can come up when you’re not really wanting to think about it. But then it makes you think about it. Natalya

Unsurprisingly, most participants acknowledged that TikTok’s algorithm, and thus its recommendation engine, was largely determined by the content they interacted with. The effects TikTok had on their wellbeing were assumed to depend on this:

Whereas with TikTok, the algorithm decides... for you, what you’re going to see. And if you like you see one weight loss video, another one’s going to come up, because you’ve liked that. And then I think you can sort of go down a rabbit hole. Iris

TikTok's personalised "For You" page, aimed at paralleling users' interests, is already known to derive most of its content from users' interactions with specific content, as well as from implicit and explicit signals of engagement (Marengo et al., 2020; Montag et al., 2019; Szeto et al., 2021). A handful of participants corroborated this, and admitted to taking active measures to control the content they were shown, such as by purposely engaging with more positive videos to filter out negative content:

Yeah. So I think I actually make quite a big effort to like the positive videos, because I don't want it to be affecting me negatively... Like I want to keep enjoying myself on the app. And if I see sadder and more negative videos, then I don't think it'll be healthy, or I won't enjoy myself on it. Eloise

Others believed that trending videos were always the most visible, regardless of whether they were positive or negative. Given TikTok's emphasis on the imitation and replication of trends (Zulli & Zulli, 2020), this was to be expected:

But you're always going to get some content that you didn't want on there, but that's just how TikTok works. It's just the trending videos that come up to the top. Abi

These findings indicated that participants felt conflicted over whether TikTok positively or negatively impacted mental wellbeing. TikTok's algorithm appeared to be highly influential in determining the content displayed to users, and its subsequent effects on their mood. By this accord, participants could manipulate the algorithm into recommending more pleasant content, by purposely viewing positive videos.

Excessive and Compulsive TikTok Use

Most participants considered TikTok to be highly addictive, with many platform-specific components reported to influence their compulsive use of it. In particular, students considered TikTok's endless scrolling feature to be highly pivotal in promoting prolonged use and addictive behaviour, displaying streams of personalised content in a "never-ending" fashion:

Because you can kind of end up scrolling on that for hours without realizing. So it does kind of waste a bit of time sometimes. Ruth

Procrastination was also commonly reported by participants, who unnecessarily or voluntarily delaying doing other important activities in favour of TikTok, such as university work or household chores:

So sometimes like if I'm not wanting to revise then I might go on TikTok just to distract myself a bit. Ruth

Most participants discussed the negative effects of excessive and compulsive TikTok use, including social isolation, low mood and poor time management. When they felt low, participants tended to use TikTok more, with the intention of improving their moods and alleviating stress. However, Ruth used TikTok in an attempt to relieve their anxiety, but ended up feeling worse rather than better:

The reason I was sort of feeling anxious in the first place was to do with some other sort of health issues. And I was back home for a bit from uni, and feeling a bit anxious about that. So I went onto TikTok to try and help and it started making me feel worse. Ruth

Iris even reported having a reduced attention span after excessively using TikTok:

One thing I have noticed, and something that a lot of people talk about, is with attention span. So my attention span has got a lot shorter since using TikTok. Iris

These findings highlighted the extremely addictive nature of TikTok, and how platform-specific components can encourage prolonged use. As such, using TikTok excessively appeared to be detrimental to participants' wellbeing, resulting in social isolation, low mood and poor time management.

Discussion

TikTok's role in students' health and wellbeing was explored through a thematic analysis of participants' narratives. Findings indicated that TikTok exerted a strong influence over various aspects of participants' mental health. These were categorised into four themes: building supportive communities; facilitating psychoeducation; a double-edged sword for mental wellbeing; and excessive and compulsive TikTok use.

Our findings suggested that students felt conflicted as to whether TikTok positively or negatively affected their wellbeing, consistent with research conducted on other social media platforms (Ivie et al., 2020; McCrory et al., 2022; Pop et al., 2022). As suggested by McCrory et al. (2022), these mixed effects may be the result of how individuals behave on the platform. Users that actively contribute content may temporarily increase their feelings of high self-esteem, while those that adopt more a "viewer" role may be more likely to experience feelings of envy and inferiority. The present study did not explore these concepts, and future research may benefit from investigating how specific behaviours on TikTok affect users' self-esteem and wellbeing.

