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The interplay of social media usage and mental well-being in students: patterns, impacts, and challenges

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Abstract

In the digital age, social media platforms have become integral to daily life, influencing how individuals connect, communicate, and perceive the world. This study investigates the complex interplay between social media usage patterns and the mental well-being of university students. Through an ex-post facto research design involving 164 students from three colleges in Coimbatore district, social media utilization patterns were analysed alongside the adverse effects on mental health and the challenges faced in limiting usage. The Social Media Induced Depression Tendency (SMIDT) scale was utilized to gauge the influence of social media on mental health across three dimensions: sensitivity/attention seeking, worthlessness /inferiority /negative affect, and reality avoidance /escapism. Results reveal a significant impact on mental health, with a substantial proportion of students exhibiting moderate to high levels of sensitivity, worthlessness, and reality avoidance. Additionally, constraints such as Fear of Missing Out and social pressure emerged as primary challenges in limiting social media usage. These findings underscore the need for interventions promoting healthier coping strategies and mindful usage to enhance overall well-being in an increasingly digitally connected world.

Keywords: Social media, mental well-being, university students, social media induced depression tendency (smidt) scale, fear of missing out (FOMO)

Introduction

In the era of digital connectivity, social media platforms have become an undeniable force, fundamentally altering how we interact with the world. With over 62% of the global population, roughly 5.04 billion people, actively using social media (Global WebIndex), these platforms have woven themselves into the fabric of our daily lives. The pervasiveness extends beyond mere presence, the average person spends over 2 hours and 23 minutes every day in social media, highlighting a significant investment of our time and attention. Social media has seamlessly integrated into every facet of contemporary existence, altering the landscape of personal communication, information dissemination, entertainment consumption, business operations, educational practices, political engagement, and even health management. Platforms like Facebook, Instagram, and Twitter facilitate connections with friends, family, and acquaintances, fostering a sense of belonging and social support networks (Verduyn et al., 2017) [7]. These platforms provide avenues for sharing experiences, achievements, and moments of joy, thereby strengthening interpersonal bonds and promoting positive emotions (Vogel et al., 2014) [8]. The democratization of information through these platforms empowers individuals to engage with content that aligns with their interests and values, facilitating intellectual growth and critical thinking skills development. The active involvement in internet communication, such as engaging with social media platforms, cultivates an environment conducive to creative exploration through collaborative interactions and exposure to diverse perspectives and ideas (Shaw & Gant, 2002) [6].

However, despite these positive aspects, concerns have been raised regarding the impact of excessive social media usage on mental health. Prolonged engagement with social media may exacerbate feelings of loneliness, anxiety, and depression, particularly among vulnerable populations such as adolescents and young adults (Primack et al., 2017) [4]. This association is often attributed to the pervasive culture

of comparison fostered by social media platforms, where individuals constantly measure themselves against idealized representations of others, leading to diminished self-esteem and heightened psychological distress (Fardouly *et al.*, 2015) [2]. Furthermore, the curated nature of content on these platforms may contribute to a distorted perception of reality, exacerbating stress and dissatisfaction (Verduyn *et al.*, 2017) [7]. Excessive social media usage has been associated with a myriad of negative effects on mental health. Beyond feelings of loneliness, anxiety, and depression, prolonged engagement with social media platforms has also been linked to sleep disturbances and increased stress levels (Levenson *et al.*, 2016) [3]. The constant exposure to curated content and filtered portrayals of life may contribute to a distorted perception of reality, leading to heightened levels of dissatisfaction and decreased life satisfaction (Chou & Edge, 2012) [1]. Moreover, the addictive nature of social media platforms, characterized by endless scrolling and notifications, can disrupt daily routines and hinder productivity, exacerbating feelings of overwhelm and inadequacy (Andreassen *et al.*, 2016) [5].

In this regard, the present study was conducted to analyse social media usage patterns, the adverse effects of social media on mental health and followed by constraints faced in limiting social media usage among university students.

