Article

TikTok and the fear of missing out: Analyzing social media consumption and mental wellbeing

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Abstract: Background: TikTok, a social media application, has gained tremendous popularity in recent years, with a broad spectrum of users from all ages, different countries and cultures. However, major concerns in the field of mental health related to the use of such platforms have consequentially emerged. This particular research aimed to analyse the usage patterns associated with the social media platform, TikTok, and its cascading psychological effects among young Mauritian adults. **Methodology:** The cross-sectional study adopted a quantitative approach with a sample of 400 Mauritians meeting the inclusion criteria. A self-reported questionnaire examining self-esteem, Fear of Missing Out (FOMO) and mental health determinants was designed and administered primarily through online mediums. **Findings:** 30.5% of the participants used TikTok for 1 h to 2 h, while 12.3% used it for 2 h to 3 h daily, and the most prevalent reason for TikTok use was leisure (73.5%). Adverse psychological effects, characterised by pessimism (33.3%), restlessness (35.1%), uselessness (39.8%), anxiety (38%), depressive behaviours (36.5%), lower self-esteem (17%), and FOMO (41.7%), were depicted among the sampled participants. An increase in FOMO led to lower self-esteem ($rs = -0.326$, $p < 0.05$), heightened anxiety ($rs = 0.467$, $p < 0.05$) and a potential increase in depressive symptoms ($rs = 0.338$, $p < 0.05$). There was a significant difference in anxiety levels when perception of self-directed negative comments was assessed ($U = 11,852.500$, $z = -4.808$, $p < 0.05$). **Conclusion:** This study empirically revealed that the general use of TikTok in itself appears to be non-problematic; rather, its unhealthy excessive usage triggers deleterious mental health among TikTok users. The findings also pointed towards sensitization measures and psychoeducation towards the appropriate use of social media platforms such as TikTok.

Keywords: TikTok; self-esteem; FOMO; anxiety and depression

1. Introduction

Social media has become an ineluctable part of our lives. Facebook, Instagram, Twitter, YouTube, Snapchat and LinkedIn are examples of social media channels which have attracted a huge audience, irrespective of age. This need to consume content from social media has pervaded over the years and although demonstrating a great potential in driving knowledge and skills acquisition (Sivakumar et al., 2023), growing concerns have been reported with the rapid emergence of different social media platforms and its impact on mental health (Olorunsogo et al., 2024). Evidence has consistently identified the problematic use of social media leading to digital addiction as well as negative impact of quality-of-life determinants such as sleep (Lin et al., 2024) and most importantly, driving adverse mental health effects with augmented anxiety levels and increased risk of depression (Yu et al., 2024). The latest social media platform, TikTok, which has gained much momentum since its inception, has been portrayed as a revolutionary platform which harnesses user creativity and can

be used for its benefits in nurturing mental health through positive psychology (Lau et al., 2024). However, its similarities in terms of problematic use and effect on mental health should not be downplayed and mandates demographic-specific research in the local context. TikTok, initially released under the name Musical.ly in 2014 and rebranded as TikTok in 2016, is among the world's most downloaded smartphone application (Singh, 2020). Its success is attributed to its emphasis on tailored content (TikTok, 2019; Zhao, 2021). During the COVID-19 epidemic, this smartphone application had the greatest quarterly download rate (Miller, 2020). As at September 2021, it had approximately 1 billion monthly active users worldwide (TikTok, 2022).

The purpose of TikTok is mainly for entertainment, leisure and to encourage creativity (TikTok, 2020). To create short movies, users may perform playback videos to a variety of hit songs using the TikTok programme, which is accessible for Apple and Android devices; one of the platform's most notable features. "Self-expression," "self-enhancement," and "self-actualization" are some of the key motivations behind user-generated content (Park and Lee, 2021). TikTok users either replicate the original video's material which is made available on the platform or engage with it. A special characteristic of TikTok is the use of hashtags that categorise videos under specific themes (Li et al., 2016). TikTok videos now cover almost all topics in the world because of their gravitational influence on both makers and viewers. As a matter of fact, 16 billion people have seen "#happy," whereas 76 billion have viewed "#pain" (Harwell, 2022).

The app has built-in features that help in deciding which videos people watch since it is fundamentally an algorithm-driven platform (Li et al., 2016). As a result of user interactions, TikTok's algorithm efficiently provides movies, and each user's feed is distinctive and customised (Bhandari and Bimo 2022; TikTok, 2022). In contrast to other social networking platforms such as Twitter and Facebook, TikTok provides its members with the FYP (For You Page), which is a collection of material that TikTok determines the user would find appealing (Hern, 2022). As a result, in today's technologically advanced culture, TikTok has emerged as a platform for a variety of activities, including creative entertainment, learning, exploring new ideas, and marketing. When it comes to communicating with its users, TikTok prioritises both the tangible (substance, information, etc.) and the abstract (personal storytelling or narrative, emotion, etc.) (Peña-Fernández et al., 2022). This prioritisation is directly related to the app's potential to generate more audience interest and engagement (Gupta et al., 2021). TikTok facilitates the instant consumption and watching of amusing videos due to its policy of public accounts and a straightforward, bright, and user-friendly content interface.

1.1. TikTok and its potential effects on psychological determinants

TikTok is important for younger adults' identity development and self-feedback because it allows them to participate in peer groups and choose their place within them, which may provide them social support. The culture of today's youth is reflected on TikTok (Yand et al., 2021). TikTok content creators derive a sense of achievement and positivity through their materials shared as a result of the acceptance of users as demonstrated by the comments and number of views (Barta and Andalibi, 2021).

However, the possible negative impacts of TikTok usage, particularly on mental health, are nevertheless becoming a significant worry.

'Fear of missing out' (FOMO) is an unpleasant experience associated to the general sensation of worry that, if one is not there, others may have more fulfilling experiences than one does. In addition to this, it is distinguished by an intense desire to remain in the company of other people (Alutaybi et al., 2019). When people utilise social media, they often worry about missed opportunities when disconnected or are unwilling or incapable to interact and speak with others to the level they would want (Alutaybi et al., 2019). FOMO results in an inappropriate attachment to online social networks and is connected to several negative life events and emotions such as sleep deprivation, decreased life competency, emotional strains, negative consequences on one's physical well-being, anxiety, and improper emotional regulation (Alutaybi et al., 2020; Cham et al., 2019).

