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To assess the relationship between social media addiction and sleep quality among students

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Abstract
This study investigates the correlation between social media addiction and sleep quality among university students. Utilizing a correlational survey design, data were collected from 100 students (55 male and 45 female) in the Bathinda region. The Social Media Addiction Scale (Sahin, 2018) and the Sleep Quality Scale (Yi *et al*., 2006) were used for assessment. The findings reveal a significant negative correlation between social media addiction and sleep quality for both male and female students. This research highlights the detrimental effects of social media addiction on sleep quality, suggesting the need for interventions to mitigate these impacts.

Keywords: Social media addiction, sleep quality, university students, correlational survey, gender differences, Bathinda region, digital well-being

Introduction

Social media is an umbrella term for a range of online services that have given over 3 billion users a way to communicate in real-time and exchange messages, texts, images, and videos. Due to the widespread availability of inexpensive Internet and smartphone technologies in developing nations, particularly among their youth, social media networks have seen an enormous surge in popularity over the past ten years (Clement, 2020) [8].

The usage of social media is rising in the country and throughout the world in parallel with the extremely quick digitization of our time (ERSÖZ & KAHRAMAN, 2020; Singh *et al*., 2020) [12, 23]. The time devoted to social media has exceeded 1.5 times in the previous five years, according to the Digital 2021: Global Overview Report. Facebook, YouTube, WhatsApp, Facebook Messenger, Instagram, WeChat, TikTok, and QQ are the major social networking sites that are utilized the most (Digital in Turkey: All the Statistics You Need in 2021 — DataReportal – Global Digital Insights, n.d.). It can be claimed that today's social media addiction has transitioned from being a common issue to a sickness with a widespread pandemic when the methods for controlling it are evaluated. People all around the world are able to use social media excessively and display an excessive amount of interest in it. Social media thus has a detrimental impact on the lives of millions of individuals throughout the globe (Andreassen, 2015; Singh *et al*., 2020) [2, 23].

Looking at the data reports on young people's addiction to social media in 2023, the results are striking. Based on statistics, around 56.8% of the global population use social media. This translates to 4.48 billion social media users globally. The eligible audiences covered by each of these figures are those who are at least 13 years and older. Even though the majority of social media sites have a minimum age restriction of 13+ years old, it is estimated that over half of youngsters between the ages of 11 and 12 have personal social media profiles. Gender differences statistics are quite noticeable when it comes to social media usage. Social media platforms elicit greater engagement from both men and women, and they serve distinct goals. Men and women use social media an average of 1.81 and 2.08 hours each day, respectively. The worrying findings pertain to the age group's addiction to social media. Based on the findings, the most susceptible age group for social media addiction is 18–29 years old. Additionally, this fits the age range that the current study is aimed at. Reports have also shown that, 40.6% of youths claim that social media alone has had a major negative impact on their ability to sleep.

Primarily, 34% of young adults cited feeling as like they were missing something by not using social media as their main motivation. Regarding their social media posts, 43% of youth felt that they are not appreciated and also felt bad if their posts were not liked (Social Media Addiction Statistics For 2023, 2021).

In a study by Drahošová & Balco, (2017) [10] that looked at the benefits and drawbacks of using social media, 97.7% of participants sai d that the main benefits were communication and information sharing, while 72.2% reported that the biggest drawback was internet addiction. It is well recognized that users, particularly those who are younger in age, carry the danger of becoming addicted. It is reported that social media has a negative impact on relationships between individuals (Çalışır, 2015) [6], psychological health (Chen *et al*., 2020) [7], personal life (Acılar & Mersin, 2015) [1], increased levels of depression (Haand & Shuwang, 2020) [16], and causes addiction to social media, despite the fact that it is regarded as a new area of socialization and that this situation is advantageous (Savci & Aysan, 2017) [20].

A number of recent research have particularly examined social media usage, but there is only a considerable body of data relating social media use in general to poor sleep. The literature suggests that there is a correlation between increased Internet use and reduced sleep duration (Garmy *et al*., 2012; Pea *et al*., 2012) [14, 17]; late bedtimes and rise times (Garmy *et al*., 2012; Shochat *et al*., 2010; Van den Bulck, 2004) [14, 21]; longer sleep times (Shochat *et al*., 2010) [21]; and increased fatigue during the day among adolescents (Garmy *et al*., 2012; Van den Bulck, 2004) [14].