Methodology
An Ex-post facto research design was employed for the present study. The study was taken among 164 students from three different colleges in Coimbatore district. The data was collected through online survey. The study was undertaken to achieve three primary objectives: i) examining social media utilization patterns among students ii) assessing its impact on mental well-being iii) identifying and ranking the constraints in limiting social media usage. Percentage analysis was employed to elucidate usage patterns. The influence of social media on mental health was studied by using social media Induced Depression Tendency (SMIDT) scale (Developed by Ugwu *et al.*, 2023). The scale consists of 15 statements in three different dimensions: sensitivity/attention seeking seeking, worthlessness/inferiority/negative affect and escapism/reality avoidance rated on a 5-point scale with 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = always, based on which the extent of influence can be studied. The influence level was categorized into low, medium and high categories based on the mean score. Rank Based Quotient (RBQ) was used for ranking the constraints faced in limiting social media usage by the Preferential Ranking Technique. The following formula is given by Sabarathnam

$$R.B.Q = \frac{\Sigma\, fi\,(n+1-i)\times 100}{N \times n}$$

Where in,
fi = Number of respondents reporting a particular problem under ith rank
N = Number of Respondents
i = Number of rank
n = Number of constraints identified
Ethical considerations, including obtaining informed consent and ensuring participant confidentiality, are rigorously observed. The anticipated results are set to provide valuable insights into the quantitative dimensions of the intricate relationship between social media engagement and student mental health.

Results and Discussion
A. Utilisation pattern of social media
In the empirical investigation of social media utilization patterns, this study endeavours to rigorously analyse four primary facets. Firstly, it seeks to ascertain the peak hours of engagement, delineating the temporal dynamics of usage prevalence. Subsequently, it aims to quantitatively assess the average daily duration devoted to social media by participants, thereby providing insights into habitual consumption patterns. Thirdly, it endeavours to identify the preeminent platform through which users interface with social media, elucidating prevailing preferences and trends. Finally, it undertakes an examination of the underlying motivations that propel individuals' engagement with social media.

- **Prime time of social media engagement**
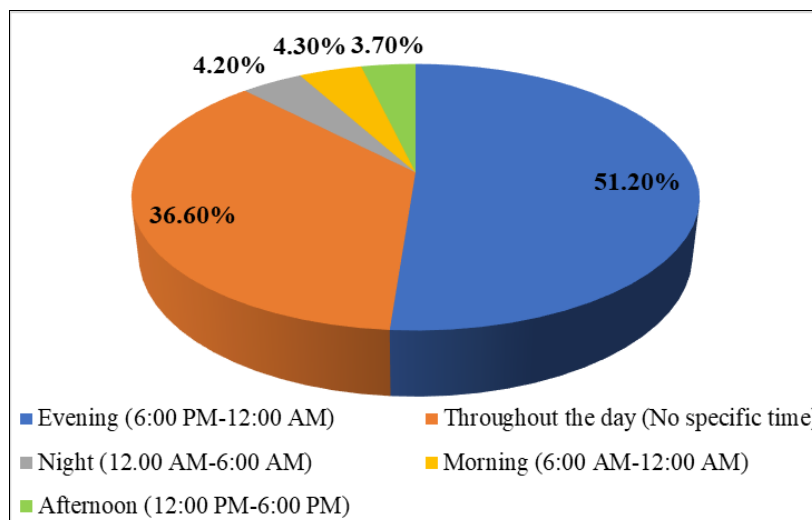
Fig 1: Distribution of respondents based on prime time of social media engagement
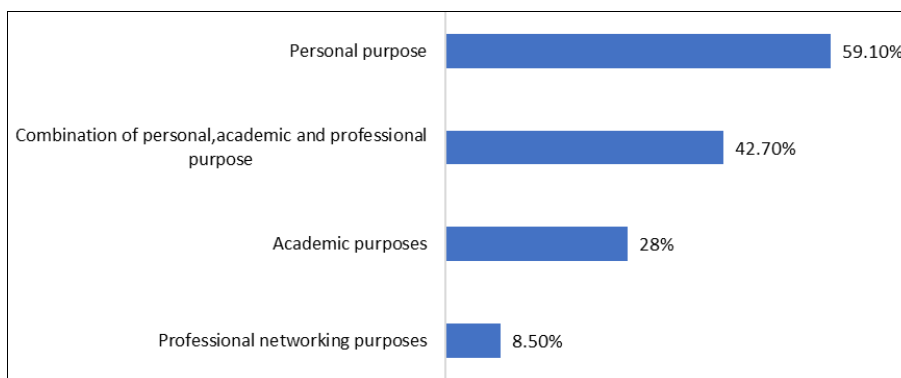
The pie chart above delineates the peak periods of social media activity, prominently highlighting evening engagement (6:00 PM - 12:00 AM) at 51.2%. This preference likely stems from alignment with leisure and relaxation following daytime academic commitments, fostering social connection and entertainment. Conversely, late-night hours (12:00 AM - 6:00 AM) exhibit minimal activity (4.2%), possibly reflecting prioritization of sleep or offline activities. Sporadic usage throughout the day without temporal preference constitutes 36.60%, underscoring the diverse patterns inherent in social media engagement. This nuanced analysis contributes to a deeper understanding of temporal dynamics and their implications for digital interaction.