In congruence with mood management theory (Zillmann, 1988), students regularly used TikTok to ameliorate stress and negative arousal. Mood management theory posits that individuals follow a hedonistic compulsion to alleviate unpleasant emotions and to maximise pleasure (Reinecke, 2016; Zillmann, 1988). By selectively exposing themselves to content that aligned with their mood optimisation needs, participants sought to rearrange their stimulus environments in a way that would maximise positive affect and reduce negative emotional states. Given the strong association between social media use, stress recovery and the development of psychological resilience in students (Grady et al., 2022; Wolfers & Schneider, 2021), these findings have major implications for TikTok's effectiveness in relieving anxiety and stress. Gu et al. (2021) supported this notion, demonstrating significant reduction in all physiological and behavioural markers of anxiety after browsing TikTok for 20 min, as well as improved satisfaction.

In contrast, students tended to engage in upward social comparisons with TikTok users perceived as better and more successful, which produced feelings of inferiority and unsuccessfulness. TikTok's highly visual design is likely to have exacerbated these adverse effects, with users able to carefully select the images and filters used when posting (Holland & Tiggemann, 2017; McCrory et al., 2022; Verduyn et al., 2017). As such, participants who viewed body image-based content felt considerably worse about their appearances. Other research has validated these findings, adding that regularly being exposed to eating disorder content and the unattainable "perfect" body may predict dieting behaviours and the subsequent development of eating disorders (Fardouly et al., 2018; Fox, 2020; Pop et al., 2022), especially in female students (Popat & Tarrant, 2022; Prieler et al., 2021).

We found that TikTok's algorithm played a prominent role in determining the content users were exposed to, and the subsequent effects it had on their psychological wellbeing. As with other platforms, TikTok's algorithm encourages user activity by recommending videos based on interactions with specific content (Ivie et al., 2020; Zhang & Liu, 2021). However, users aren't required to be following creators to see their videos, but simply need to interact with the "For You" page enough for it to learn about their personalities and interests (Bhandari & Bimo, 2022). This presents a viable explanation for how students who purposely engaged with more positive videos could filter out negative content and enhance TikTok's effects of their moods. Nevertheless, little research has explored how TikTok's algorithm can be manipulated to improve one's welfare, and this warrants further investigation.

Several studies have highlighted the abundance of health-promoting and health-compromising messages circulating TikTok, with content on COVID-19 mitigation, eating disorders and ADHD among the most popular health topics shared by users (Basch et al., 2020; Herrick et al., 2021; Yeung et al., 2022). Many students in the present study corroborated these findings, adding that viewing this material improved their awareness of mental health and confidence in managing their own problems (Basch et al., 2020; Ostrovsky & Chen, 2020; Russell et al., 2021). Despite this, however, findings on the effects of viewing mental health content are mixed. Hooper (2022), for example, analysed 50 TikToks catalogued under #mentalhealthuk and highlighted a direct relationship between viewing pro-eating disorder content and dysfunctional eating behaviours. Lim et al. (2021), meanwhile, suggested that social media representations of substance use were closely linked to increased substance-using behaviours. These adverse effects are likely to be more detrimental for younger and more psychologically vulnerable audiences, including female adolescents, undergraduate students and individuals with pre-existing mental health conditions (Arendt et al., 2019; Prieler et al., 2021; Yang et al., 2020). As such, TikTok's platform designers should consider censoring content related to sensitive topics.

First-person lived experience accounts on TikTok may provide more accurate representations of the struggles associated with poor mental health (Herrick et al., 2021; Russell et al., 2021), serving as educational resources for users to gain insight into their medical conditions and discover new strategies for optimising psychological wellbeing (Basch et al., 2020; De La Garza et al., 2021; O'Reilly et al., 2018). As suggested by our sample, these accounts may be especially useful for disseminating the social stigmas attached to mental illnesses, which are known to adversely affect patients' wellbeing and quality of life (Perez-Flores & Cabassa, 2021; Puspitari et al., 2020; Ross et al., 2019). Having said that, the overabundance of content available on TikTok also led many participants to self-diagnose medical conditions excessively and inaccurately, with these effects amplified by the pervasiveness of medically inaccurate information across the platform (Yeung et al., 2022). Celebrities, influencers and other highly prolific TikTok users, in particular, may be more influential in the transmission of this false material, able to easily distribute erroneous information to large audiences without having any expert knowledge on a given topic (Braunberger et al., 2017; Szeto et al., 2021).

