IMPACT ON MENTAL HEALTH DUE TO COVID-19 PANDEMIC AMONG BANGLADESHI INTERNATIONAL STUDENTS IN MALAYSIA: A CROSS-SECTIONAL STUDY

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ABSTRACT

Novel Coronavirus (COVID-19) is a dangerous virus that was first emerged in China at December 2019. It has already affected more than 11.75 million people and killed more than 0.54 million people. The main purpose of this paper is to find out the present mental condition of Bangladeshi International students who are currently studying in Malaysia and the activities to overcome their loneliness or boringness. A systematic cross-sectional online survey regarding COVID-19 has been conducted from June 15 to June 25, 2020. After developing questionnaires utilizing Google form, it has been sent out to the participants using online platform and the responses of the participants have been recorded. Total 280 participants (100 female and 180 male) completed the survey. The average age of them is about 33 years. In addition, 39.29%, 32.14%, 28.57% of the participants are doing their Master's, Bachelor's and PhD respectively. It has been observed that maximum male participants (58.3%) felt financial stress and maximum female participants (56%) felt horrified due to COVID-19. Additionally, it has been found that maximum male and female participants were utilized more time in the social media then the normal time. Since COVID-19 has already become a major issue all over the world, it is necessary to identify the mental health conditions and activities of people during this pandemic situation so that appropriate measures can be taken. More research should be conducted regarding mental health impact and possible solution. Hopefully, it will ease to provide fruitful information especially for the community health workers with a view to helping them tackle these psychological fitness related issues in response to other similar societal disasters. After the pandemic, follow-up should be made in order to improve mental health.

Keywords: Mental condition, Questionnaires, Stress, Boringness, Participants

INTRODUCTION

The world noticed a tremendous outbreak of Pneumonia since December 2019 for an unknown etiology and that was first revealed in Wuhan, Hubei Province, China.[1] Following the outbreak, SARS CoV-2, a novel corona virus, was brought out as the causative virus for pandemic in China as well as other parts of the world by the World Health Organization (WHO).[2] There were 43,103 undoubted cases of COVID-19 by 12 February 2020, and of these, 42,708 cases (99.1%) were from China.[3] From these analyses, it is firmly noticed that China has been severely affected by the COVID-19, which has been emerged as major public health disaster.[4] The symptoms that COVID-19 exposes correlate as similar group of severe acute respiratory syndrome (SARS), which has immense possibility of transmitting from animals to humans.[5] Considering the current scenario deeply, it is still ambiguous when the pandemic will reach its peak condition. The source of the SARS-CoV-2 remains obscure till now. However, the SARS-CoV-2 was first infected with contact of a local seafood vendor in Wuhan where some wildlife animals including bats were sold illegally.[6] For the survival against the COVID-19 pandemic, it is utmost requisite to understand how the people, especially those in the severely affected countries like China, have been coping with such a lethal disastrous virus. The estimated devastation caused by COVID-19 is closely matched with that of caused by the SARS epidemic in 2003. More

than 8000 infections were caused by the SARS epidemic and 800 deaths happened worldwide (in 26 countries).[7,8] It took eight months to control the SARS epidemic (by July 2003).[2] Moderate-to-severe post-traumatic stress symptoms were also found among the population in areas which were severely affected by the SARS epidemic.[9] Taking the risk factors into account, it was clearly identified that female were more vulnerable to the risk of developing SARS-related post-traumatic stress symptoms.[9]

Likewise, the effects of MERS, H1N1 and Ebola pandemics on mental health including feeling depression and substance use issue have additionally been recorded.[8] Also, the population may have went through some appeared risk factors for anxiety and depression including high death rate, asset and food insecurity, disparity among people and experience with infected and debilitated individuals which can prompt some unfavorable psychological states results during these epidemic.[8] On the contrary, there have been about > 82,000 instances of COVID-19 with > 2800 deaths occurred within two months after the beginning of outbreak in December 2019.[2]

