

Role of Social Media Addiction and Emotional Regulation on Mental Health of Medical and Dental Students

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ABSTRACT

Objective: The use of social media has increased exponentially in the last 2 decades, especially among young adults. This study aimed to investigate the role of social media addiction and emotional regulation on mental health among medical and dental students in Pakistan.

Materials and Methods: This cross-sectional quantitative research was conducted from January to May 2023. A convenient sample of 503 students (345 females, 158 males) was taken from different private and government universities in Pakistan. A self-developed demographic sheet was administered along with the Bergen Social Media Addiction Scale (BSMAS), emotional regulation questionnaire, and Depression Anxiety Stress Scale-21 (DASS).

Results: There was a significant positive relationship between social media addiction with DASS subscales scores ($r = 0.39$, $r = 0.38$, $r = 0.37$, $p < 0.01$) and a positive correlation with emotional regulation ($r = 0.21$, $p < 0.01$). Cohen's d value for social media addiction was 0.33 (< 0.50) which indicated moderate effect size, showing significant mean differences among gender ($p < 0.05$). Cohen's d values for mental health problems were 0.60 (> 0.50) and 0.80 (> 0.50), showing significant mean differences among marital status and gender respectively ($p < 0.05$), which represents a large effect size.

Conclusion: There is a significant role of social media addiction in the mental health of students. This research illustrates new insights for research by presenting empirical support for its incidence among medical and dental students in Pakistan.

Keywords: Adult, Emotions, Mental Health, Social Control, Social Media

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INTRODUCTION

Social media has its benefits as it is the source of updated information, but it can easily lead to an addiction which is demarcated by its excessive use that disrupts daily life both personally and socially.¹ The younger generation is less cautious about the adverse outcomes of social media addiction in comparison to their parents' generation. Studies show that different generations not only perceive social media differently, but they also have different reactions to the use and misuse of social websites as well.² Emotional regulation can be referred to as the inherent underlying process which has a vital role in assessing and adjusting emotional responses. Emotional regulation is a significant part of self-regulation to develop the sense of individual differences in temperament and societal effectiveness.³

People of all ages experience emotions differently, they adapt the emotional regulation strategies to face all the stressful events and life challenges accordingly.⁴ Mental health can be explicated as the absence of mental disease. The ability to cope with daily life challenges reflects the fundamental meaning of mental health as this includes the strategy of performing intellectually, emotionally and spiritually with the sense of constructive personality- insight, feelings of self-worth as well as physical fitness.⁵

Medical and dental students are under a lot of stress due to the high difficulty level of the curriculum. In addition, the use of social media as a coping mechanism enhances their chances of addiction making them prone to concurrent behavior issues.

Previous studies reveal that a meaningful connection between social media addiction (SMA), emotional regulation strategies and mental health exists. Research conducted on Chinese college students examined the association between SMA and mental health revealed that SMA was negatively related to mental health whereas, self-esteem signified an underlying process of relation between social media addiction and student's mental health.¹ A cross-sectional study unveiled the negative role of SMA, gaming and smartphones on mental health whereby, social media addiction triggered psychological distress (such as depression, anxiety and stress) among Chinese schoolchildren.⁶ A study conducted in Turkey has demonstrated a 6.8% rise in use of social media addiction in the last five years where

males experienced more stress, anxiety and depression than females.⁷

There is a dearth of literature available on the subject in Pakistan thus the current study aims to pave its way to contemporary literature, by contributing to providing a fundamental framework of data regarding the role of social media addiction and emotional regulation strategies on the mental health of medical and dental students to assist future researches. The present research intends to determine an association between social media addiction and emotional regulation strategies, examine the relationship between social media addiction and mental health, and explore the incidence of mental health problems (depression, stress, anxiety) in medical and dental students of Pakistan.

MATERIALS AND METHODS

A cross-sectional quantitative research design was used in the current study to inspect the association between social media addiction, emotional regulation strategies and mental health of medical and dental students, and that included a methodological approach to analysis. Convenient sampling was used for participant selection.

The sample was collected from the medical and dental students at The University of Lahore, Superior University, Khyber University, University of Health Sciences and Shifa Tameer-e-Millat University. An online questionnaire was developed on Google Forms to be distributed to the students via WhatsApp groups and official email IDs. Data was also collected physically on paper.

The questionnaire consisted of four parts: the first part describes the aim of the study and inquires about the demographic information including age, gender, socioeconomic status, year of study and field of study. This part also entailed voluntary consent from all participants. The rest of the questionnaire was only presented to those who signed the voluntary consent form. The second part consisted of a pre-validated questionnaire called the Bergen Social Media Addiction Scale (BSMAS).⁸ All 6 items are responded to on a 5-point scale (never to always). The scoring of BSMAS is precise as the 6 items were supposed to be measured on a 5-point Likert scale. Then, the score of each item consists of the sum of all item's scores and the total score ranges from 6-30. When an individual scores more than 3 for 4 out of 6, this indicates the addiction. The

Cronbach's alpha value of the translated Scale was 0.85 signifying good reliability of the tool.

