

Social Functioning and Mental Health Status during COVID-19 Pandemic

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Abstract

Background: A descriptive type of cross-sectional study was carried out to assess the social functioning and mental health status of the COVID-19 pandemic with 117 samples. The aim of the study was to determine the social functioning and mental health status of the Bangladesh University of Health Sciences (BUHS) faculties and officers during the COVID-19 pandemic.

Methodology: A descriptive type of cross-sectional study was carried out with 117 University teachers and other officers who took part in the study over three months from June-2020 to August-2020. All participants who was fulfilled the inclusion criteria were invited in this study. Convenience sampling technique was used to recruit the study participants. AOQ form (Borderline Personality Disorder Mental Health assessment form) is used to measure the mental health outcomes of the respondents. The Social Functioning Questionnaire (SFQ), an eight-item self-report scale (score range 0-24), was developed from the Social Functioning Schedule (SFS).

Results: The socio-demographic characteristics of the respondents were considered as sex, occupation, type of family, history of chronic diseases, living area, and work from home. The study revealed that more than half 53.8% ($n = 63$) of the respondents were male. It was found that 69.2 % ($n = 81$) of them belonged to nuclear families; among them, 84.6% ($n = 99$) were living in urban areas and 54.7% ($n = 64$) worked from home. It shows a statistically significant ($p = 0.001$) association between sex and money problem. Male has more significant money problems than females. There was a significant association between social functioning and mental health scores ($r = .391$, $p = .001$). The results showed a partial correlation between social functioning score and mental health score after adjusting for age and sex. Here, $r = .276$ and $p = .003$. This means that social functioning and mental health scores are significantly correlated even after controlling for age and sex. There was a significant association between mental health and social function status ($p = 0.01$).

Conclusion: This study found a significant association between mental health and social function status. This would be helpful for future mental health support for those individuals with prior vulnerable mental health status.

Keywords: COVID-19, social functioning, mental health, cross-sectional study

1. Introduction

COVID-19 is a highly infectious and transmittable disease for the entire world and still now it is a major public health threat. This pandemic and pathogenic viral infection are caused by severe acute respiratory syndrome coronavirus 2. This virus first emerged in Wuhan city in China and rapidly spread worldwide including Bangladesh reporting more than 2.4 million confirmed cases of COVID-19, leading to 169,006 deaths as of April 22, 2020 (WHO, 2020).

As of 6th June 2021, globally there were 172 630 637 confirmed cases of COVID 19 and 3 718 683 deaths received by the WHO from national authorities. The first case of a COVID-19 patient was detected in Bangladesh on March 8, 2020, confirmed by the Institute of Epidemiology, Disease Control and Research (IEDCR) for the first time in Bangladesh (Paul, 2020). Among the top 32 countries Bangladesh one of them and accounts for 0.47% of the COVID-19 cases of the world (Jin et al, 2020). This new coronavirus is highly infectious, threatening public health and safety. This is a similar pandemic outbreak of fear, anxiety, and depression. The virus affects physical health and the emotional well-being both of all mankind, transporting important psychosocial impact for members of the humanity. In Bangladesh, young professionals, and working people have so far been mostly infected with COVID-19. Specifically, IEDCR reported that 68% of COVID-19 positive cases were observed in people aged between 21 to 50 years.

However, the current study aimed to find out the mental health status of Bangladesh University of Health Sciences employees of Dhaka city during the COVID-19 pandemic.

2. Methods

This was a descriptive type of cross-sectional study carried out to assess the social functioning and mental health status during the COVID-19 pandemic. The study was conducted at the Bangladesh University of Health Sciences of Dhaka city. A total of 117 University teachers and other officers took part in the study over three months from June-2020 to August-2020. A structured online survey questionnaire was used to collect data from participants, which was developed based on evidence from studies published previously. The internal consistency reliability for the two questionnaires was as follows: for social functioning questionnaire the Cronbach's alpha was 0.8 and for mental health status questionnaire it was 0.9 for inter-item correlation matrix all the values in the table was positive.

2.1 Statistical Analysis

The data were entered into the software Statistical Package for Social Science version 22.0. All the estimates of precision were presented at a 95% confidence interval (CI). Descriptive analysis included mean, standard deviation (SD), frequencies, and percentages. Demographic information and the magnitude of the social functioning and mental health outcomes were presented using frequencies and percentages. A fourteen-item self-report scale (score range 0-42) has been used to assess the mental health status of individuals. The score obtained 0-14 indicated poor mental health status, 15-28 indicated quite well, and above 29 indicated well mental health status. The score obtained 0-8 indicated poor social functioning status, 9-16 indicated quite well, and above 17 indicated well social functioning status. The associated factors of the outcomes were determined by using multinomial logistic regression analysis. To find out the factors that influenced the outcomes, first-run univariate analysis then bivariate analysis was also done. The statistical tests were considered significant (2-sided) at a level of $p < 0.05$.

2.2 Ethical Consideration

Informed consent was obtained from each respondent, confidentiality of respondents was maintained, Information obtained during the research work was not used for any other purpose except research.

3. Results

Table 1 shows the socio-demographic characteristics of the respondents considering sex, occupation, type of family, history of chronic diseases, living area, and work from home. The study revealed that more than half 53.8% ($n = 63$) of the respondents were male. It was found that 69.2 % ($n = 81$) of them belonged to nuclear families; among them, 84.6% ($n = 99$) were living in urban areas and 54.7% ($n = 64$) worked from home.