Recently, various researchers worked regarding various perspectives of COVID-19. Ozdinc et al. predicted the progress of COVID-19 by employing a SIR model.[10] Sayin et al. studied Otolaryngology-Head and Neck Surgery Perspective of COVID-19.[11] Senel et al. conducted Bayesian statistical inference in order to estimate the instantaneous R for COVID-19.[12] Additionally, Toluk et al. investigated statistical perspective of COVID-19.[13] Online media were utilized for counseling during COVID-19 by Akgül.[14] Moreover, Rabby et al. conducted an online survey to identify general people's understanding regarding COVID-19.[15] Ahmadian et al. and Serdaroğlu et al. also conducted research on COVID-19.[16,17] Furthermore, clinical symptoms of patients infected with COVID-19 were studied that reported the clinical symptoms of patients infected with COVID-19 and expressed quantitative forecasting of the unexpected spreading of COVID-19.[18,19] Meanwhile, some works reviewed the effectiveness of the drugs against COVID-19.[20,21,22] However, there are not enough studies available on the severe impact of COVID-19 pandemic on mental health as well as activities to overcome loneliness or boringness.

The principal objective of the investigation is to explore whether there was a quick impact of the COVID-19 pandemic on the state of mental health, relating way of habits including standard of lifestyle. This study work focused on the Bangladeshi International students of various levels who are carrying on their studies currently in Malaysia. The present mental state of the International students was demonstrated with effective survey and various case studies. However, this study will be able to grab the attention of the concerned authority to take essential steps for the proper care of the students in this crucial moment to battle against the pandemic psychologically with success. Though this article is based on the international students' mental health issue, but authors believe that international students staying in different countries from various nationalities also faced similar issues. Therefore, this study will also be helpful for the other countries to take proper care of their citizens' mental condition.

MATERIALS AND METHODS

From 15 June 2020 to 25 June 2020, a cross sectional analysis was accomplished. Only grown-ups (aged ≥18 years) who had the ability to share verbal consent were selected in the study and convenience and snowball sampling methods was applied successfully. Additionally, all of the participants were International Students in Malaysia. For completing the survey, no monetary rewards were provided regarding promotional activities. Since community-based national sampling survey has become very difficult due to the locked down situation, that's why necessary data has been collected utilizing online platform. A Google form has been created with necessary questionnaires and forwarded to the participants through Messenger and WhatsApp account. The survey mainly consisted of two main questionnaires to find out how the mental health of the participants were affected due to COVID-19 and how they were trying to overcome their loneliness or boringness. Moreover, both male and female participants were participated and they were required to indicate their gender. The participants also chose their ages from four age groups and indicated their education status.

RESULTS

Table 1 demonstrates negative mental health impacts by demographic factors and Table 2 exhibits activities to overcome loneliness or boringness by demographic factors.

Table 1. Negative mental health impacts by demographic factors.

Variables	Sex (n=280)		Age Group (Years) (n=280)				Education status (n=280)		
	Females(n=100)	Males (n = 180)	18–30 (n= 130)	31–40 (n = 60)	41–50 (n=50)	>50 (n=40)	Bachelor (n=90)	Masters (n=110)	PhD (n=80)
Increased stress from study, n (%)									
Yes	27(27)	43(23.9)	47(36.2)	11(18.3)	7(14)	5(12.5)	35(42.2)	23(20.9)	12(15)
No	73(73)	137(76.1)	83(53.8)	49(81.7)	43(86)	35(87.5)	55(61.1)	87(79.1)	68(85)
Increased financial stress, n (%)									
Yes	55(55)	105(58.3)	75(57.7)	39(65)	24(48)	22(55)	53(58.9)	60(54.5)	47(58.8)
No	45(45)	75(41.7)	55(42.3)	21(35)	26(52)	18(45)	37(41.1)	50(45.5)	33(41.2)
Increased stress from home, n (%)									
Yes	51(51)	96(53)	68(52.3)	40(66.7)	23(46)	16(40)	47(52.2)	61(55.5)	39(48.7)
No	49(49)	84(47)	62(47.7)	20(33.3)	27(54)	24(60)	43(47.8)	49(44.5)	41(51.3)
Feel horrified, n (%)									
Yes	56(56)	94(52.2)	68(52.3)	35(58.3)	32(64)	15(37.5)	53(58.9)	51(46.4)	46(57.5)
No	44(44)	86(47.4)	62(47.7)	25(41.7)	18(36)	25(62.5)	37(41.1)	59(53.6)	34(42.5)
Feel helpless, n (%)									
Yes	49(49)	99(55)	77(59.2)	27(45)	27(54)	17(42.5)	54(60)	49(44.5)	45(56.3)
No	51(51)	81(45)	53(40.8)	33(55)	23(46)	23(57.5)	36(40)	61(55.5)	35(43.7)
Feel apprehensive, n (%)									
Yes	39(39)	78(43.3)	56(43.1)	24(40)	19(38)	18(45)	38(42.2)	41(37.3)	38(47.5)
No	61(61)	102(56.7)	74(56.9)	36(60)	31(62)	22(55)	52(57.8)	69(62.7)	42(52.5)

Table 2. Activities to overcome loneliness or boringness by demographic factors.