In fact, it has been found that increasing the amount of time spent on social media might result in worse sleep (Eroğlu & Yıldırım, 2017) [11]. Poor sleep habits can cause students to feel sleepy during the day and have a detrimental impact on their behaviour, academic performance, activities, and energy (Güneş *et al*., 2018) [15]. Also, two recent studies from the UK and Canada have shown that the longer a person uses SM (Social media), the shorter their sleep length and the lower the quality of their sleep (Sampasa-Kanyinga *et al*., 2018; Woods & Scott, 2016) [19, 26]. Espinoza & Juvonen, (2011) [13] conducted a poll with 268 young teenagers on social media and discovered that 37% of them reported experiencing sleep disturbances as a result of using social networking sites.

Social media, being a relatively new phenomena, hasn't been well studied yet. According to estimates, adolescents and young adults in developed nations are most likely to suffer from social media addiction (Andreassen *et al*., 2017; Bányai *et al*., 2017) [3, 4]. India, which has the biggest young population in the world, has emerged as a worldwide leader in the last five years in terms of smartphone and mobile data adoption, which has contributed to the rise in popularity and usage of social media (Silver *et al*., 2019) [22]. In addition to the stress and worry of studying, a prior study conducted on medical students in Delhi found that a significant percentage of them were addicted to their phones. This might make them more prone to developing insomnia and social media addiction (Basu *et al*., 2018) [5]. Nevertheless, the literature on social media addiction in India and particularly in the Bathinda, Punjab is surprisingly scant. Therefore, in order to fill this vacuum in the research, the current study will particularly bring into a novel idea by looking at the relationship between adolescent social media use and sleep quality. According to earlier research on general Internet usage, it is anticipated that increased social media use will be linked to lower-quality sleep.

Therefore, in this study, it was aimed to investigate the relationship between social media addiction and sleep quality among university students. Three objectives were determined in the study. These include; (1) To assess the relationship between Social Media Addiction and Sleep Quality among students, (2) To assess the relationship between Social Media Addiction and Sleep Quality among male students and (3) To assess the relationship between Social Media Addiction and Sleep Quality among female students.

For the fulfilment of the above stated objectives three hypotheses, (both null and alternate) were formulated. These were; (1)H_{o1}: There will be no relationship between Social Media Addiction and Sleep Quality among students versus H_{A1}: There will be a negative relationship between Social Media Addiction and Sleep Quality among students, (2) H_{o2}: There will be no relationship between Social Media Addiction and Sleep Quality among male students versus H_{A2}: There will be a negative relationship between Social Media Addiction and Sleep Quality among male students, (3) H_{o3}: There will be no relationship between Social Media Addiction and Sleep Quality among female students versus H_{A3}: There will be a negative relationship between Social Media Addiction and Sleep Quality among female students.

Objectives

1. To assess the relationship between Social Media Addiction and Sleep Quality among students.
2. To assess the relationship between Social Media Addiction and Sleep Quality among female students.
3. To assess the relationship between Social Media Addiction and Sleep Quality among male students.

Hypotheses

H_{01}: There will be no relationship between Social Media Addiction and Sleep Quality among students.

H_1 There will be a negative relationship between Social Media Addiction and Sleep Quality among students.

H_{02}: There will be no relationship between Social Media Addiction and Sleep Quality among female students.

H_2 There will be a negative relationship between Social Media Addiction and Sleep Quality among female students.

H_{03}: There will be no relationship between Social Media Addiction and Sleep Quality among male students.

H_3 There will be a negative relationship between Social Media Addiction and Sleep Quality among male students.

Methods

Participants and Procedure

The current study examined the association between students' sleep quality and social media addiction using a correlational survey design and quantitative research methods. Data for the

current study were gathered using the convenience sampling approach. People from different universities made up the study population. The age range of the persons who took part in the study was 18 to 29 years old. There were total N= 100 (55 male and 45 female) participants. This study was carried out at various universities in the Bathinda region. For the proper conduction of the research, using Google Forms, researchers prepared a questionnaire that they gave to participants and asked for assistance in finding possible research subjects. The participants received a thorough explanation of the study's objectives. Following their consent to participate in the study, participants were required to fill out a Google Form with their demographic data and their own self-reported questionnaire, as directed. The questionnaires were answered in the following order: Social Media Addiction Scale by Cengiz Sahni (2018), Sleep Quality Scale by Yi, Shin, and C. Shin (2006) [27].

Measures

Demographic Information Sheet

The demographic information form was designed to gather information related to participants such as age, gender, qualification, education, and residential area that are addicted to social media.