The third part consisted of a pre-validated emotional regulation questionnaire developed by Gross and John (ERQ).⁹ The scale comprised of 10 items was intended to quantify the tendency of respondents to control their sentiments in two ways: (1) Cognitive Reappraisal and (2) Expressive Suppression. Participants response to individual items on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The final score consisted of the the sum of all scores in the subscale of cognitive reappraisal and expressive suppression respectively. The greater the score, the higher the usage of that specific emotion regulation strategy, contrarywise low scores depict less recurrent use. Cognitive reappraisal consisted of 6 items (1,3,5,7,8,10) and the remaining 4 items (2,4,6,9) were of expressive suppression with the possible range of 6-42 and 4-28 correspondingly. This questionnaire has no reversed scoring item. The value of Cronbach's α of ERQ whole scores and sub-scores is satisfactory (0.73 ~ 0.82), signifying that ERQ is a consistent measure of emotion regulation.

The last part consisted of the Depression, Anxiety and Stress Scale (DASS-21) with 21 items.¹⁰ The is consisted of three subscales premeditated to measure the level of depression, anxiety and stress. These three DASS-21 scales encompass 7 items. Scores on this scale were a multiplier of 2 to get the closing score. Scores of stress, anxiety and depression are measured separately by adding the scores of each item. Mild-severe range of three subscale scores was 0- 42. DASS-21 has good reliability which showed that it has Cronbach's alpha 0.81, 0.89 and 0.78 for the subscales of depression, anxiety and stress respectively. It is reliable, valid and easy to administer.

The research was conducted in accordance with the declaration of Helsinki and was approved by the institutional ethical review board, ref no: UCD/UOL/DRC/02/16. Participants' willingness was taken into account and informed consent was attained from all participants during the research data collection. Participants first learned about the purpose, benefits and risks involved in the study. Once they decided to be part

of the study by giving their consent, a questionnaire was shared to gather personal demographic information and other tools to measure Social Media Addiction, Emotional Regulation, Strategies and Mental Health. clear instructions were given to participants clearly on the form at the top of the section on how to complete the list of questions. Each participant was informed that their data was used for research purposes only. The anonymity of participants was maintained by not collecting their names, roll numbers or any other identifiable information. All codes of conduct had been applied throughout the study and onwards.

After collecting the data, data was inserted and afterwards evaluated on Statistical Package for Social Sciences (SPSS) version 23. The gathered information was screened for any incomplete or missing information. In order to find the relationship between variables, Pearson Product Moment Coefficient of correlation analysis was used. For assessing mean comparison, t-test was applied.

RESULTS

This part grants the core statistical results and interpretations of the existing data. In order to analyze the data, Pearson Product Moment Coefficient of correlation and independent sample t-test method were used in SPSS V.23. Percentages, means and statistical deviations of demographic variables and characteristics were calculated by using descriptive statistics. A sample of total 503 adults with age range of 18 - 25 years participated in the study of which 31.4% were male and 68.6% were female (Table 1). Table 1 reveals that maximum participants were with age range of 18 – 20 years ($n=279, 55.5\%$). More number of female adults ($n = 345, 68.6\%$) participated in the study. Higher number of adults from urban areas ($n = 323, 64.2\%$) were participants. Majority of the participants were in 2nd year of study ($n = 230, 45.7\%$). Participants with upper Socioeconomic status were greater in number ($n = 307, 61\%$). Unmarried adults participated maximumly ($n = 387, 76.9\%$). Parental marital status of most of the participants was married ($n = 359, 71.4\%$). The most preferred social app was WhatsApp ($n = 208, 41.4\%$), followed by Instagram ($n = 126, 25.0\%$) and YouTube ($n = 110, 21.9\%$).

Table 1: Sociodemographic Characteristics of Participants

Characteristics	Frequency (<i>n</i>)	Percentage (%)
Gender		
Men	158	31.4
Women	345	68.6
Age Groups		
18-20	279	55.5
21-23	166	33.0
>24	58	11.5
Area of living		
Rural	180	35.8
Urban	323	64.2
Year of Study		
1 st Year	161	32.0
2 nd Year	230	45.7
3 rd Year	90	17.9
4 th Year	16	3.2
5 th Year	6	1.2
Socioeconomic status		
Upper	307	61.0
Middle	193	38.4
Lower	3	.6
Marital status		
Married	116	23.1
Unmarried	387	76.9
Field of Study		
MBBS	352	70.0
BDS	151	30.0
Family monthly income		
20,000-40,000	116	23.1
40,000-60,000	118	23.5
60,000-80,000	108	21.5
80,000- above	161	32.0
Parental Marital status		
Married	359	71.4
Separated	106	21.1
Divorced	37	7.4
Social App Preference		
Facebook	22	4.4
WhatsApp	208	41.4
Instagram	126	25.0
YouTube	110	21.9
Twitter	6	1.2
Snapchat	12	2.4
TikTok	19	3.8

Note. (N=503)

Table 2 suggests that a significant positive correlation between SMA and depression, anxiety and stress has been detected. Social media addiction has a strong

positive correlation with anxiety ($r= 0.39, p < 0.01$), depression ($r= 0.38, p < 0.01$), and stress ($r= 0.37, p < 0.01$).

