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## Social Media Excessive Use and COVID-19 Related Stress in Young Adults

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ARTICLE DETAILS	ABSTRACT
<p><b>History:</b></p> <p>Received: December 02, 2021                      Accepted: December 26, 2022</p>	<p>Social media use significantly increased during the novel pandemic. The problems of infodemic associated with uncontrolled social media usage added to COVID-19 related stress in young adults. This study was aimed at finding the relationship between problematic social media usage, COVID-19 related stress and time spent on social media. A cross-sectional research design with a survey method was applied to the population of Punjab Province, Pakistan. The data of 412 participants of age 18 to 35 (38% males and 62% females) was analyzed for results. Statistical analysis showed that COVID-19 related stress is positively and significantly (<math>r = 0.40, p &lt; .01</math>) associated with social media excessive use but not with the time spent on social media. The <math>R^2</math> value of 0.16 revealed that the predictor variable (social media excessive use) explained 16% variance in the outcome variable (COVID-19 related stress) with <math>F(1, 410) = 76.79, p &lt; .001</math>. The study confirms the negative effects of excessive social media consumption on mental health during the pandemic. The benefits of findings for policymakers, government and health psychologists are discussed.</p> <p>© 2022 The Authors, Published by WUM. This is an Open Access Article under the Creative Common Attribution Non Commercial 4.0</p>
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### 1. Introduction

The novel COVID-19 epidemic in Wuhan turned into a pandemic affecting 210 countries on April 11 (2020) throughout the world and was declared a public health emergency of international concern (WHO, 2020). To stop the spread of this virus and due to the unavailability of proper vaccinations and medications, governments adopted emergency measures including lockdowns that affected the social, economic, business and educational activities of the public. This kind of lockdown was termed the “biggest psychological experiment” making at risk the mental health of about one-third of the world’s population quarantined in any way (Van Hoof, 2020). People restrained at their homes socialize through social networking websites mostly seeking, sharing and giving feedback on information about the cure, and the current situation of the pandemic (Saud et al., 2020).

Social media use is measured in many ways like streaming, active use, time spent on social media, addictive use and social media flow (Zhao & Zhou, 2021). According to Goffman’s theory, delivering content for the reader on social media is just like presenting oneself in the

‘front region’ but behaving naturally and originally or in the ‘back region’ (Merunkova & Slerka, 2019). It fulfills their natural desire to be known by others through sharing and posting their knowledge and skills. In Pakistan, about 46 million people used social media till January 2021. Findings from 2020 to 2021 showed an increase in social media usage above 24% (Kemp, 2021). This increase is related to physical restrictions due to the pandemic that brought more people to social media exposure. Excessive or problematic social media use is defined in two ways; one as a novel mental disorder; and the other as using them for improper activities (Yellowlees & Marks, 2007). The hypodermic needle theory considers media as a threatening and strong source because of the susceptibility of the user to be influenced by a specific piece of information (Mehrad et al., 2020).

The sharing of biased and fake information is a negative aspect of social media in Pakistan (Memon et al., 2015). After the spread of the pandemic, the false and misleading information related to the transmission, origin, control and cure of the disease caused negative results in the public and they become more worried. All of this collectively gave rise to the infodemic, a phenomenon related to social media that occurred for the first time in the 21<sup>st</sup> century (Depoux et al., 2020). According to Depoux and others (2020), it was not only the virus that spread very fast but the information, even the wrong information flew more rapidly than the virus. Anti-vaccination information, fake news about treatment, fear of contamination and criticism of government policies were the main trends on social media (Broniatowski et al., 2020; Burki, 2020).

In the context of the COVID-19 pandemic, long periods of quarantine ceased mobility and financial instability due to lockdown can cause stress. This stress ultimately leads to anxiety and depression. Majority of youth aged 18 to 35 reported anxieties during the lockdown due to the spread of the pandemic in Iraqi Kurdistan (Ahmad & Murad, 2020). Another study in Italy found increased rates of anxiety and post traumatic stress symptoms and depression in the population (Rossi et al., 2020). Psychosocial theories consider COVID-stress to be caused by being isolated because of human’s social nature. Being quarantined, the stressor was not only the virus but also the separation from loved ones. The perceived loneliness leads to poor decision making as well as emotional issues (Jaremka et al., 2013).