Table 1. Distribution of the respondents by socio-demographic characteristics (n = 117)

Variables		Frequency	Percent
Gender	Male	63	53.8
	Female	54	46.2
Type of family	Nuclear	81	69.2
	Joint	36	30.8
History of Chronic Disease	No	45	38.5
	Yes	72	61.5
Living area	Semi Urban	18	15.4
	Urban	99	84.6
Work from home	No	53	45.3
	Yes	64	54.7
	Total	117	100.0

Table 2 revealed that there were significant differences between male and female on money problems ($\chi^2 = 20.429$, $p = 0.001$).

Table 2. Association between money problem and sex of the respondents (n=117)

Money problem	Sex of the respondents		Total	χ^2 value	p value	95% CI	
	Male	Female				Lower	Upper
No problem	45	54	99	20.429	.001	.366	.564
Money problem	18	0	18				

Table 3 shows Spearman’s correlation coefficient between social functioning score and mental health score. The results indicate that there is an association between social functioning scores and mental health scores ($r = .391$, $p = .001$).

Table 3. Correlation between social functioning score and mental health score of the respondents (n=117)

	Social functioning score	
	r	p
Mental health score	0.391***	0.000

Note. *** Correlation is significant at the 0.001 level (2-tailed).

Table 4 finds the results of partial correlation between social functioning score and mental health score after adjusting for age and sex. Here, $r = .276$ and $p = .003$. This means that social functioning and mental health scores are significantly correlated even after controlling for age and sex.

Table 4. Correlation between social functioning score and mental health score after controlling age and sex (n=117)

	Social functioning score	
	r	p
Mental health score	0.276***	0.003

Note. *** Correlation is significant at the 0.003 level (2-tailed).

Table 5 reveals that there was a significant association between mental health and social function status ($p = 0.01$).

Table 5. Association between mental health status and social functioning (n=117)

Mental health status	Social functioning		χ^2 value	P value	95% CI	
	poor	well			Lower	Upper
poor	0	45	52.00	.010	1.047	1.247
well	9	63				
Total	9	108				

4. Discussion

This comparison should be taken with caution, because of inherently different assessment methods and sampling strategies used.

The study shows the socio-demographic characteristics of the respondents considering sex, occupation, type of family, history of chronic diseases, living area, and work from home. It revealed that more than half 53.8% ($n = 63$) of the respondents were male. Higher psychological distress emblem in women partly because it bears a higher ratio of the workers that may be negatively affected by COVID-19. Research shows that women display disparity neurobiological responses causes of visible to stressors, possibly so long as the root for the total higher proportion of mental disorders in women (Goel et al., 2014; Eid et al., 2019). It is shown that 57.3% of the participants were in the age group 27–40 years. The rest of the 31.6% and 11.1% were in 41–55 and 56 and above respectively with a mean of 42.69 ± 7.8 SD years. Previous reports from China, female gender and younger age (Wang et al., 2020; Qiu et al., 2020; Liu et al., 2020) were consistently associated with higher risk for different mental health outcomes. Further study showed that the rapid spread of Covid-19 has seriously affected the mental health of older people worldwide (Banarjee, 2020; Vahia, Jeste, & Reynolds, 2020). Mental health problems have spiked among the older population mostly due to isolation and loneliness resulting from measures to control the spread of COVID-19 (Ipsit et al., 2020). The study explored that almost half 46.2% ($n = 54$) had money problems and the rest of them didn't have. A study titled "Covid-19 induced economic loss and ensuring food security for vulnerable groups: Policy implications from Bangladesh" showed that the economic loss due to COVID-19 lockdown based on the lost wage earnings of the daily wage workers in the farm and nonfarm sectors of Bangladesh. (Craig et al., 2008). The study shows a statistically significant ($p = 0.001$) association between sex and money problem. Male has more significant money problems than females. A similar study revealed that the impact of economic problems related to the COVID-19 crisis on mental health may be severe. Millions of people around the world lost their jobs (Cscella, Rajnik et al., 2020). A recent study in China indicated that 96.2% of recovering COVID-19 patients had significant posttraumatic stress symptoms (Bo et al., 2020). Psychiatric conditions including mood, anxiety, sleep, and substance use disorders are associated with suicidal behavior (Sher, 2019). In Bangladesh, the culture is such that married women face household burdens along with their issues, which causes mental illness (de Pinho & de Araujo, 2012). The Pandemic itself is characterized as a period of distress and difficulty for women, their responsibilities are further exacerbated (Shaw, 2020).

4.1 Limitations of the Study

Some limitations should be accounted for in the generalization of the findings of the study. It does not cover a national representative sample as all of the participants were from Dhaka city, there may have been some other confounding issues that remained unattended. The response rate of the participants was very poor. Volunteer bias might be present.

5. Conclusion

This study provides a preliminary idea of the pretext of the social functioning and mental health conditions of a certain group of people during the COVID-19 Pandemic. It explores that majority of the respondent's (92.3%) social functioning status was not satisfactory. Among them, (47%) of the respondents' mental health status was not satisfactory. The study further revealed that marital status and age category score are influenced by social functioning status. There was a significant association between social functioning score and mental health score. From the study, we conclude that social functioning and mental health status are significantly influenced by marital status and sex.

Authors' Contributions

MNP designed the study. MNP and SMN collected data and conducted the data analysis, and wrote the manuscript. MHR made critical revisions to the manuscript. All authors read and approved the final version of the manuscript.

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Competing Interests Statement

The authors declare that they have no conflicts of interest.

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