Table 2: Correlations for Study Variables

Variables	1	2	3	4
Depression	–			
Anxiety	0.78**	–		
Stress	0.80**	0.78**	–	
Social media addiction	0.38**	0.39**	0.37**	–

** $p < 0.01$

The Pearson correlation reveals that social media addiction has a significant moderate positive

relationship with Cognitive Appraisal ($r= .21, p < 0.01$) and expressive suppression ($r= .19, p < 0.01$) (Table 3).

Table 3: Additional Correlations for Study Variables

Variables	1	2	3
Cognitive appraisal	–		
Expressive suppression	0.73**2	–	
Social media addiction	0.21**	0.19**	–

DISCUSSION

In the present research, findings have illuminated the role of social media addiction and emotion regulation strategies on the medical and dental students of Pakistan. This study was designed to quantitatively analyze the relationship of emotion regulation strategies and mental health with social media addiction.

Present results have revealed that an increase in SMA leads to a decrease in mental health. These findings are consistent with past literature in which researchers found that social media addiction was negatively associated with mental health which depicted that an individual with higher social media addiction will have poor mental health thus, consistency lies in the positive relationship of social media addiction and depression, anxiety and stress.¹¹

Findings reveal the association of SMA with mental health problems in such a way that the higher the social media addiction a person has, the higher he/she would have poor mental health means that if a person is addicted to social media he/she may have the more incidence of stress, anxiety and depression. The reason for this might be explained by the constant need for affirmation through social media content in the form of

'likes' and 'followers'. When a person stops receiving such appreciation, it causes anxiety which often leads to depression in chronic cases.¹² Medical and dental students suffer from high academic pressure, they use social media to relax which backfires in the form of a different form of anxiety. That student traps himself in a downward spiral resulting in poor social interaction and poor grades.

Relationship of social media addiction and mental health was statistically noteworthy and consistent with former studies which illustrate that a positive correlation between social media addiction and mental health problems was observed in a cross-sectional study, unveiled the negative effects of social media, gaming and smartphones on mental health whereby, social media addiction triggered psychological distress (depression, anxiety and stress) among Chinese.¹³ Another study concluded that internet abuse and social media addiction were correlated to sleep problems and other mental health issues. The findings of that previous study are reliable to present study in such a way that the more a person has an addiction to social media, the more that person will have both physical and psychological health issues which include depression, anxiety and stress.¹⁴

A significant positive relationship was detected between social media addiction and cognitive appraisal and expressive suppression regarding present results. This substantiated positive relationship representing that an increase in SMA led to an increase in cognitive appraisal and expressive suppression, meant that those adults who use social media excessively might tend to have high adoption of emotion regulation strategies in this pandemic situation. In constancy to previous literature and Media Dependency Theory, it can be concluded from the current study that the use of social media in the pandemic period might be inducing positive implications in controlling emotions. Therefore, a positive relationship between the constructs indicates the positive influence of social media on emotion regulation strategies. Theory explained the idea of a combination of the media system and social system, depicting the intimacy of social media.¹⁵

Findings are also consistent with other theories and research such as, according to Mood Management Theory, social media use is determined by the person's desire to self-regulate unpleasant feelings so as to feel more positive emotions. A recent study led among adults during COVID-19 has indicated that higher feelings of loneliness predicted more social media use.¹⁶

An earlier study conducted in Pakistan indicated that social media use is associated with perceived threat and self-efficacy, which illustrated that emotional and cognitive mechanisms affect the perception of people regarding covid-19 threat and their preventive behaviours with respect to information accessible on social media, indicating the positive relationship of social media usage and emotion regulation in such a way that, if the exposure to social media is increased in pandemic then people would have more awareness about regulating their emotions.¹⁷

This is a unique study that determines the association between SMA, emotional regulation and depression among medical and dental students of Pakistan. A few limitations should be considered while spotting the results of the current study. Boundaries can be implemented while generalizing the findings that only literate adults were chosen as participants for research. Also, causal inferences cannot be made between variables due to the cross-sectional nature of the study. Having said that, this study paves the way for future studies related to social media addiction in medical and

dental students. Future studies can use experimental research design to explore the causal relationship between social media addiction and emotion regulation with mental health. Research could be conducted on various cultures with different age ranges of people. It is also suggested for future research to explore qualitatively as well as quantitatively the differential effects of other variables on the domain of mental health.