Asmundson and Taylor (2020) used the term “coronaphobia” which developed during the months of the pandemic and the studies began to explain and measure it. Now, according to Taylor (2021), it is termed as COVID stress syndrome that consists of five factors (a) fear of infection (b) fear of socio-economic aspects (c) fear of foreigners related to “carrying” virus (d) compulsive checking of symptoms related to COVID-19 disease (e) traumatic stress symptoms related the pandemic. The severe form is characterized by clinically significant distress that causes dysfunctions and the diagnostic criteria comprised of symptoms related to both; post-traumatic stress disorder as well as obsessive-compulsive disorder (Taylor, 2021).

The unchecked use of social media and the problems of the infodemic lead to enhanced levels of fear worldwide and in Pakistan (Ahmad & Muraad, 2020). Excessive or addictive use of social media is itself a problematic behavior that has a reciprocal relationship with anxiety (Atroszko et al., 2018; Ramzan et al., 2019). In Pakistan, there are studies on social media use and the perceived risk of COVID-19 (Mehmood et al., 2021), COVID-19 stress on frontline healthcare providers (Munawar & Choudhry, 2021), impacts of mass media on mental health (Mumtaz, 2021) and other related issues during this period of public emergency. However, there is a lack and gap in information about public mental health that is affected by COVID-19 stress and the role of problematic use of social media in it during the first, second and third waves of the pandemic. Pervading this space, the current research aimed to explore how excessive use of social media is related to COVID-19 related stress in young adults since the first wave of the pandemic, till now.

### **1.1 Objectives**

1. To find the relationship between excessive use of social media and enhanced COVID-19 stress.
2. To explore the relationship between time spent on social media and COVID-19 related stress.
3. To predict COVID-19 related stress by the excessive use of social media.

### **1.2 Research Hypotheses**

1. There is a significant relationship between the excessive usage of social media and COVID-19 stress.
2. There is a significant relationship between the time spent on social media and COVID-19 related stress.
3. The excessive use of social media significantly predicts COVID-19 related stress.

## **2. Methods**

### **2.1 Study Design and Sampling**

A cross-sectional study design was used to collect data through a mixed (online as well as physical) survey based on a snow-ball, convenient sampling method. A study was conducted during the lockdown period in Pakistan, so snow ball sampling helped to collect online data from participants according to Inclusion Criteria.

### **2.2 Procedure and Participants**

The adults (both male and female) of age 18 to 35 of Punjab Province were taken in the inclusion criteria. But the participants of age above 35 and below 18 years were excluded. Moreover, those who have no access to the internet and who had never used social media in their lives were considered under exclusion criteria. Data was collected through both physical and online modes due to the pandemic related lockdown. A Google form consisting of COVID Stress Scale and Social Networking Usage Questionnaire along with a demographic sheet and consent form was sent to the residents of Punjab Province, Pakistan through WhatsApp and Facebook from May 21<sup>st</sup> to June 15<sup>th</sup>, 2021. About 80 forms were distributed physically on Campus and in girls' hostels of The Islamia University of Bahawalpur. They were advised to read the questions carefully. All the participants fill out the form voluntarily. Overall, 416 participants responded of which 412 were put to analysis. The socio-demographic characteristics of the sample are given in Table 1.

### **2.3 Ethical Considerations**

All the subjects of the current study were protected from all kinds of harm. It was made sure to keep confidentiality and to answer all their questions. Their consent was taken before collecting data. Deception regarding aims and exaggerations of the study findings were also eluded.