Social Media Addiction Scale: Cengiz Sahin (2018) [18]

The Social Media Addiction Scale is developed by Cengiz Sahin (2018) [18]. This is a 5-point Likert type scale with 29 items and 4 sub-dimensions: 1–5 items fall under the virtual tolerance subdimension; 6–14 items fall under the virtual communication subdimension; 15–23 items fall under the virtual problem subdimension; and 24-29 items fall under the virtual information subdimension. All of the items on the scale are positive; the maximum score is 145, and the lowest score is 29. Higher scores show that the agent considers himself to be a "social media addict" (Sahin, 2018) [18].

Sleep Quality Scale: YI, H., Shin, K., and C. Shin (2006) [27]

The Sleep Quality Scale was developed by YI, H., Shin, K., and C. Shin (2006) [27]. The SQS is composed of 28 items**,** it is a four-point Likert-type scale, ranging from 0 to 4 (0 = "rarely", 1 = "sometimes", 2 = "often", and 3 = "almost always")."). The scores are based on factors 2 and 5 (recovery after sleep and satisfaction with sleep) and are reversed before calculation. The overall score may vary from 0 to 84, while more severe sleep problems are indicated by a higher score. The reliability and validity Initial psychometric assessments by Yi and colleagues yielded an internal consistency of 0.92 and a test-retest reliability of 0.81 (Yi *et al*., 2006.) [27].

Statistical analysis

Data was analyzed using Statistical Package for Social Science (SPSS) version 22.0 and Microsoft Excel 2016. Firstly, Microsoft Excel was used to enter data and then prepare final data for SPSS format. Descriptive statistics (e.g., means and standard deviations) and Inferential statistics (Pearson product moment correlation) were performed using SPSS version 22.0.

Results and Discussion

Table 1: Showing the correlation between SMA and SQ among Students

		SMAS	SQS
SMAS	Person correlation	1	-.689**
	Sig. (2-tailed)		.000
	N	100	100
SQS	Person Correlation	-.689**	1
	Sig.(2-tailed)	.000	
	N		100
**Correlation is significant at the 0.01 level (2-tailed).			

SMA= Social Media Addiction
SQ= Sleep Quality

Table 2: Showing the N (Total Number), Max. & Min. Scores, Mean Score and Standard Deviation of Students

	N	Range	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic
SMA	100	93.00	36.00	129.00	94.6300	1.87086	18.70864
SQ	100	46.00	10.00	56.00	38.9800	1.19392	11.93922

SMA= Social Media Addiction
SQ= Sleep Quality

In order to fulfil the first objective of the study, Table 1 shows the negative correlation between social media addiction and sleep quality among students and Table 2 showed the N (Total Number), Max. & Min. Scores, Mean Score and Standard Deviation of all students. Thus, the H_{01} that there will be no relationship between social media addiction and sleep quality among students is rejected and the H_1 that there will be a negative relationship between social media addiction and sleep quality among students is accepted.

Table 3: Showing the correlation between SMA and SQ among female students

		SMA	SQ
SMA	Pearson correlation	1	-.694**
	Sig. (2-tailed)		.000
	N	45	45
SQ	Person correlation	-.694**	1
	Sig. (2-tailed)	.000	
	N	45	45
**. Correlation is significant at the 0.01 level (2-tailed).			

SMA= Social Media Addiction
SQ= Sleep Quality

Table 4: Showing the N (Total Number), Max. & Min. Scores, Mean Score and Standard Deviation of female Students

	N	Range	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic
SMAGIRLS	45	92.00	37.00	129.00	97.0889	2.53417	16.99976
SQGIRLS	45	39.00	17.00	56.00	41.4444	1.50204	10.07597
Valid N (listwise)	45						

SMA= Social Media Addiction
SQ= Sleep Quality

In continuation, to fulfil the second objective of the study, Table 3 showed the negative correlation between social media addiction and sleep quality among female students and Table 4 showed the N (Total Number), Max. & Min. Scores, Mean Score and Standard Deviation of female participants. Thus, the H_{02} that there will be no relationship between social media addiction and sleep quality among female students is rejected and the H_2 that there will be a negative relationship between social media addiction and sleep quality among female students is accepted.

Table 5: Showing the correlation between SMA and SQ among male Students

		SMABOYS	SQBOYLS
SMABOYS	Pearson correlation	1	-.680**
	Sig. (2-tailed)		.000
	N	55	55
SQBOYS	Person correlation	-.680**	1
	Sig. (2-tailed)	.000	
	N	55	55
**. Correlation is significant at the 0.01 level (2-tailed).			