- **Average time spent on social media per day**
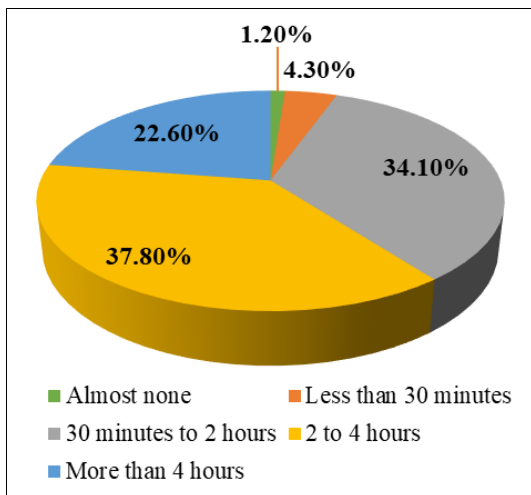
Fig 2: Distribution of respondents based on average time spent on social media per day

The analysis of the pie chart suggests that a significant majority of respondents (72.5%) allocate between 30 minutes to 4 hours daily to social media engagement, indicative of its entrenched incorporation into daily regimens. A noteworthy proportion (22.6%) surpasses the 4-hour threshold, likely influenced by addictive functionalities and the perceived significance of social media as a principal conduit for entertainment and interpersonal connection. In contrast, a minority subset (5.5%) devotes less than 30 minutes, potentially signifying a deliberate prioritization of offline pursuits or concerns regarding the deleterious effects of prolonged screen exposure.

- **Popular social media platforms among respondents N=164**
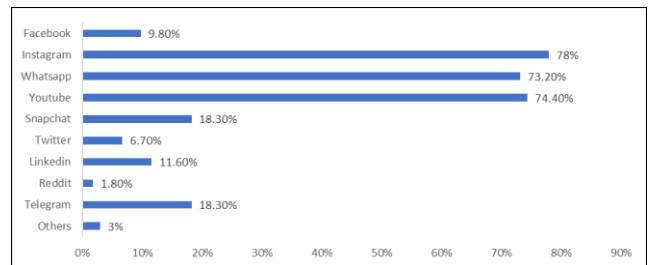
Fig 3: Most used social media platforms among respondents

The dominance of Instagram, YouTube, and WhatsApp in the bar chart can be attributed to their visually captivating content and user-friendly interfaces, catering to users' reduced attention spans. These platforms offer quick, digestible formats and seamless communication features, aligning with preferences for instant gratification and convenience. Influencer culture and personalized experiences reinforce their adoption and engagement, while mobile accessibility ensures continuous usage on-the-go. WhatsApp's prevalence is fuelled by its seamless communication and widespread accessibility, facilitating effortless interaction with privacy and security. Its ubiquity across demographics underscores its appeal as a primary mode of digital communication, contributing to its significant presence in the social media landscape.

- **Purpose of social media usage N=164**

Fig 4: Primary purpose of social media usage

The bar chart displays the purposes of social media usage, with respondents given the option to select multiple answers. This approach enables a comprehensive understanding of the varied motives driving social media engagement, ensuring that diverse perspectives are captured for richer insights. Majority prioritize personal use, the emphasis on personal use reflects social media's fundamental role in fostering connections and providing entertainment, aligning with basic human needs for social interaction and leisure. Furthermore, the blend of personal,

academic, and professional purposes highlights social media's versatility as a platform catering to diverse needs, thus amplifying user engagement and relevance. Such insights underscore the platform's significance beyond mere recreation, positioning it as a vital tool for communication, learning, and networking across different spheres of life.