Variables	Sex (n=280)		Age Group (Years) (n=280)				Education status (n=280)		
	Females(n=100)	Males (n = 180)	18–30 (n= 130)	31–40 (n = 60)	41–50 (n=50)	>50 (n=40)	Bachelor (n=90)	Masters (n=110)	PhD (n=80)
Watching movie/ drama/ YouTube, n (%)									
Yes	64(64)	87(48,3)	59(45.4)	43(71.7)	26(52)	23(57.5)	43(47.8)	56(50.9)	52(65)
No	36(36)	93(51.7)	71(54.6)	17(28.3)	24(48)	17(42.5)	47(52.2)	54(49.1)	28(35)
Using social media more, n (%)									
Yes	65(65)	111(61.7)	93(71.5)	42(70)	28(56)	13(32.5)	68(75.6)	66(60)	42(52.5)
No	35(35)	69(38.3)	37(28.5)	18(30)	22(44)	27(67.5)	22(24.4)	44(40)	38(47.5)
Attending online courses, n (%)									
Yes	42(42)	84(47)	62(47.7)	31(51.7)	22(44)	11(27.5)	36(40)	56(50.9)	34(42.5)
No	58(58)	96(53)	68(52.3)	29(48.3)	28(56)	29(72.5)	54(60)	54(49.1)	46(57.5)
Attending various online competitions, n (%)									
Yes	54(54)	73(40.6)	71(54.6)	25(41.7)	21(42)	10(25)	56(62.2)	39(35.5)	32(27.5)

No	46(46)	107(59.4)	59(45.4)	35(58.3)	29(58)	30(75)	34(37.8)	71(64.5)	48(72.5)
Playing online and mobile games, n (%)									
Yes	56(56)	109(60.6)	83(63.8)	39(65)	29(58)	14(35)	67(74.4)	54(49.1)	44(55)
No	44(44)	71(39.4)	47(36.2)	21(35)	21(42)	26(65)	23(25.6)	56(50.9)	36(45)
Performing physical exercise, n (%)									
Yes	45(45)	98(54.4)	67(51.5)	36(60)	29(58)	11(27.5)	46(51.1)	56(50.9)	41(51.3)
No	55(55)	82(45.6)	63(48.5)	24(40)	21(42)	29(72.5)	44(48.9)	54(49.1)	39(48.7)

DISCUSSION

Among 280 participants, 100 were female and 180 were male. Female and male participants were further divided into four age groups. 130 participants reported that they were within 18 to 30 years old, 60 participants reported that they were within 31 to 40 years old, 50 participants reported that they were within 41 to 50 years old and 40 participants reported that they were more than 50 years old. Moreover, based on the education status, it has been observed that 90 students were from Bachelor's level, 110 students were from Master's level and 80 students were from PhD level.

First of all, negative mental health impacts can be compared.

Based on gender, it has been observed that majority (56%) of the female participants felt horrified due to the COVID-19 and majority (58.3%) of the male participants felt excessive financial stress due to COVID-19. Moreover, majority of female participants felt excessive financial stress and excessive stress from home (55% and 51% respectively). However, the majority of female participants did not feel stress from study, helpless and apprehensive. In case of male participants, though majority of the participants felt excessive stress from home, felt horrified and helpless, still majority did not feel excessive stress from study and apprehensive.