SMA= Social Media Addiction
SQ= Sleep Quality

Table 6: Showing the N (Total Number), Max. & Min. Scores, Mean Score and Standard Deviation of male participants)

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
SMABOYS	55	86.00	36.00	122.00	5094.00	92.6162	19.92624
SQBOYS	55	46.00	10.00	56.00	2033.00	36.9636	13.01561
Valid N (listwise)	55						

SMA= Social Media Addiction
SQ= Sleep Quality

In order to fulfil the last objective of the study, Table 5 showed the negative correlation between social media addiction and sleep quality among male students and Table 6 showed the N (Total Number), Max. & Min. Scores, Mean Score and Standard Deviation of female participants. Thus, the H_{03} that there will be no relationship between social media addiction and sleep quality among male students is rejected and the H_3 that there will be a negative relationship between social media addiction and sleep quality among male students is accepted.

Hence it can be seen through the result that there is a negative correlation between social media addiction and sleep quality. The correlation is found to be slightly high among females as compared to the males. So null hypothesis is rejected as negative correlation has been found between social media addiction and sleep quality among students and accordingly the alternative hypothesis is accepted.

Conclusion, Strengths, and Limitations

According to the current study findings, it can be concluded that there exists a negative correlation between the social media addiction and sleep quality among students. The results also indicate that there is a negative relationship between the social media addiction and sleep quality among the group of both group of participants i.e., male students as well as female students.

There is still a lack of research and understanding about social media's impact on people's wellbeing. Rather than concentrating on a single aspect (like Facebook reliance), we investigated social media usage in its whole by looking at the SM platform used, the reason for using it, the devices utilised, the amount of time and frequency that it is used, and its usage before bed. Unfortunately, despite the fact that our study addressed a wide range of sleep-related topics and intricate SM ideas, it had some shortcomings. Restricting the study sample to a single centre may have an impact on how well the current findings apply to other age groups, other university students, or students pursuing different academic specialties. One additional constraint that was taken into consideration was the inclusion of just those with social media addiction in the investigation. As a result, the sample size was small, making it unable to extrapolate the findings to other demographic groups. The population of persons in the research who were under 30 and did not surpass that age was one of the limitations identified by the findings with regard to the inclusion and exclusion criteria. As a result, this suggests that it is one of the limitations to be considered. The final limitation of the study included the use of the questionnaires that were used to collect the data. In order to get information from those who are addicted to social media and their sleep quality, the current study employed self-report measures. These tools are susceptible to response bias, social

desirability, and faking good. In light of these and other study limitations, it is necessary to expand the scope of future research on social media usage and sleep quality. This can be achieved through a variety of strategies, including the use of more valid and reliable data collection tools, the use of the Polysomnography (PSG) technique to assess each person's actual quality of sleep, and the use of a large sample size to enable the study's findings to be applied to a wider demographic.

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Conflict of Interest
The authors declare no conflict of interest.

Data Availability Statement
The data cannot be shared openly, in order to protect study participants privacy. The data has been collected after the informed consent of the participants.

Ethical Considerations
Informed consent was taken from the subjects. Anonymity was maintained and the subjects were offered the option to withdraw themselves from the study at any time without offering any explanation. All participants provided informed consent prior to enrolment in the study. Participants were fully informed about the purposes of this research and how their responses would be used and stored.