Given the lack of accuracy verification and monitoring of posts, as well as the public's reliance on social media as a source of information (Gupta & Ivanova, 2021; Ross et al., 2019; Szeto et al., 2021), the high prevalence of misinformation across TikTok may instead serve to perpetuate negative stigmas towards mental illnesses, and thus cause a more rapid deterioration in individuals' psychological wellbeing (Murphy et al., 2013; Ross et al., 2019). Such stigmas typically encompass negative attitudes, discrimination and a desire for social distance (Hartini et al., 2018; Li et al., 2018; Puspitasari et al., 2020), and often lead

to individuals resisting seeking help for fear of embarrassment (Perez-Flores & Cabassa, 2021; Ross et al., 2019). As such, platform designers should consider having verified TikTok accounts for health professionals, which would prove especially useful for dispelling misinformation and spreading medically accurate material (Roche et al., 2021; Szeto et al., 2021; Villa-Ruiz et al., 2021).

Our study revealed that TikTok facilitated access to people with similar interests, experiences and difficulties, and was thus used regularly by participants to build and foster social connections. Consistent with the stimulation hypothesis (Nowland et al., 2018), participants had ample opportunity to form emotional connections with peers and acquire social support, which helped reduce loneliness. Based on one's feelings of communication and reciprocity within a community, social support serves an intrinsic need that is important for wellbeing (Gilmour et al., 2020; Hancock et al., 2022). As such, greater perceived social support has been shown to improve psychological wellbeing, moderate the negative effects of stress and reduce loneliness (Hancock et al., 2022; Huang, 2017; Li et al., 2015).

In this regard, student support services could consider encouraging students transitioning to university to actively participate on TikTok. TikTok's short video modality may effectively stimulate a sense of shared emotion between content creators and recipients (Barta & Andalibi, 2021; Zhu et al., 2019), and as such may support users to connect with others in similar situations experiencing similar emotions. Student services could even generate unique hashtags that contain advice on transitioning to university, as well as provide a platform to meet other new students, which may play a pivotal role in many physiological and psychological health outcomes (Coundouris et al., 2021).

In contrast, a smaller number of participants felt that communication on TikTok differed significantly from other social networking sites, emphasising the content presented by its algorithm over typical online social activities, such as messaging. Unlike other social media, TikTok encourages its users to build networks based on similarities of content, instead of promoting users who may already be connected to each other (Barta & Andalibi, 2021). While TikTok's short video modality may be useful for stimulating strong emotional connections with peers (Barta & Andalibi, 2021; Zhu et al., 2019), individuals are not required to contact users to view their content, which may limit communication and lead to social isolation (Barta & Andalibi, 2021; Bhandari & Bimo, 2022). In order to address these adverse effects, students could use TikTok in combination with offline face-to-face interactions, which may stimulate a greater sense of social belonging and connectedness (Sacco & Ismail, 2014; Trepte et al., 2014). Future research should explore this concept further, and determine whether this combination produces more favourable outcomes for individuals' mental wellbeing.

The majority of students spend over two hours a day on social networking sites, often at the expense of other goal-related activities such as university work (Alblwi et al., 2021; Allahverdi, 2021; Meier et al., 2016). Such excessive social media use is known to disrupt day-to-day functioning and worsen psychological wellbeing (Malus & Ciencialova, 2021; Pop et al., 2022). Consistent with these findings, participants found TikTok to be a highly addictive platform, with its endless scrolling feature significantly contributing to excessive and compulsive use. Indeed, this feature is designed to capture users' attention, by displaying copious streams of personalized content tailored to each person's interests (Marengo et al., 2022; Montag et al., 2019; Wartberg et al., 2021).

