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THE IMPACTS OF COVID ON MENTAL WELLBEING: AN EMPIRICAL STUDY ON STUDENTS AT TERTIARY LEVEL OF BANGLADESH

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ABSTRACT

The aim of this paper is to find out the mental status of the final year Business School students who have started exploring the job market, when the overall state of mental wellbeing of the students all over the world has been deteriorating due to the massive impacts of COVID-19 pandemic. To collect data Standard Google form and to measure mental status of the respondents the 14-items Warwick-Edinburgh Mental Well-being Scale (WEMWBS) were used. A left skewed distribution of WEMWBS score indicated poor mental states of the students in general. The overall females' score is less than males' score, which can be attributed to our patriarchal culture. Nonetheless, with the Spearman's Rank Correlation test, it is seen that many of the variables are strongly correlated with each other. The result of this paper may direct the corporate policy makers to develop some policies for this target audience.

Key Words: COVID-19, Mental status, Mental Wellbeing Stress, Warwick-Edinburgh Mental Well-being Scale.

1. INTRODUCTION

People all over the world have been experiencing devastating impacts of COVID-19, since it has been first reported from Wuhan, China on 31 December, 2019 (Wang et. al., 2020). In Bangladesh, COVID-19 case was first reported on March 8, 2020 (WHO, 2020), and the country announced emergency lockdown since March 26, 2020. Students all over the country have been maintaining social and physical distance since then (WHO, 2020). Though people are trying to adjust with the "new normal", the overall Mental Wellbeing (MWB) condition of the society is deteriorating continuously. A pandemic can have negative impacts on individuals as well as economies and societies (Macintyrea, 2020). Shigemura et. al., (2020) conduct a research in Japan with a target population and found negative consequences. According to (Worldometer, 2020), Coronavirus is the third deadliest pandemic people are facing all over the world. American Psychiatric Association (Worldometer, 2020) conducted a research in America, and found that 59% people felt that the virus has affected their daily lives, and 57% adults believed that they will be financially affected because of the coronavirus, will have serious negative impacts on their economic activity, whereas 36% Americans reported that coronavirus has had severe impacts on their MWB. People are also more likely to suffer from psychological distress such as, stress, anxiety, clinical depression, etc.

This pandemic has had severe impacts on the education system of Bangladesh as well. Students who were supposed to end their higher education and look for their preferable jobs are now living in anxiety fearing future unemployment, as lots of organizations had to reduce their operations here, and in some cases, shutdown. Many companies had to revise their human resource planning to adapt and survive. Layoffs,

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pay-cuts, and freezing for an uncertain period have become the common words uttering in everywhere. It is a reality that unemployment is associated with mental illness (Kasl and Jones, 2000). The reasons behind negative correlation between unemployment and physical & mental health are: (i) ill workers are more likely to lose jobs (Böckerman and Ilmakunnas 2009; García-Gomez et al. 2010), (ii) poor health causes long term unemployment (Stewart 2001), and (iii) unemployment itself can lead to a worsening of physical and mental health.

There are lots of researches have been found on mental well-being of people, very few researches have been done in the light of young generation, particularly who are at their final stage of education at business school and at the same time searching jobs. They are passing through uncertainty as because of delay in all process of classes, exams on one hand and job cut on the other hand. That is why their MWB should not be overlooked anymore. The focus of this study is measurement of MWB of under-graduate and graduate level students of Bangladesh who are in the final stage of their education and at the same time searching for employment. The result of this research may direct the policy makers both at tertiary level of education and at corporate level to develop some policies to understand and support this target audience.

2. RESEARCH QUESTION AND OBJECTIVES

It is assumed that COVID-19 has impacted the MWB of students. Thus, the research question of this paper is: what is the status of Mental-Wellbeing (MWB) of students at the time of COVID-19 in Bangladesh?

Following the research question, the objective of this paper is to know the status of MWB of students at the time of COVID-19, who are currently working or searching for jobs at different organizations. The specific objectives of this research paper are as follow:

- To analyze the current state of MWB of final year students at tertiary level.
- To determine the factors under WEMWB Scale which have major impacts on students during COVID-19.
- To determine whether gender has any influence on the MWB of students.
- To find out the correlations among different factors responsible for students' MWB under WEMWS.

3. RESEARCH HYPOTHESES

A hypothesis is a tentative statement about the relationship between two or more variables. It is formulated based on research question or research objective. The main research objective of this paper is to know the status of Mental-Wellbeing (MWB) of both male and female students at the time of COVID-19 in Bangladesh. In our patriarchal culture, it is theoretical that female go through more stress than their male counterpart and the status of mental well-being is different for them. Therefore, it is important to test the validity of this concept.