References

1. Acılar A, Mersin S. Üniversite Öğrencilerinin Facebook Kullanımı Ile Mahremiyet Kaygısı Arasındaki İlişki (The Relationship between Facebook Usage and Privacy Concerns Among University Students). Elektronik Sosyal Bilimler Dergisi. 2015;14(54):103-114. [Accessed January 20, 2024]. Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2715347
2. Andreassen CS. Online Social Network Site Addiction: A Comprehensive Review. Current Addiction Reports. 2015;2(2):175-184. doi:10.1007/s40429-015-0056-9
3. Andreassen CS, Pallesen S, Griffiths MD. The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. Addictive Behaviors. 2017;64:287-293. DOI:10.1016/j.addbeh.2016.03.006
4. Bányai F, Zsila Á, Király O, Maraz A, Elekes Z, Griffiths MD, Andreassen CS, Demetrovics Z. Problematic social media use: Results from a large-scale nationally representative adolescent sample. PloS one. 2017;12(1):e0169839. DOI:10.1371/journal.pone.0169839
5. Basu S, Garg S, Singh MM, Kohli C. Addiction-like Behavior Associated with Mobile Phone Usage among Medical Students in Delhi. Indian Journal of Psychological Medicine. 2018;40(5):446-451. DOI:10.4103/IJPSYM.IJPSYM_59_18
6. Çalışır G. Social media as a means used in interpersonal communication: A research oriented onto the students of Gümüşhane University Faculty of Communication. Humanities Sciences. 2015;10(3):115-144.
7. Chen IH, Pakpour AH, Leung H. Comparing generalized and specific problematic smartphone/internet use: Longitudinal relationships between smartphone application-based addiction and social media addiction and psychological distress. Journal of Behavioral Addictions. 2020;9(2):410-419. DOI:10.1556/2006.2020.00049
8. Clement J. Social media-statistics & facts. Statista; c2020.
9. Digital in Turkey: All the Statistics You Need in 2021—DataReportal – Global Digital Insights. (n.d.). Retrieved; c2023, from https://datareportal.com/reports/digital-2021-turkey
10. Drahošová M, Balco P. The analysis of advantages and disadvantages of use of social media in European Union. Procedia Computer Science. 2017;109:1005-1009. DOI:10.1016/j.procs.2017.05.435
11. Eroğlu O, Yıldırım Y. Examining the relationship between the purpose of using social media networks addiction and sleep quality. Turkish Journal of Sports Science. 2017;1(1):1-10.
12. Ersöz B, Kahraman ÜG. The changing face of information in the age of informatics: A conceptual study on infobesity; c2020.
13. Espinoza G, Juvonen J. The Pervasiveness, Connectedness, and Intrusiveness of Social Network Site Use Among Young Adolescents. Cyberpsychology, Behavior, and Social Networking. 2011;14(12):705-709. DOI:10.1089/cyber.2010.0492
14. Garmy P, Nyberg P, Jakobsson U. Sleep and Television and Computer Habits of Swedish School-Age Children. Journal of School Nursing. 2012;28(6):469-476. DOI:10.1177/1059840512444133
15. Güneş NA, Akbıyık Dİ, Aypak C, Görpelioğlu S. Social media dependency and sleep quality in high school students. Turkish Journal of Family Practice. 2018;22(4):185-192.
16. Haand R, Shuwang Z. The relationship between social media addiction and depression: A quantitative study among university students in Khost, Afghanistan. International Journal of Adolescence and Youth. 2020;25(1):780-786. DOI:10.1080/02673843.2020.1741407
17. Pea R, Nass C, Meheula L. Media use, face-to-face communication, media multitasking, and social well-being among 8-to 12-year-old girls. Developmental Psychology. 2012;48(2):327. DOI:10.1037/a0027030
18. Sahin C. Social media addiction scale-student form: The reliability and validity study. Turkish Online Journal of Educational Technology-TOJET. 2018;17(1):169-182.
19. Sampasa-Kanyinga H, Hamilton HA, Chaput J. Use of social media is associated with short sleep duration in a dose–response manner in students aged 11 to 20 years. Acta Paediatrica. 2018;107(4):694-700. doi:10.1111/apa.14210
20. Savci M, Aysan F. Technological addictions and social connectedness: Predictor effect of internet addiction, social media addiction, digital game addiction and smartphone addiction on social connectedness. Dusunen Adam: Journal of Psychiatry and Neurological Sciences. 2017;30(3):202-216.
21. Shochat T, Flint-Bretler O, Tzischinsky O. Sleep patterns, electronic media exposure and daytime sleep-related behaviours among Israeli adolescents: Sleep patterns and media exposure in adolescents. Acta

Paediatrica. 2010;99(9):1396-1400. DOI:10.1111/j.1651-2227.2010.01821.x
22. Silver L, Smith A, Johnson C. Mobile connectivity in emerging economies. Pew Research Center. 2019;7:1-92.
23. Singh S, Dixit A, Joshi G. Is compulsive social media use amid COVID-19 pandemic addictive behavior or coping mechanism? Asian Journal of Psychiatry. 2020;54:102290. DOI:10.1016/j.ajp.2020.102290
24. Hawi NS, Samaha M. The relations among social media addiction, self-esteem, and life satisfaction in university students. Social Science Computer Review. 2017;35(5):576-586.
25. Van den Bulck J. Television viewing, computer game playing, and Internet use and self-reported time to bed and time out of bed in secondary-school children. Sleep. 2004;27(1):101-104. doi:10.1093/sleep/27.1.101
26. Woods HC, Scott H. #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. Journal of Adolescence. 2016;51:41-49. DOI:10.1016/j.adolescence.2016.05.008
27. Yi H, Shin K, Shin C. Development of the sleep quality scale. Journal of sleep research. 2006;15(3):309-316.