### **2.4 Measures**

The COVID Stress Scale developed and validated by Taylor et al. (2020) was translated by investigators and checked for reliability. The Cronbach's alpha of this translated version came to .87 which was acceptable as  $>.70$  is considered adequate. It consists of 5 sub-scales, (1) Danger and contamination fears, (2) fears about economic consequences, (3) xenophobia, (4) compulsive checking and reassurance seeking, and (5) traumatic stress symptoms about COVID-19. The overall scoring of the scale rather than subscale scoring was done. Self-translated Urdu version of the Social Networking Usage Questionnaire (Gupta & Bashir, 2018) was used in the current study. The Social Networking Usage Questionnaire contained five dimensions namely academic, socialization, entertainment, informativeness, and constraints. The overall scoring of the scale rather than subscale scoring was done. The internal consistency of this version regarding the present sample ( $N = 412$ ) was also tested

which comes to .96 showing very good reliability. The psychometric properties of both scales are given in Table 2. The consent form and demographic questions were also added to the survey.

### 3. Results

The statistical data analysis was done using SPSS version 22. The demographic characteristics of the participants are summarized in Table 1 which consists of the frequency and percentage of the responses of demographic variables. A total of 412 individuals were involved in this survey. Of them, 38% of the participants were male and 62% were female respondents, more than half (52%) of the individuals were of the 18-21 age group which shows more people who participated in this study are young. As illustrated, around about two third of the participants (64%) were students of BS. The vast majority of the participants fell in 3-7 hours of usage of social media (44%) and a higher proportion (59%) of participants had not any relative affected by COVID-19. The majority of the participants (92%) have not been affected by COVID-19.

**Table 1: Frequency Distribution of Demographic Variables (N=412)**

Variables		Frequency (%)
Age	18-21	215 (52)
	22-25	140(34)
	26-29	43(10)
	30-35	14(3)
Gender	Male	157(38)
	Female	255(62)
Education	<i>BS</i>	262(64)
	Intermediate	19(5)
	<i>MSc</i>	47(11)
	Metric	5(1)
	<i>MPhil</i>	73(18)
	<i>PhD</i>	6(1)
I use social media ( <i>hours per day</i> )	1-3	182(44)
	4-6	146(35)
	7-9	49(12)
	Above 9	35(8)
Has any of your relatives, family, or neighbors been affected by <i>COVID-19</i> ?	Yes	168(41)
	No	244(59)
Have you been affected by <i>COVID-19</i> ?	Yes	34(8)
	No	378(92)

**Table 2: Psychometric Properties for Scales (N=412)**

Scales	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>Cronbach's α</i>	<i>Skewness</i>
Social Networking Usage Questionnaire	38.81	12.74	0-76	0.96	-0.25
The <i>COVID</i> Stress Scale	50.46	30.21	0-142	0.87	-0.30

Note. *M*=Mean, *SD*=Standard Deviation

Table 2 shows the psychometric properties of the scales used in the current study. The Cronbach's  $\alpha$  values for Social Networking Usage Questionnaire was .96(>.80) and for The COVID Stress Scale was .87(>.80). These values show high internal consistency.

**Table 3: Correlation between Social Media Usage, COVID-19 Related Stress and Time Spent on Social Media (N = 412)**

Variables	<i>M</i>	<i>SD</i>	1	2	3
COVID Stress	50.46	30.21	-		
SMU	38.81	12.74	0.40**	-	
<i>T</i>	1.58	0.94	-0.01*	0.15**	-

Note. *M*=Mean, *SD*=Standard Deviation, *SMU* = Social media usage, *T*= Time spent on social media, \*\* $p < .01$ , \* $p < .05$

Table 3 presents the relationship among COVID-19 related stress, social media usage and time spent on social media. COVID-19 related stress is positively and significantly related to social media usage ( $r = .40$ ,  $p < .01$ ) while negatively and non-significantly related to time spent on social media ( $r = -.01$ ,  $p > .05$ ). This indicates that COVID-19 related stress will increase when the social media usage is enhanced.

**Table 4: Linear Regression Model for Predicting COVID-19 related Stress (N = 412)**

Variable	<i>B</i>	$\beta$	<i>SE</i>
Constant	13.92**		4.39
Social media excessive use	0.94***	0.40	0.10
$R^2$	0.16		

Note. \*\*\* $p < .001$ , \*\* $p < .01$

Table 4 shows the impact of social media excessive usage on COVID-19 related stress. The  $R^2$  value of .16 revealed that the predictor variable (social media excessive use) explained 16% variance in the outcome variable (COVID-19 related stress) with  $F(1, 410) = 76.79$ ,  $p < .001$ . The findings reveal that social media excessive use positively predicted COVID-19 related stress ( $\beta = .40$ ,  $p < .001$ ).