The use of social media sites like Facebook, Instagram, and TikTok have also been linked to a person's sense of self-worth. Within a community setting, social media users' propensity to share irrational and idealised images can be a cause of worry. TikTok trends such as "#thinspiration" (posting photos to stimulate weight reduction) and "#fitspiration" (sharing photos to inspire fitness goals) are connected to idealised body ideals (Cohen et al., 2019); the latter which may be linked to body dissatisfaction and reduced self-esteem (Robinson et al., 2017; Tiggemann and Zaccardo, 2015). Although, this is not isolated to the use of TikTok alone, but also regroups other social media platforms.

According to Chen et al. (2021), the addictive characteristics of TikTok, includes continuous scrolling, automatic video playback, and tailored content suggestions, all which have the potential to induce obsessive usage tendencies among its users. The algorithmic feed of the site is intentionally crafted to sustain user engagement over prolonged durations, hence fostering the emergence of addictive tendencies (Montag et al., 2021). These characteristics engage users in prolonged and aimless browsing inside the application, frequently resulting in a loss of temporal awareness. Consequently, certain users may encounter challenges in managing their usage and may encounter adverse effects on their mental well-being and efficiency.

Maguire and Pellosmaa (2022) looked at the connection between mental health disorders and TikTok usage; findings which revealed a significant association between TikTok addiction and poor consequences on mental health. Higher levels of depression, anxiety, and stress are associated with TikTok addiction (Sha and Dong, 2021). These adverse mental health effects are also deeply rooted in the usage patterns and frequency, such that deviating from a 'healthy' usage pattern may induce negative mental health effects. Other studies also demonstrated the strong relationship between increased social media usage and TikTok addiction with greater rates of depression, anxiety, and stress (Zahra et al., 2022). TikTok features content which may adversely affect mental health based on its interpretation or actual semantic. Cyberbullying and explicit kinds of body shaming on social media platforms, can result in disordered eating and narcissistic personalities among others (Aloui, 2021). Improper and objectifying remarks are frequently made on TikTok, which makes women particularly vulnerable to abuse (Aloui, 2021; Jaffar et al., 2019).

The overutilization and dependency on TikTok have been linked to a range of adverse psychological consequences, such as heightened levels of anxiety, depression, and diminished self-worth (Chao et al., 2023; Khalaf et al., 2023; Yao et al., 2023). Psychological distress among users can be attributed to various factors, including the persistent tendency to compare oneself to others, the pressure to generate captivating material, and the apprehension of missing out (FOMO) (Chen et al., 2021; Jabeen et al., 2023).

1.2. Theories underlying the psychological impact of TikTok

In the context of TikTok, the Self-Psychology Theory which posits the formation of the self and underscores the phenomenon of mirroring (Kohut, 1971) can be extrapolated to map the evolving relationship between content creators and their audience. Short-form videos are frequently utilized by content creators to communicate many facets of their lives, feelings, and experiences, with the intention of seeking validation and establishing connections with their followers (Oaten, 2022; Vaingankar et al., 2022). The act of viewers actively participating in this content by liking, commenting, and sharing it serves as a means of mirroring, since it validates the creator's expression and identity (Garcia, 2023). The creator's sense of self-worth and belonging can be strengthened by receiving positive feedback and validation from the audience, which in turn encourages their ongoing involvement with the platform (Zhang et al., 2020), the latter driving self-esteem. Furthermore, getting viewers' attention might help foster a healthy sense of grandiosity among young adults and motivate a feeling of acceptance. (Fegan and Bland, 2021).

Similarly, using the Ego Psychology Theory (Loevinger, 1976), individuals may undergo unique milestone sequences and ego developments. For example, someone who regularly creates and shares content on TikTok may experience shifts in their ego development as they navigate the platform's social dynamics, engagement metrics, and feedback mechanisms. The process of creating content, receiving feedback, and interacting with other users on TikTok can contribute to various aspects of personality development, such as self-expression, social interaction skills, and self-esteem.

1.3. Adverse behaviours associated to TikTok

The phenomenon of cyberbullying on the TikTok platform encompasses a range of manifestations, such as harassment, trolling, hate speech, dissemination of rumours, and the sharing of offensive or degrading material (Wang et al., 2019). Individuals may be subjected to these behaviours due to their physical appearance, identity, beliefs, or other personal attributes, resulting in psychological anguish and suffering. Victims of cyberbullying on TikTok may experience substantial detrimental impacts on their mental health and overall well-being. Several have reported that individuals who fall victim to cyberbullying may encounter heightened levels of anxiety, sadness, diminished self-esteem, and contemplation of suicide studies (Ho and Gu, 2021; Kumar and Goldstein, 2020; Maurya et al., 2022). The enduring and widely disseminated nature of cyberbullying on the TikTok platform has the potential to intensify these adverse consequences, resulting in enduring psychological distress.

Vasiu and Vasiu (2020) stated that instances of extortion on the TikTok platform encompass a range of manifestations, such as the use of public humiliation as a threat, the broadcast of sensitive information, or the exploitation of personal connections. The act of blackmailing on the TikTok platform commonly entails threats to disseminate or distribute content that is deemed embarrassing, intimate, or incriminating, with the condition that the victim complies with the demands put forth by the perpetrator (Freed et al., 2018; Powell and Henry, 2016; TikTok, 2023). Extortion and blackmail on TikTok can significantly impact the emotional well-being, reputation, and overall sense of safety of its victims. Coercive methods and psychological manipulation by offenders can lead to several negative emotional responses in victims, including dread, anxiety, shame, and trauma (Basch et al., 2022; Wolak et al., 2018).