B. Influence of social media on mental health of students

The influence is studied under three dimensions sensitivity, worthlessness and reality avoidance as mentioned earlier.
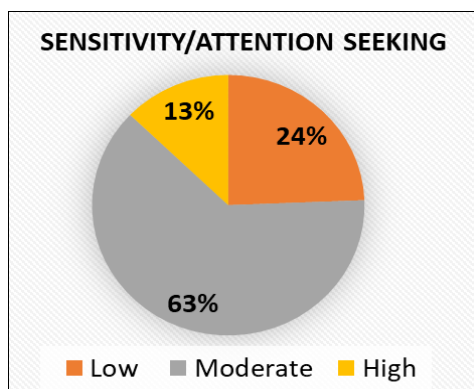
- **Level of sensitivity/attention seeking**

Table 1: Percentage breakdown of respondents based on sensitivity

S. No	Statements	Percentage				
		Always	Often	Sometimes	Rarely	Never
1	I feel left out or ignored if I don't get many likes or comments on my social media posts.	6.7	9.1	26.2	12.2	45.7
2	I check my social media notifications constantly to see if anyone has messaged or interacted with me.	21.3	18.9	34.1	15.2	`10.4
3	I feel a need to post on social media to get validation or feel better about myself	9.1	12.2	31.1	11.6	36
4	I compare myself to others on social media and feel inferior or less successful.	12.8	17.7	27.4	12.8	29.3
5	I worry about what others think of me on social media and try to portray a perfect image.	12.8	15.2	27.4	17.1	27.4

Based on the table1, the level of sensitivity of respondents to social media is studied and categorized. N=164

Table 2: Level of sensitivity/attention seeking

S. No	Category	Frequency	Percentage
1	Low	40	24
2	Medium	103	63
3	High	21	13

Fig 5: Distribution of respondents based on level of sensitivity/attention seeking

The data underscores a nuanced landscape of social media sensitivity among students, with 63.00% exhibiting moderate, 24 per cent low, and 13% high sensitivity levels. The distribution of social media sensitivity among students can be attributed to a variety of factors shaping their digital experiences and psychological responses. Moderate sensitivity levels may stem from a natural inclination towards seeking validation and social connection, which are intrinsic human needs often amplified in the online realm. The prevalence of low sensitivity levels could suggest a healthier relationship with social media, influenced by factors like strong self-esteem or balanced offline activities. Conversely, high sensitivity levels may arise from external pressures, such as societal expectations for perfection and the constant comparison fostered by social media platforms. These factors underscore the complex interplay between individual traits, societal influences, and digital environments in shaping students' sensitivity levels towards social media.

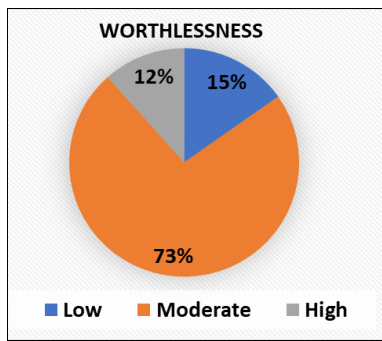- **Level of worthlessness/inferiority/negative affect**

Table 3: Percentage breakdown of respondents based on worthlessness / inferiority/negative affect

S. No	Statements	Percentage				
		Always	Often	Sometimes	Rarely	Never
1	Seeing other people's seemingly happy lives on social media makes me feel like my own life is insignificant.	12.8	16.5	40.2	11	19.5
2	After spending time on social media, I often feel down on myself and have negative thoughts about my self-worth.	13.4	23.2	35.4	18.9	9.1
3	I feel like I can't achieve the same level of success or happiness that I see others portraying on social media.	17.1	19.5	36.6	12.2	14.6
4	Using social media makes me feel more isolated and lonelier, even though it's supposed to connect me with others.	22.6	23.8	33.5	11.6	8.5
5	I find it difficult to feel good about myself unless I'm getting positive attention on social media.	15.2	15.2	35.4	12.2	22

Based on the table 3, the level of feeling worthless due to social media is studied and categorized.

Table 4: Level of worthlessness/inferiority/negative affect

S. No	Category	Frequency	Percentage
1	Low	25	15
2	Medium	120	73
3	High	19	12

WORTHLESSNESS

Fig 6: Distribution of respondents based on level of worthlessness/inferiority/negative affect

The distribution of sense of worthlessness due to social media -73% moderate, 15% low, and 12% high, suggests varied responses influenced by factors like comparative envy, negative self-perception, unattainable standards, paradoxical connectivity, and validation dependency. Comparative envy arises from constant comparison with curated online personas, while negative self-perception exacerbates sensitivity, particularly among those with low self-esteem. Unattainable standards perpetuated by social media platforms contribute to feelings of worthlessness, especially for individuals with high sensitivity levels.