CONCLUSION

Data analysis, results and discussion permit a conclusion that finely summarizes the purpose and findings of present research. Social media addiction and emotional regulation are those factors of psychology which are widely being studied in Pakistan and therefore this research illustrates new insights for research by presenting empirical support for its incidence in the medical and dental community of Pakistan. The findings reveal that there is a significant positive strong correlation between social media addiction and depression, anxiety and stress. Moreover, gender differences were significant in social media addiction and mental health problems. Social media addiction has a significant moderate positive relationship with Cognitive Appraisal and expressive suppression.

DISCLAIMER

None.

CONFLICT OF INTEREST

None to declare.

ETHICAL STATEMENT

The Ethical approval was taken from Research Ethics Committee of concerned university (Ref: ANDC/SU/DRC/02/16).

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REFERENCES

- Hou Y, Xiong D, Jiang T, Song L, Wang Q. Social media addiction: Its impact, mediation, and intervention. *Cyberpsychology(Brno)*. 2019;13(1):1-8.
- Mahmoud AB, Fuxman L, Mohr I, Reisel WD, Grigoriou N. "We aren't your reincarnation!" workplace motivation across X, Y and Z generations. *Int J Manpow*. 2021;42(1):193-209.
- Tamir M, Vishkin A, Gutentag T. Emotion regulation is motivated. *Emot*. 2020;20(1):115.
- Spinelli M, Lionetti F, Setti A, Fasolo M. Parenting stress during the COVID-19 outbreak: Socioeconomic and environmental risk factors and implications for children emotion regulation. *Fam Process*. 2021;60(2):639-53.
- Alquwez N, Alshahrani AM. Influence of spiritual coping and social support on the mental health and quality of life of the Saudi informal caregivers of patients with stroke. *J Relig Health*. 2021;60:787-803.
- Chang KC, Chang YH, Yen CF, Chen JS, Chen PJ, Lin CY, et al. A longitudinal study of the effects of problematic smartphone use on social functioning among people with schizophrenia: Mediating roles for sleep quality and self-stigma. *J Behav Addict*. 2022;11;(2):567-576.
- Kirik A, Arslan A, Çetinkaya A, Mehmet G. A quantitative research on the level of social media addiction among young people in Turkey. *Int J Soil Sci*. 2015;3(3):108-22.
- Monacis L, De Palo V, Griffiths MD, Sinatra M. Social networking addiction, attachment style, and validation of the Italian version of the Bergen Social Media Addiction Scale. *J Behav Addict*. 2017;6(2):178-86.
- Seixas R, Pignault A, Houssemand C. Emotion Regulation Questionnaire-Adapted and Individual Differences in Emotion Regulation. *Eur J Psychol*. 2021;17(1): 70-84.
- Oei TP, Sawang S, Goh YW, Mukhtar F. Using the depression anxiety stress scale 21 (DASS-21) across cultures. *Int J Psychol*. 2013;48(6):1018-29.
- Patterson MS, Russell A, Spadine MN, Prochnow T, Heinrich KM. Impact of social networks, mental health, and sobriety on exercise within a collegiate recovery community. *Health Behav Res*. 2020;3(1):1-17.
- Karim F, Oyewande AA, Abdalla LF, Ehsanullah RC, Khan S. Social media use and its connection to mental health: a systematic review. *Cureus*. 2020;12(6):e8627.
- Chen IH, Chen CY, Liu CH, Ahorsu DK, Griffiths MD, Chen YP, et al. Internet addiction and psychological distress among Chinese schoolchildren before and during the COVID-19 outbreak: A latent class analysis. *J Behav Addict*. 2021;10(3):731-46.
- Mendoza M, Parra D, Soto Á. GENE: Graph generation conditioned on named entities for polarity and controversy detection in social media. *Inform Process Manag*. 2020;57(6):102366.
- Jung JY. Media dependency theory. *The international encyclopedia of media effects*. eds P. Rössler, C.A. Hoffner and L. Zoonen. 2017:1-10. <https://doi.org/10.1002/9781118783764.wbieme0063>
- Cauberghe V, VanWesenbeeck I, DeJans S, Hudders L, Ponnet K. How adolescents use social media to cope with feelings of loneliness and anxiety during COVID-19 lockdown. *Cyberpsychol Behav Soc Net*. 2021;24(4):250-7.
- Mahmood QK, Jafree SR, Mukhtar S, Fischer F. Social media use, self-efficacy, perceived threat, and preventive behavior in times of COVID-19: results of a cross-sectional study in Pakistan. *Front Psychol*. 2021;12:562042.