1.4. TikTok ramifications in Mauritius

Local publications have reported that the Mauritian population consumes TikTok often and also engage more in media production. A large portion of the country's population has drawn interested in this application, as seen by the millions of views that videos made by Mauritians have received; impact which is said to improve the content producers' confidence and self-esteem. However, well-known Mauritian influencers have also experienced significant psychological discomforts which may also co-extend to the lambda individual. Scholarly studies examining how TikTok use affects Mauritians' mental health are scant. Examining the psychological effects of TikTok utilisation in the Mauritian environment would help reveal the factors that enhance or impact adversely mental wellbeing. It would also provide substantial information on the healthy usage of such applications, whose utility co-extends beyond entertainment and could be optimally used for professional and personal growth.

2. Methodology

2.1. Target population

The study adopted a quantitative approach to analyse the psychological impact of using TikTok among the Mauritian adults. The population of interest for this current study was the young Mauritian adult between the age cohort of 18 years and 35 years who used the TikTok application. From the marketing hub of Geyser (2023), in the United States the largest percentage of users of Tik Tok referring to 32.5% users are between 10 to 19 years, 29.5% users are between 20 to 29 years, 16.4% users between 30 to 39 years while 13.9% users are between 40 to 49 years and only 7.1% users have 50 years and above. Based on these statistics, the highest percentage of TikTok users have been 18 years and 35 years, thus justifying the selected age cohort for this research. The number of Mauritians aged 18 to 35 was 409,372 as at 2022. The sample size was calculated to 384 with a margin of error of 5%, and a confidence interval of 95%. A buffer of 10% was applied to cater for any incomplete questionnaire submission or withdrawal from the study, and the final response rate generated through this study stood at 400 participants.

2.2. Inclusion and exclusion criteria

The study included Mauritian adults aged between 18 to 35 years who were either active or passive TikTok users or content creators. The exclusion criteria, on the other hand, included non-Mauritians, all those below 18 years, non-TikTok users and TikTok users who had been using this app for less than 1 month.

2.3. Research instrument and study variables

For this study, a survey through a self-administered web-based questionnaire was used. Considering the large number of adults required, the web-based questionnaire was appropriate allowing respondents to complete it at their convenience and completing the general technology-friendliness of the targeted strata. Data was collected from mid-September to the end of October 2022. To obtain standardized and factual responses, closed-ended question formats were preferred, including dichotomous and Likert items employing 4-point and 5-point Likert scales. Demographic information such as age, gender, marital status and education level were also collected from the participants. Moreover, three different scales were used to measure participants' self-esteem, FOMO; and anxiety and depression respectively.

2.3.1. Rosenberg self-esteem scale (RSES)

The Rosenberg Self-Esteem Scale is the most prevalent scale used to measure global self-esteem (Sinclair et al., 2010). It consists of 10 items about self-acceptance and self-worth. Each statement is evaluated on a 4-point Likert scale ranging from "strongly disagree" to "strongly agree." Five items of the scale have been reversed coded. The score ranges between 0–30, with a cut-off value of 15 (Rosenberg, 1965). A score below 15 indicates a low sense of self-esteem, 15 to 25 is considered normal self-esteem and a score of above 25 is considered enhanced self-esteem. This study employed the RSES to determine whether TikTok usage has a positive or negative effect on self-esteem.

2.3.2. Fear of missing out (FOMO)

The FOMO scale was developed by Przybylski et al. (2013) and is categorised as a unidimensional scale, comprising of 10 questions over a 5-point rating profile which vary from 'Not at all true' to 'Absolutely true'. By summing up the item scores, the total score can be calculated; the latter which range from 10 to 50. A score higher than 25 indicates a higher level of FOMO (Przybylski et al., 2013). In this study, the FOMO scale was used to measure the extent to which individuals fear missing out on TikTok.

2.3.3. Hospital anxiety and depression scale (HADS)

Zigmond and Snaith (1983) developed the Hospital Anxiety and Depression Scale. Comprising of 14 items, the symptomatology for depression (HADS-D subscale) and anxiety (HADS-A subscale) can be assessed. The items are scored using a 4-point rating profile where the total scores vary from 0 to 21. The screening cut-off score of ≥ 8 was employed for indicating symptoms of depression or anxiety. In this study, the HADS was used to assess the degree to which TikTok users experience anxiety and depression

2.4. Instrument reliability and validity

Table 1. Construct internal consistency.

	Number of items	Cronbach alpha coefficient	Bartlett test of sphericity (validity)		
			KMO Sample adequacy	χ^2-statistic	*p*-value
Use of TikTok	8	0.791	0.762	1231.128	$p < 0.001$
Self-esteem	10	0.802	0.815	1278.736	$p < 0.001$
FOMO	10	0.862	0.822	1799.614	$p < 0.001$
HADS-anxiety	7	0.771	0.833	599.951	$p < 0.001$
HADS-depression	7	0.741	0.788	544.899	$p < 0.001$
HADS-overall	14	0.813	0.818	1640.056	$p < 0.001$

The internal consistency for the six variables was deemed reliable with alpha coefficients exceeding the cut-off value of 0.7 (DeVellis, 2003), indicating consistency within the variables measured (**Table 1**). In addition, a pre-test of the instrument was conducted with ten participants who satisfied the inclusion criteria. Aside from grammatical corrections, no substantial modifications were identified. The validity of the data was further established using Bartlett's test of Sphericity which revealed a significant correlation between the items of each scale ($P < 0.05$); while further support was garnered through an analysis of the sample adequacy using the Kaiser Meyer Olkin test; data resulting in values greater than 0.6 (Hair et al., 2010), further indicative of the strong correlation among the items which would relate to its respective variable.

2.5. Data analysis

Questionnaires were administered online using mass emailing techniques through tertiary institutions as well as disseminated through social media platforms including Instagram, LinkedIn and Facebook among others. Data was mined using Microsoft Excel 2016; and summarised into tables or graphically presented as deemed appropriate. The data was further analyzed using the Statistical Package for Social Sciences (SPSS) Version 21. Both descriptive and inferential statistics were employed. Descriptive statistics in the form of central measures of tendency, and frequencies or percentage were used to present the results; while inferential statistics based on the normality of the data (Shapiro Wilk test with $p > 0.05$) were used to test the different hypotheses.