#### 4. Discussion

The continuous exposure to infodemic and contagious fear on social networking websites inordinately increased COVID-19 related stress among young adults during pandemic. Many studies confirm the worst effects of social media excessive use on mental health. High level of depression was reported among Chinese adults with negative anticipation of COVID-19 related information on social networking websites (Zhao & Zhou, 2020). In another study, elevated anxiety and loneliness associated with social media excessive use appeared during pandemic among a sample of 715 adults (Boursier et al., 2020). In Saudia, Al-Qahatani showed during COVID outbreak, anxiety, depression, and stress were significantly related to time spent on social media (Al-Qahatani et al., 2020).

Decreased stress from COVID is not significantly related to social media usage as revealed by Brailovskaia et al. (2021) that about 50% people of in Germany and 60% people of in Italy who use social media as COVID-19 information sources had increased stress and burden positively related with social media use. As social media has a momentous influence on spreading fear of COVID, Facebook was the most utilized application in causing panic and psychological anxiety (Ahmad & Murad, 2020) and a significant positive link exist between exposure to misinformation via social media and anxiety, despair, and social isolation (Hammad & Alqarni, 2021).

The current study confirms that COVID-19 related stress can be significantly predicted by excessive usage of social media. In terms of risk and protective factors, it was discovered that the link between COVID-19 fear and stress is stronger in older persons than it is in younger

people (Tillman et al., 2019). Adolescents can utilize social media as a positive coping tool to deal with nervous feelings during the COVID-19 quarantine (Cauberghe et al., 2021); and stress is predicted indirectly by disordered social media use due to a fear of COVID-19. Furthermore, disordered social media use was related to signals that were found to be a direct predictor of depression (De Choudhury et al., 2021).

The results of the second hypothesis describe that the time spent on social media is not significantly related to COVID-19 related stress. Social media is not only used for seeking COVID-19 related problem causing information but also for dealing with the stress that people already facing, whether it is related to COVID or not. The time spent on social media may also be related to searching for coping information or seeking coping services (McHugh et al., 2018; Pahyahay & Khalili-Mahani, 2020; Eden et al., 2020). Demirtepe-Saygili (2020) claimed social media is both problems causing habit as well as a coping tool. The unhealthy lifestyles associated with social media usage, the content to which a person is exposed and the way this content is evaluated is associated with the negative consequence that is the stress. On the other hand, using social media for seeking reliable information, a tool of distraction during emotion-focused coping and procuring social support is associated with positive consequences.

#### **4.1 Implications**

Policymakers may start campaigns to enhance public awareness of the potential drawbacks of excessive social media use. Government authorities may also wish to create official pages on different social media platforms where people can get accurate information on COVID-19. Strategies should also be developed to convey trustworthy messages from authorities to the general population in order to decrease the sense of uncertainty that will automatically direct habits toward healthy activities on social media. The general public, especially those who have been directly or indirectly traumatized by COVID-19 is advised to avoid excessive social media use and learn effective emotion regulation strategies (e.g. reappraisal) to reduce negative emotions induced by news coverage. Positive and health psychologists should come forward to facilitate people through social media during times of uncertainties and pandemics.

#### **4.2 Limitations and Suggestions**

As the survey method with snowball sampling was used to collect responses, so there are chances of respondents' biasness, moreover, generalizability is low in snow ball sampling. The current study collected data only from Punjab so the results cannot be generalized to other provinces and at the national level. A national level study with greater sample size is suggested for future researchers exploring the moderating and mediating effects of active users of social media and coping strategies used for decreasing COVID-19 stress via social media and the internet.

#### **4.3 Conclusion**

This research aimed to explore the harmful effects of social media that can exaggerate the COVID-19 related stress. The study proves that social media excessive use is positively and significantly associated with COVID-19 related stress and social media excessive use is a predictor variable of COVID-19 related stress. However, when more time is spent on coping activities on social media, these negative effects can be reduced.

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