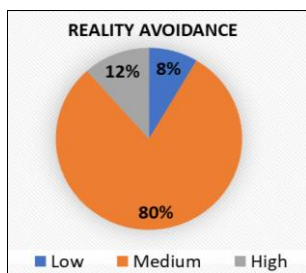- **Level of reality avoidance/escapism**

Table 5: Percentage breakdown of respondents based on reality avoidance/escapism

S. No	Statements	Percentage				
		Always	Often	Sometimes	Rarely	Never
1	I use social media as a way to escape from boredom or negative emotions	27.4	23.8	34.8	8.5	5.5
2	I spend more time on social media that I intend to, neglecting other important activities or responsibilities.	20.1	20.7	36	14.6	8.5
3	I find it difficult to focus on tasks or real-life situations because I keep wanting to check social media.	17.7	20.7	39	15.9	6.7
4	I feel anxious or restless when I can't access social media for a period of time.	12.2	20.1	40.9	17.1	9.8
5	I prefer to interact with people online through social media rather than in person.	14.6	17.1	37.2	17.7	13.4

Based on the table 5, the extent of reality avoidance due to social media is studied and categorized.

Table 6: Level of reality avoidance/escapism

S. No	Category	Frequency	Percentage
1	Low	14	8
2	Medium	131	80
3	High	19	12

REALITY AVOIDANCE

Fig 7: Distribution of respondents based on level of escapism/reality avoidance

The data indicates that a significant portion of respondents, constituting 80%, exhibit a medium level of reality avoidance through social media. This level of engagement involves utilizing social platforms as a means to escape boredom or negative emotions, exceeding intended usage time. Additionally, challenges in focusing on real-life tasks and feelings of anxiety during periods of social media unavailability are prevalent. This medium level of reality avoidance underscores the notable reliance on digital spaces for emotional regulation and engagement, highlighting the pervasive impact of social media on everyday experiences

C. Challenges of Limiting Social Media Usage

The constraints faced by students in limiting the social media usage were assessed and they were ranked by following RBQ technique. The results of RBQ value and ranks are given in Table 7

Table 7: Constraints faced by respondents in limiting social media usage

Preference	I	II	III	IV	V	VI	VII	RBQ Value	Rank
Fear of Missing Out	61	33	21	15	17	8	9	75.4	I
Social pressure	56	23	32	14	13	21	5	72.43	II
Difficulty in staying connected without social media	19	39	51	11	21	16	7	66.74	III
Habitual behaviour	33	9	48	38	19	6	11	65.91	IV
Boredom/loneliness	49	19	23	17	11	38	7	65.82	V
Difficulty in managing stress/emotions without social media	21	33	59	10	7	21	13	55.81	VI
Lack of alternate activities	16	11	12	31	54	22	18	51.01	VII

These findings transcend the simplistic portrayal of social media as mere distraction for students. Rather, the dominance of Fear of Missing Out and social pressure as primary constraints underscores a deeper vulnerability to isolation and an inherent craving for belonging. Moreover, students' struggles in managing emotions without these platforms hint at a dependency that surpasses mere distraction, potentially signalling a concerning reliance on virtual connections to address unmet social and emotional needs. This illuminates a potentially alarming trend-a generation at risk of relying precariously on virtual connections to fulfil unmet social and emotional needs, raising concerns about their mental well-being and inability to develop healthy coping mechanisms.

Conclusion

The exploration of the intricate dynamics between social media usage and the mental well-being of university students reveals a significant impact, as a substantial proportion of students fall into the moderate and high categories across three dimensions. This underscores the profound influence of social media on their mental health. Constraints such as the Fear of Missing Out and societal pressures shed light on underlying vulnerabilities exacerbated by social media use, compounded by the accessibility and instant gratification offered by these platforms for emotional diversion and stress relief. To address these challenges, interventions promoting healthier coping strategies and emotional regulation techniques are imperative. Strategies such as adjusting phone settings, scheduling breaks, and fostering mindful usage can empower individuals to reclaim control over their digital habits and enhance their overall well-being. This comprehensive approach propels us towards a future where technology and human well-being converge, fostering authentic connections and holistic flourishing.

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