Objective 1: Examining differences in mental health components against demographic attributes. A Kruskal-Wallis Test was undertaken to verify if there were any differences between self-esteem, FOMO, anxiety and depression using demographic attributes such as gender, age group, relationship status and occupation. A Post hoc Dunn-Bonferroni Test was also undertaken to identify the groups with reported differences.

Objective 2: Associating TikTok usage and mental health components. A chi-square test was used to examine the relationship and its directionality between the use of TikTok and the following components, namely, self-esteem, FOMO, anxiety and depression.

Objective 3: Investigating the relationship between FOMO and mental health components. A chi-square test was performed to determine the potential linkage and influence of FOMO on the following components, i.e., self-esteem, anxiety and depression.

Objective 4: Examining the nature of comments (negative versus positive) on mental determinants. A Mann-Whitney U Test was carried out to verify if the type of comments influenced FOMO, and anxiety and depression.

2.6. Ethical considerations

As the population of this study consisted of adults between the ages of 18 and 35, excluding vulnerable populations such as children, it was anticipated that no major ethical issues would arise. The participants completed the survey willingly and at their convenience and were informed about their responses being treated in utmost confidentiality and anonymity. Aside from participation being voluntary, individuals who did not wish to continue the survey after enrolling in the study could exit at any given point. No incentives were provided to the participants to exclude any potential form of bias. Data collected was used exclusively for this study; and data managed according to the general data protection regulation. This study was approved by the Postgraduate Dissertation Committee, School of Health Sciences, University of Technology, Mauritius.

3. Results

3.1. Demographic profile and TikTok usage

An almost equal distribution between male and female respondents was observed, with 55% aged between 18 and 25 years old, and the employed population representing 61% of the sampled participants (**Table 2**). The study revealed that 46.6% of the participants, representing the majority, often shared or forwarded TikTok contents. 49.1% of the participants spend significantly more time on TikTok than they think; 48.8% frequently use TikTok more than they plan and 12.1% frequently commented on a friend's video (**Table 3**). It was estimated that 39.8% of participants use TikTok for less than one hour per day, while 30.5% use it for between one and two h, 12.3% use it for between 2 h–3 h, and 9.5% use it for more than 5 h.

Table 2. Participants' characteristics.

Respondents profile	Group	Frequency ($n = 400$)	Percentage (%)
Gender	Male	168	42.0
	Female	232	58.0
Age group	18–20 years	80	20.0
	21–25 years	132	33.0
	26–30 years	76	19.0
	31–35 years	112	28.0
Marital status	Single	207	51.8
	In a relationship	67	16.8
	Married	115	28.8
	Divorced	11	2.8

Table 2. (*Continued*).

Respondents profile	Group	Frequency (*n* = 400)	Percentage (%)
Occupation	Student	141	35.3
	Housewife	5	1.3
	Working	244	61.0
	Unemployed	10	2.5

Table 3. TikTok usage as reported through the social networking intensity scale (SNAIS).

Descriptive	Percentage (%)				
	Never	Few	Sometimes	Often	Very often
Sent messages to followers/chat with followers.	55.3	20.5	12.8	5.3	6.3
Commented on friends' videos.	50.5	21.5	16.0	8.3	3.8
Shared/Forwarded content.	15.8	21.3	16.5	18.3	28.3
Built a personal profile on TikTok.	41.3	25.3	15.5	8.8	9.3
Bought/gave virtual goods.	72.3	10.0	9.3	6.0	2.5
There are times that I spent more time on TikTok than I think.	13.5	17.8	19.8	20.3	28.8
There are times that I used TikTok more than I plan.	13.8	15.5	22.0	17.3	31.5
My productivity decreased due to TikTok.	30.0	18.8	19.8	16.0	15.5

*Data presented as percentage of total number of participants (*n* = 400).

Additionally, 23% of the participants created content on TikTok, out of which 34.1% of participants created content for TikTok once per month, while 16.6% claimed they created content more frequently than three times per week. Another promising finding was that 42% of participants created content to entertain, 21% created content as it was a trend, and 11% created content for TikTok challenges.

3.2. Examining differences in mental health components against demographic attributes

3.2.1. Self-Esteem against demographic characteristics

There was a significant effect of demographic dimensions on self-esteem such that the participants showed a significant difference against; age group [χ^2 (3) = 19.855, $p < 0.05$], marital status [χ^2 (3) = 19.473, $p < 0.05$] and occupation [χ^2 (3) = 13.562, $p < 0.05$]. The study demonstrated that self-esteem differed significantly between; the age groups of 18–20 years versus 31–35 years and 21–25 years versus 31–35 years ($p < 0.05$); the participants who were single versus married and who reported being in a relationship versus married ($p < 0.05$); and finally, those studying versus employed participants ($p < 0.05$) (Appendix, **Table A1**).

3.2.2. Self-reported anxiety and depression levels against demographic characteristics

The self-reported anxiety levels of the participants were significantly different across age group [χ^2 (3) = 31.954, $p < 0.05$], marital status [χ^2 (3) = 26.910, $p < 0.05$] and occupation [χ^2 (3) = 17.625, $p < 0.05$]. The studies showed that anxiety differs significantly between; the age groups of 31 years–35 years versus 18–20 years, 31 years–35 years versus 21 years–25 and 26 years–30 years versus 21 years–25 years ($p < 0.05$); divorced versus single, divorced versus in a relationship, married versus single

and married versus in a relationship ($p < 0.05$); housewives versus students, as well as employed versus student participants ($p < 0.05$) (Appendix, **Table A2**). Similar findings were observed when examining depressive index against occupation [$\chi^2 (3) = 13.377$, $p = 0.04$] with employed participants performing lower on the score versus students ($p < 0.05$) (Appendix, **Table A3**).