As a consequence, students frequently used TikTok as a platform for procrastinating doing university work. While academic procrastination is especially prevalent within the student population (Klingsieck, 2013; Rozgonjuk et al., 2018; Shen & Liu, 2019), it is often considered a counterproductive process that is detrimental to users' wellbeing,

productivity and work performance (Hen & Goroshit, 2020; Rozgonjuk et al., 2018; Shin & Grant, 2021a, 2021b). In congruence with this, participants who used TikTok to procrastinate displayed elevated anxiety levels and experienced a deterioration in their mental wellbeing.

In stark contrast, however, scholars have also proposed the idea of a curvilinear effect for procrastination, arguing that engaging in a moderate level of procrastination may actually benefit performance on creative tasks and tasks involving searching for information (Rapp et al., 2013; Shin & Grant, 2021a, 2021b). Shin and Grant (2021a, 2021b), for instance, suggested that moderate procrastination could promote creative incubation, freeing individuals from time pressure constraints and allowing for more flexibility in restructuring problems.

Nevertheless, students who used TikTok excessively and compulsively experienced mental health problems, became socially isolated and struggled to effectively manage their time (Bhattacharya et al., 2019; Malus & Ciencialova, 2021; Sariwulan et al., 2020). When more stressed about studying and exams, we noticed that participants tended to use TikTok more frequently, and as such, we anticipate that it functioned as an avoidant coping mechanism to temporarily relieve anxiety (McNicol & Thorsteinsson, 2017). This is particularly worrying, given that dependence on TikTok to satisfy specific gratifications may induce symptoms linked to substance use, such as withdrawal and mood modification (Kuss & Griffiths, 2017; Naik & Sherekar, 2022).

This study has some limitations. First, as our participants were primarily female, the transferability of our findings to male students is questionable. It is possible that men have separate motivations for using TikTok, which may affect their experiences on the platform and subsequent effects on their wellbeing. While women are often driven to use social media to maintain close relationships and compare themselves with others (Haferkamp et al., 2012; Krasnova et al., 2017; Rus & Tiemensma, 2018), men may strive to form new relationships instead (Muscanell & Guadagno., 2012). As such, our findings may not fully reflect students' experiences on TikTok or its effects on their mental health.

Although excessive social media use is known to have many adverse effects in one's psychological wellbeing (Malus & Ciencialova, 2021; Pop et al., 2022; Rozgonjuk et al., 2018), we did not quantify how often students used TikTok, only that they engaged with it regularly. As such, it is difficult to infer whether more frequent TikTok use causes a greater deterioration in one's psychological wellbeing. In future studies, researchers may benefit from administering a validated social network use scale to determine TikTok engagement, such as the Impact of Students' Social Network Use scale (ISSNU; Topaloglu et al., 2016), aimed at measuring social network activity, communication preferences and motivations for using social media (Sigerson & Cheng, 2018).

In conclusion, our findings suggested that TikTok has mixed effects on students' mental health and wellbeing. While participants found TikTok to be useful for temporarily relieving anxiety and academic stress, they often compared themselves to other users and developed health-destructive behaviours after viewing unpleasant content. These differential effects were largely mediated by TikTok's algorithm, which determined the content shown to them, and the subsequent effects it had on the psychological wellbeing. By purposely viewing positive videos, users may be able to manipulate the algorithm into recommending pleasant content more frequently, and thus improve its effects on their mental health. Nevertheless, students should limit how long they spend on TikTok, especially given the undesirable consequences associated with excessive use.

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Author Contribution E.R. conceived of the study, participated in its design and coordination, performed the thematic analysis and drafted the manuscript. C.T. participated in the study design and its coordination, helped prepare study materials and assisted with interpreting the data and drafting the manuscript. Both authors read and approved the final version of this manuscript.

Data Availability The datasets generated and/or analysed during the present study are not publicly available. However, they are available from the corresponding author on reasonable request.

Declarations

Ethical Approval The present study aimed to adhere the British Psychological Society code of ethics (Oates et al., 2021). Ethical approval was granted by Bournemouth University ethics committee.

Informed Consent All subjects provided informed consent prior to participating in the study. No identifiable data was collected by the researchers.

Conflict of Interest The authors declare no competing interests.

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