Based on age group, it has been observed that majority (59.2%) of the participants whose age was within 18 to 30 years old felt helpless due to COVID-19. Moreover, majority of 18 to 30 years old participants felt horrified, felt increment of financial stress and stress from home whereas majority did not feel apprehensive and did not feel increment of stress from study. But in case of 31 to 40 years age group, maximum (66.7%) participants reported increment of stress from home. Furthermore, majority of 30 to 40 years old participants felt horrified and felt increment of financial stress whereas majority did not feel stress from study, did not feel helpless and apprehensive. Again, in case of 41 to 50 years old, majority (64%) reported that they felt horrified due to COVID-19. Majority of same group also reported that they felt helpless but majority did not feel apprehensive, did not feel increment of financial stress, stress from study and home. Moreover, in case of more than 50 years age group, maximum (55%) participants reported increment of financial stress. However, majority of the same age group neither felt horrified, helpless and apprehensive nor felt increment of stress from study and home.

Based on education status, it has been observed that majority (60%) of the participants from Bachelor's level felt helpless due to COVID-19. Majority of the same level also reported increment of financial stress, increment of stress from home and felt horrified but majority did not feel increment of stress from study and did not feel apprehensive. On the other hand, maximum master's level participants (55.5%) reported increment of stress from home. Majority of the same level also reported increment of financial stress but majority did not feel increment stress from study and did not feel horrified, helpless and apprehensive. On the contrary, maximum participants (58.8%) from PhD level felt increment of financial stress due to COVID-19. Moreover, majority of the same level felt horrified and helpless but did not feel apprehensive and did not feel increment of stress from study and home.

Secondly, activities to overcome loneliness or boringness can be compared.

Based on gender, it has been observed that majority (65%) of the female participants used social media more to overcome loneliness or boringness. Similarly, maximum (61.7%) of the male participants reported that they used social media more. Though majority of female participants watched movie/ drama/ YouTube, attended various online competitions and played online and mobile games, majority did not attended online courses and did not performed physical exercise. Moreover, majority of male participants played online and

mobile games and performed physical exercise. However, the majority of male participants did not watch movie/ drama/ YouTube, did not attended online courses and various online competitions.

Based on age group, it has been found that majority (71.5%) of the participants within 18 to 30 years old used social media more. Moreover, majority of same age group attended various online competitions, played online and mobile games and performed physical exercise but majority of them did not watch movie/ drama/ YouTube and did not attend online courses. But in case of 31 to 40 years age group, maximum (71.7%) reported that they watched movie/ drama/ YouTube. Moreover, majority of same age group utilized social media more, attended online course, played online and mobile games and performed physical exercise but did not attend various online competitions. Again, in case of 41 to 50 years old, majority (58%) reported that they played online and mobile games and also 58% from the same age group reported that they performed physical exercise. Additionally, majority of the participants of the same age group reported that they utilized social media more and watched movie/ drama/ YouTube but majority did not attend online courses and various online competitions. Moreover, in case of more than 50 years old group, maximum (57.5%) reported that they watched movie/ drama/ YouTube. However, majority did not utilized social media more, did not attend online courses and various online competitions, did not played online and mobile games and did not perform physical exercise.

Based on education status, it has been found that majority (75.6%) of the participants from Bachelor's level used social media more. Moreover, majority of the same level attended various online courses, played online and mobile games and performed physical exercise but majority did not watch movie/ drama/ YouTube and did not attend online courses. Similarly, maximum master's level participants (60%) reported that they used social media more. Majority of the same level also watched movie/ drama/ YouTube, attended online courses and performed physical exercise but majority did not attend various online competitions and did not play online and mobile games. On the other hand, maximum participants (65%) from PhD level watched movie/ drama/ YouTube. Majority of the same level also utilized social media more, played online and mobile games and performed physical exercise but majority did not attend online courses and various online competitions.

The study is one of the investigations in order to find out the harmful effects caused by the COVID-19 pandemic on mental health of Bangladeshi International student of Malaysia. Though concerned authority is very alarming and trying to take necessary steps, the pandemic is still increasing and more countries are affected which make the participants horrified. Due to locked down condition, income becomes difficult that's why financial stress has been arisen. As the parents and relatives of the participants are living in other countries and whole world have been affected by the COVID-19 pandemic, that's why participants also feeling stress. As no vaccine has been discovered yet in order to tackle COVID-19 virus, participants are feeling helpless.

CONCLUSION

As COVID-19 is a global issue, appropriate steps should be taken as early as possible. More research should be conducted regarding mental health impact and possible solution. Hopefully, it will ease to provide fruitful information especially for the community health workers with a view to helping them tackle these psychological fitness related issues in response to other similar societal disasters. After the pandemic, follow-up should be made in order to improve mental health.

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