3.3. Self-esteem and TikTok usage

The current study revealed that 69.3% of participants had normal self-esteem (score range from 15 to 25), 17% reporting low self-esteem (score < 15), and 13.8% experiencing enhanced self-esteem (score > 25). Self-esteem was different between the participants aged between 18 to 20 years and 31 to 35 years and between 21 to 25 years and 31 to 35 years with mean self-esteem values recorded as 17.9, 18.99 and 20.97 respectively. An introspection within the different items consolidating the self-esteem scale showed that, a sizeable proportion of participants reported having good qualities (55%), agreed that they feel they are a person of worth (55.8%); and only 4.3% firmly disagreed that they are prone to feel like a failure overall. The data presented the majority of respondents as exhibiting normal self-esteem levels (**Table 4**). There was a significant but weak association between self-esteem and TikTok usage [$\chi^2 (588) = 1219.758$, $p < 0.05$, Cramer's $V = 0.381$]; with an observed negative correlation ($r_s = -0.286$, $p < 0.05$, $n = 400$), suggesting that an increase in TikTok usage led to a decrease in self-esteem. This was further endorsed with data showing that spending less than one hour on the platform was linked to normal to high self-esteem profiles, while 31% of the participants spending 3 h to 5 h and 23.7% spending more than 5 h on TikTok exhibited low self-esteem.

Table 4. Characterizing participants' reported self-esteem.

Descriptive	Percentage (%)			
	Strongly agree	**Agree**	**Disagree**	**Strongly disagree**
On the whole, I am satisfied with myself.	30.3	48.8	10.8	10.3
At times I think I am no good at all.	12.0	28.3	31.0	28.8
I feel that I have a number of good qualities.	35.0	55.0	7.5	2.5
I am able to do things as well as most other people.	26.0	60.8	10.5	2.8
I feel I do not have much to be proud of.	10.8	28.0	36.8	24.5
I certainly feel useless at times.	8.0	31.8	30.5	29.8
I feel that I'm a person of worth, at least on an equal plane with others.	24.5	55.8	11.0	8.8
I wish I could have more respect for myself.	22.3	38.8	19.3	19.8
All in all, I am inclined to feel that I am a failure.	4.3	15.5	35.0	45.3
I take a positive attitude toward myself.	38.5	51.0	8.8	1.8

*Data presented as percentage of total number of participants ($n = 400$).

3.4. Assessing FOMO against mental wellbeing in the sampled participants

44% of the respondents reported having high FOMO (cut-off score 25) versus 56% reportedly having no fear of missing out on more rewarding experiences as opposed to their peers. A greater proportion of participants (49.3 %) were not at all

concerned with their friends having a more active and joyful lifestyle, however, only 23% of the respondents agreed to the statement of 'not spending too much time keeping up with their surroundings' (**Table 5**). Participants who were married or in a relationship experienced less FOMO, with a mean of 22.3 and 23.5 respectively than those who were single, with a mean of 24.4. FOMO was marginally associated with TikTok use [χ^2 (924) = 2068.807, $p < 0.05$, Cramer's $V = 0.430$]; with a modest positive correlation between FOMO and TikTok usage ($r_s = 0.367$, $p < 0.05$, $n = 400$); with 73% of the participants who spent 2 h–3 h per day on TikTok reporting higher levels of FOMO in contrast to the 42% of participants who reported using the platform for more than 5 h and exhibited higher levels of FOMO within the same group. 63.5% of TikTok users in this study with a usage frequency of less than one hour per day was characterized as exhibiting low FOMO. There was a weak association between FOMO and self-esteem [χ^2 (693) = 1505.783, $p < 0.05$, Cramer's $V = 0.423$], with an inverse relationship between FOMO and self-esteem ($r_s = -0.326$, $p < 0.05$), such that high FOMO led to poor self-esteem. FOMO was also related to anxiety [χ^2 (594) = 1550.831, $p < 0.05$, Cramer's $V = 0.464$] with increased in anxiety levels paired with high FOMO ($r_s = 0.467$, $p < 0.05$); which were similar effects depicted with depressive features and FOMO [χ^2 (594) = 1343.097, $p < 0.05$, Cramer's $V = 0.432$; $r_s = 0.338$].

Table 5. Assessing the fear of missing out (FOMO) among participants.

Descriptive	Percentage (%)				
	Not at all true	Slightly true	Moderately true	Very true	Extremely true
I fear others have more rewarding experiences than me.	44.8	15.8	22.0	10.3	7.3
I fear my friends have more rewarding experiences than me.	46.0	14.0	21.8	11.8	6.5
I get worried when I find out my friends are having fun without me.	49.3	14.3	16.3	11.3	9.0
I get anxious when I don't know what my friends are up to.	53.5	12.8	18.0	9.0	6.8
It is important that I understand my friends "in jokes".	18.5	13.8	32.8	18.8	16.3
Sometimes, I wonder if I spend too much time keeping up with what is going on.	23.0	16.3	25.0	22.3	13.5
It bothers me when I miss an opportunity to meet up with friends.	27.5	17.5	27.0	17.5	10.5
When I have a good time, it is important for me to share the details on TikTok.	66.5	9.3	13.5	7.8	3.0
When I miss out on a planned get-together it bothers me.	38.3	16.8	23.5	10.0	11.5
When I am away on vacation, I continue to keep tabs on what my friends are doing.	43.5	14.8	22.5	11.5	7.8

*Data presented as percentage of total number of participants ($n = 400$).

3.5. Examining anxiety and depression versus TikTok consumption

Anxiety was not generally observed in the current population with only 38% reporting features of anxiety; while 59.3 % of the participants were not feeling tensed or 'wound up' (**Table 6**) and only a third of the sampled participants reporting

restlessness. There was a weak correlation between TikTok use and anxiety [χ^2 (504) = 1164.789, $p < 0.05$, Cramer's $V = 0.402$] and a moderate correlation was established between anxiety and TikTok usage and ($r_s = 0.422$, $p < 0.05$); indicating the potential role of TikTok usage as an individual or cumulative factor on anxiety levels. Introspecting within the user profiles showed that users who spend less than one hour daily on TikTok would usually report normal anxiety levels (77.4%) while those who spent 3 or more hours on the platform generally exhibited features of borderline and abnormal anxiety levels (50%).

Table 6. Analysing the HADS—Anxiety subscale (HADS-A).

Descriptive		Frequency (*n* = 400)	Percentage (%)
I feel tense or 'wound up'.	Not at all.	237	59.3
	From time to time, occasionally.	122	30.5
	A lot of time.	31	7.8
	Most of the time.	10	2.5
I get a sort of frightened feeling as if something awful is about to happen.	Not at all.	149	37.5
	A little but it does not worry me.	118	29.5
	Yes, but not too badly.	98	24.5
	Very definitely and quite badly.	35	8.8
Worrying thoughts go through my mind.	Only occasionally.	159	39.8
	From time to time, but not too often.	132	33.0
	Yes, but not too badly.	77	19.3
	Very definitely and quite badly.	32	8.0
I can sit at ease and feel relaxed.	Not at all.	23	5.8
	Not often.	98	24.5
	Usually.	179	44.8
	Definitely.	100	25.0
I get a sort of frightened feeling like 'butterflies' in the stomach.	Not at all.	151	37.8
	Occasionally.	164	41.0
	Quite often.	58	14.5
	Very often.	27	6.8
I feel restless as I have to be on the move.	Not at all.	125	31.3
	Not very much.	137	34.3
	Quite a lot.	104	26.0
	Very much indeed.	34	8.5
I get sudden feelings of panic.	Not at all.	161	40.3
	Not very much.	126	31.5
	Quite often.	92	23.0
	Very much indeed.	21	5.3

With respect to self-reported depression, 36.5% of the participants exhibited pertinent signs associated to depression. Respondents still enjoyed the things they used to enjoy (46.8%) and felt cheerful (47%); while a similar percentage often felt they were slowed down (**Table 7**). There was a weak association between depression and the use of Tik Tok among young adults in Mauritius [χ^2 (504) = 1002.603, $p < 0.05$, Cramer's $V = 0.373$] and a weak correlation was found between depression and the use of Tik Tok ($r_s = 0.224$, $p < 0.05$). Examining the user profiles in terms of time spent also showed that 57.9% of users spending more than 5 h on TikTok exhibited

borderline and abnormal depressive symptoms versus the 70% of participants who spent less than one hour daily on the platform and were not affected by depressive symptoms. These findings suggest that as TikTok usage increases daily, it may contribute to an increase in depression levels either individually or collectively.

Table 7. Analysing the HADS—Depression subscale (HADS-D).

Descriptive		Frequency ($n = 400$)	Percentage (%)
I still enjoy the things I used to enjoy.	Hardly a little.	34	8.5
	Only a little.	89	22.3
	Not quite so much.	90	22.5
	Definitely as much.	187	46.8
I can laugh and see the funny side of things.	Not at all.	21	5.3
	Definitely not so much now.	55	13.8
	Not quite so much now.	80	20.0
	As much as I always could.	244	61.0
I feel cheerful.	Not at all.	27	6.8
	Not often.	45	11.3
	Sometimes.	188	47.0
	Most of the time.	140	35.0
I feel as if I am slowed down.	Not at all.	119	29.8
	Sometimes.	188	47.0
	Very often.	64	16.0
	Nearly all the time.	29	7.3
I have lost interest in my appearance.	Definitely.	36	9.0
	I don't take as much care as I should.	112	28.0
	I may not take quite as much care.	90	22.5
	I take just as much care as ever.	162	40.5
I look forward with enjoyment to things.	Hardly at all.	50	12.5
	Definitely less than I used to.	68	17.0
	Rather less than I used to.	77	19.3
	As much as I ever did.	205	51.3
I can enjoy a good book or radio or TV program.	Very seldom.	42	10.5
	Not often.	71	17.8
	Sometimes.	127	31.8
	Often.	160	40.0

3.6. Attitude towards negative comments on TikTok

Participants admitted that they felt uneasy when they perceive negative comments about themselves on TikTok (30.5%) and felt uneasy when viewing negative comments about others on TikTok (41.5%). 54.8% of users would ignore negative comments on TikTok, while only 18.5% would passively laugh and brush off the negative comments. Reciprocating to negative comments was only adopted by 6.8% of the users. There was no significant difference between FOMO and participants who felt uneasy when they perceived negative comments being targeted towards them [$U = 15285.500$, $Z = -1.572$, $p = 0.116$]; and similar observations when mapping depression against perceived negative comments [$U = 16518.500$, $z = -0.414$, $p = 0.679$]. However, heightened anxiety levels were perceived in participants

who felt uneasy when they were exposed to negative comments directed towards them [$U = 11852.500, Z = -4.808, p < 0.05$].

4. Discussion

4.1. Demographics and mental determinants

The present study demonstrated a significant difference between self-esteem and relationship status. 58.8% of the participants who had low self-esteem were single. In line with this finding, Pop et al. (2022) discovered that loneliness is a possible predictor of social media use. Numerous people who live away from their families or do not have a life partner utilize social networking sites to combat loneliness, which is associated with higher life satisfaction and self-esteem (Szcześniak et al., 2020). The current study also established that there is a significant difference between the participants' self-esteem and age groups. This significant difference can be attributed to the fact that younger participants have less emotional maturity than older participants. Accordingly, Carstensen et al. (2011) discovered that emotional well-being improves with age. Furthermore, self-esteem levels fluctuated across the developmental spectrum, validating the notion of self-esteem improvement with age.

There was statistically significant difference in FOMO across marital status. Participants within a committed relationship experienced less FOMO as opposed to those who were single. These findings are supported by Alutaybi et al. (2019), who stated that people desire to be in the company of others and therefore in an excluded setting, they might be plagued with social isolation which could englobe FOMO. Rozgonjuk et al. (2020) also concluded that FOMO differs between single and married participants, which is consistent with the present findings, consolidating the idea of married individuals not affected by the need to be part of a dynamic externally-driven society given that their immediate focus lies within the family settings (Freeman et al., 2023), a feature which is largely observed in Mauritians as well given their preference for physical presence to virtual companionship. The current study also identified differences in FOMO across occupations. Those who were employed experienced less FOMO than those who were either students or unemployed. Hayran et al. (2020) demonstrated that FOMO differs between employed and unemployed participants, confirming the results of the present study; and possibly portraying the notion that the working-class individuals prioritize their undertakings which would exclude elements associated to FOMO such as trending factors. The current study found no statistically significant difference in FOMO across age groups, data in agreement with Milyavskaya et al. (2018) and Rozgonjuk et al. (2020), suggesting that age has no bearing on FOMO. Similar findings were reported for FOMO and gender, the latter which may be a strong indicator of the gendered-gap being narrowed in these circumstances, hence the absence of any disparity when it comes to gender. The Mauritian culture also evolved in a less conservative structure enabling both genders to access the same level of support and education within a social setting, the latter which potentially supports the general absence of gender-based differences when it comes to social factors linked to FOMO. This impact of progressiveness and the removal of gender-atypical behaviors is often reported when there is an equal access to empowerment and participation (Erdmann et al., 2023).

The present findings showed that age groups had differential anxiety levels which contrasted data from Vannucci et al. (2017), the latter concluding an absence of age-related difference in anxiety levels. Mauritian students aged between 18 and 25 years exhibited higher anxiety levels which could potentially be attributed to academic stress and the sense of belonging within a different social setting amidst peers within the same age group. Similarly, the difference in anxiety levels between those aged 26 to 30 versus the 31 to 35 age group could be attributed to the transition to young adulthood in a professional setting where individuals experiences ranging from integrating a professional setting, or embarking into a committed relationship and navigating through the intricacies of a work-life balance may be considered as more stressful events in their lives, which subsequently trigger anxiety. In addition, the study revealed a statistical difference between marital status and anxiety. Divorced participants demonstrated greater anxiety, data corroborated by Parlak Sert and Başkale (2022), through findings reporting the higher levels of anxiety among divorcees versus married couples. This could be explained by the fact that anxiety stems from personal life experiences in the case of fragmented social settings, which may drive a need to find support through different medium which would not stigmatize their experiences, hence a higher screen-time on social media platforms such as TikTok. A number of studies have reported the stark difference in social networks density between married and divorced individuals, the latter attributed to their behavioral objectives of connecting with potential partners (McDermott et al., 2013).

A significant difference was also found between the occupations of the participants and their self-reported levels of depression with working participants exhibiting heightened levels as opposed to students; leading to the potential inference that working participants have more responsibilities and demanding roles than students, explaining the differences noted. It is also worth noting that the unemployment rate in Mauritius shot up from approximately 7% to 12.20% between 2019 to the second quarter of 2020 and slightly decreased to 10.9% in the third quarter of 2020 because of the COVID 19 pandemic (UNDP Mauritius, 2020). This created much financial instability and uncertainty of job security among the working population, possibly justifying the adverse mental health conditions observed. No differences were noted between gender and self-reported depressive symptoms, contradicting the findings of Maguire and Pellosmaa's (2022) study, which found that females scored higher on TikTok use and depression than males. Differences in age did not demonstrate any impact on self-reported depressive symptoms which may be due to the fact that adolescents are more susceptible to internalising mental health disorders than adults (Zahn-Waxler et al., 2000). As a result, there was an insignificant difference between the various adult age groups in terms of depressive symptoms. Similar findings were reported for the different marital status and depressive symptoms, contrasting the fact that divorced participants report more depressive symptoms on social media as evidenced by Primack et al. (2018). The present pool of participants were mainly young adults, which in the event of being in a relationship or married, would still be in a nascent commitment, possibly demonstrating the absence of self-reported depressive symptoms. Moreover, the fact that divorcees accounted for only 2.8% of our respondents, a potential link between depressive symptoms and this stratum would not be reflected in the present research setting.

4.2. Self-esteem and FOMO versus TikTok usage

Only 17% of the respondents exhibited low self-esteem, against the majority with normal self-esteem levels, leading to the notion that spending time on TikTok would not necessarily affect self-esteem levels, but possibly the purpose and duration for specific purposes may mediate self-regulation and therefore self-esteem. This would align with reports of Savira et al. (2022) concluding that the use of TikTok influences adolescents' self-esteem; and Batool and Iqbal (2022) showing that TikTok users with a desire for popularity create more videos to boost their self-esteem. These inferences align with Kohut's (1971) theory of self-psychology, whereby one's self-esteem is greatly influenced by the perceptions of others. The more participants felt appreciated by others, the more their self-esteem increased and the more comfortable they felt spending time on TikTok. However, according to Jan et al. (2017), users who have been victimised on various social media platforms report lower self-esteem, similar to Wilcox and Stephen (2013), who concluded that the use of social networks diminishes participants' self-control, thereby lowering their self-esteem. Participants motivated by 'likes' and 'good comments' spend more time on TikTok aligns with the notion of feeling valued and using external validation to boost self-esteem. This study probes for further research on the downsides of seeking external validation through other users on TikTok based on content creation and reactions.

Our study revealed a positive correlation between FOMO and TikTok use such that increase in FOMO was linked to increased TikTok use although a high proportion of users reported having low FOMO. Yang (2023) provides a clear explanation of the relationship between FOMO and TikTok revealing the need to be informed about the latest trends through such platforms. Wang (2019) added that the homogeneity caused by TikTok can be attributed to FOMO, assisting individuals though their social relationships maintenance mainly through sharing commonalities and subjects of discussions through trending information. Consistent with the findings of this study, Buglass et al. (2017) confirmed that FOMO mediates the relationship between low self-esteem and increased social media use. Another interesting outcome of the present study was the fact that a proportion of the Mauritian adults were not concerned about missing TikTok updates, which could potentially be a result of subscriptions to other social media platforms.

4.3. The nexus between TikTok use, FOMO and mental health determinants

A positive correlation was identified between FOMO and mental health determinants such as depression and anxiety such that participants self-reported heightened levels as FOMO increases. Dempsey et al. (2021) confirmed that depression and anxiety are strongly associated with the problematic use of social media. Dhir et al. (2018) also found that compulsive social media use leads to social media fatigue, which then manifests as depression and anxiety. Hence, increased use of social media would undoubtedly lead to addiction which would be heavily dependent on FOMO, and act as a precursor for depression and anxiety. Therefore, within the concept of 'withdrawal' from social media, this could cascade into FOMO, and potentially affect anxiety and depression levels.

The current study identified a positive correlation between anxiety, depression, and TikTok use. According to Sha and Dong (2021), TikTok use disorder is linked to depression, anxiety, and stress; findings similar to Maguire and Pellosmaa (2022) who discovered that TikTok addiction differs significantly in relation to anxiety and depression. Although these findings are not restricted to TikTok per se it can also co-extend to any social media platform as highlighted by Bettmann et al. (2021), reporting that young adults who use social media may experience elevated anxiety and depression levels. The present study revealed self-reported anxiety and depressive symptoms in a cluster of participants which may also involve the use of TikTok, more specifically linked to the outcome of spending time on the social media platform. According to Nepon et al. (2011), negative social feedback may increase rumination as well as symptoms of social anxiety and depression, as per the social disconnection model; hence in the present case, participants who may be more sensitive to negative social comments due to their high level of interpersonal sensitivity may potentially experience elevated anxiety levels and depressive symptoms. Contrastingly, Shensa et al. (2018) found that positive interactions and social connectedness on social media platforms reduce the level of anxiety and depression among users, advocating for the responsible use of the social media platform as well aligning to the findings of the other cluster of participants who were unaffected by the time spent on TikTok.

5. Conclusion

Substantial studies accentuate the addictive nature of internet use, which may tip on either side of the mental health balance, inducing either positive effects or lead to psychological distress the outcome of which is associated to the pattern of usage. TikTok is without a doubt the most popular social media network right now with users adopting this social media platform for various purposes including educational, leisure, entertainment, marketing and advertising. The present study demonstrated that TikTok has taken over a considerable portion of the young Mauritian adults' personal time, justifying why many spend an increasing amount of time on their smartphones. While TikTok has been a catalyst for positive changes, its ill effects are too significant to be denied. Key findings have demonstrated the link between FOMO and mental health determinants such as low self-esteem, and self-reported anxiety and depressive symptoms which may have been derived from the extensive use of TikTok. Negative comments towards the self are generally viewed unfavourably and could be potential mediators of psychological impairments, the latter which was endorsed by a significant relationship between perceived negativity and anxiety. These findings, although indicative of some areas of concern towards the use of such social media platform like any other, does not intend to stigmatize the use of TikTok, rather this study advocates for the responsible use of TikTok and the drawing of personal boundaries. When reflecting on the contents accessed and when used within certain limits, it can also stimulate knowledge and well-being.

6. Limitations

The current study did not examine whether the experiences of TikTok users differ across socioeconomic backgrounds, which could possibly account for the differences

in experiencing TikTok's negative effects and adoption of coping mechanisms. To fully grasp the psychological effects of TikTok usage, future studies must undoubtedly aim to employ a broader variety of experimental techniques which includes the comparison against a group of individuals who are TikTok 'naïve'. Controlled research evaluating the correlations between behavioural change and TikTok involvement throughout various themes inclusive the use for connectivity, education, entertainment and others would be instrumental in understanding the broader effects of TikTok on mental health. Cross-disciplinary research within the realm of big data analytics and using a mixed-method approach with qualitative and clinical findings related to social media addiction may help professionals to further characterise and outline the responsible use of TikTok to explore its maximum potential.

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Appendix

Table A1. Differences in self-esteem levels across demographic groups.

Age	Test statistics	Std error	*p*-value
18–20 years and 21–25 years	−32.072	16.344	0.050
18–20 years and 26–30 years	−41.656	18.477	0.024
18–20 years and 31–35 years	−73.801	16.886	0.000
21–25 and 26–30 years	−9.584	16.610	0.564
21–25 and 31–35 years	−41.729	14.819	0.005
26–30 years and 31–35 years	−32.145	17.143	0.061
Marital status			
Divorced and single	30.953	35.692	0.386
Divorced and in a relationship	35.584	37.526	0.343
Divorced and married	85.767	36.405	0.018
Single and in a relationship	−4.631	16.214	0.775
Single and married	−54.814	13.416	0.000
In a relationship and married	−50.183	17.729	0.005
Occupation			
Student and housewife	−7.993	52.494	0.879
Student and working	−43.175	12.203	0.000
Student and unemployed	−.62.243	37.749	0.099
Housewife and working	−35.182	52.113	0.500
Housewife and unemployed	−54.250	63.181	0.391
Working and unemployed	−19.068	37.217	0.608

*Negative test statistic value denotes a higher value for the second stratum versus the first listed sub level, for each comparison undertaken.

Table A2. Differences in anxiety levels across demographic groups.

Age	Test statistics	Std error	*p*-value
31–35 years and 26–30 years	25.544	17.137	0.136
31–35 years and 18–20 years	70.062	16.879	0.000
31–35 years and 21–25 years	75.122	14.814	0.000
26–30 years and 18–20 years	44.518	18.470	0.016
26–30 years and 21–25 years	49.578	16.603	0.003
18–20 years and 21–25 years	−5.060	16.338	0.757
Marital status			
Divorced and married	58.499	36.391	0.108
Divorced and single	108.406	35.679	0.002
Divorced and in a relationship	126.943	37.512	0.001
Married and single	49.907	13.411	0.000
Married and in a relationship	68.444	17.722	0.000
Single and in a relationship	−18.537	16.202	0.253

Table A2. (*Continued*).

Age	Test statistics	Std error	*p*-value
Occupation			
Housewife and unemployed	−120.600	63.157	0.056
Housewife and working	−123.452	53.093	0.018
Housewife and student	162.778	52.474	0.002
Unemployed and working	2.852	37.203	0.939
Unemployed and student	42.178	37.735	0.264
Working and student	39.326	12.198	0.001

*Negative test statistic value denotes a higher value for the second stratum versus the first listed sub level, for each comparison undertaken.

Table A3. Differences in depression levels across demographic groups.

Occupation	Test statistics	Std error	*p*-value
Working and student	33.811	12.198	0.006
Working and housewife	79.494	52.092	0.127
Working and unemployed	−87.294	37.203	0.019
Student and housewife	−45.684	52.473	0.384
Student and unemployed	−53.484	37.734	0.156
Housewife and unemployed	−7.800	63.156	0.902

*Negative test statistic value denotes a higher value for the second stratum versus the first listed sub level, for each comparison undertaken.