Thus the main hypothesis of this study is:

H0_covid: The mean value for all factors under WEMWBS is not equal for male and female students.
As WEMWBS consists of 14-items (factors scale) scale, 14 working hypotheses have been developed to support the main hypothesis.

4. LITERATURE REVIEW

Society often thinks of health as something biological and physical. A key component of health missing over here is MWB (Peterson, 2019), which is also an integral part of our overall wellbeing. It is important at every stage of our life, starting from childhood to adulthood (Mental health.gov, 2020). Even though, MWB does not have any operational definition yet, two approaches are used to understand MWB (Dodge et al. 2012) are: (i) the hedonic perspective which highlighted individual happiness and life satisfaction, that is, presence of positive affect, where 'affect' refers to pleasant and unpleasant moods and emotions; and (ii) the eudemonic perspective, which is an individual's ability to realize their own unique potential, such as positive psychological functioning, good relationships with others and self-realization (Janmohamed & Brown, 2008, Carruthers and Hood, 2004, Deci and Ryan, 2008). Keyes & Lopez, (2002) consider five social dimensions of wellbeing, such as: socially accepting others, creating positive comfort level for the society, contribution for the society, social unity, and feeling included in the society.

Most researchers now believe that MWB is a multi-dimensional construct (Michaelson, et. al., 2009; Stiglitz, et. al., 2009; Diener, E., & Suh, E., 1997), and it is more than just happiness, and contributing to the community (Shah and Marks, 2004). According to the World Health Organization (WHO, 2004), MWB is a state in which every individual realizes his or her own potential and can contribute to his or her community by coping with the normal stresses of life. MWB can be both positive and negative. Negative MWB is related with psychological distress, such as, depression and anxiety (Mirowsky & Ross, 2003; Payton, 2009); insomnia (Drapeau et. al., 2011; Marchand, 2004); mood disorder (Bonde, 2008); difficulty to cope with everyday responsibilities (Cummins et. al., 2015); in some cases, severe consequences like suicide (Beck & Alford, 2009).

To monitor the MWB of adults in Scotland, the Warwick-Edinburgh Mental Wellbeing scale was developed in 2006 led by Professor Stewart-Brown (2020) and supported by Professor Stephen Platt from the University of Edinburgh (NHS, 2006). The 14-items statements of WEMWBS was worded positively. The theoretical range of scores for WEMWBS is 14-70, with higher scores indicating a higher level of mental wellbeing (Stewart-Brown, n.d., 2020). This scale has been used widely for measuring MWB in adults in different countries. A Study conducted by Bianca (2012) at University of Bologna and found that students less than 40 score were probably depressed, and score between 40 - 44 are possibly depressed.

Recently, at the time of COVID-19, researchers all over the world, tried to work on MWB. A survey from Hubei province in China reported threefold cases of domestic violence since the pandemic started (Liu Y., 2020). The World Health Organization (2020) has emphasized on physical wellbeing as well as MWB, as people have started to maintain physical and social distance with their family members, and friends; students have started online classes, employees have started working from home (Brown, S. S. & Janmohamed, K. 2020). Staying in front of the screen for a longer than average period of time is likely to cause mental impacts due to boredom and repetitiveness. This is a new reality for everyone. Warwick Medical School (2020), WHO (2020), and Worldometer (2020) also tried to find out the psychological impacts of quarantine, and ways of reducing it by using WEMEBS.

A survey was done by NUS in 2015 on students related with unemployment issue and found that 78% of students in both further and higher education have felt stressed; 77% have suffered from anxiety and 33% have had suicidal thoughts in London. Mental health was shown to be a consequence of risk factor for unemployment (Olesen et. al., 2013) also. The major consequences during a pandemic identified by

researchers are: (i) risk of infection, thus search for physical safely (Brooks et. al., 2020; Xiang et. al., 2020); (ii) unfamiliar diseases, thus not knowing probable solutions (Gao et. al., 2020; Garfin et. al., 2020); (iii) living in isolation (Qiu et. al., 2020; Wang et. al., 2020); (iv) social distancing (Xiang et. al., 2020) and (v) lastly, financial loss and job insecurity (Zhou et. al., 2020).

At this moment, students all over the world are in anxiety, as the world economy is heading straight to a recession due to the pandemic. Students who are graduating now, or have graduated recently are concerned about their future and fear about long time unemployment. In Bangladesh, still no research has been done in this pandemic situation so far on students to see their mental well-being score when they are searching jobs. Thus, the aim of this paper to see the status of mental well-being of the students of business at tertiary level.

Gender and MWB

Women in Bangladesh today have come a long way, since independence, and have proved their credibility in every sphere of life beside male counterparts, starting from school to workplace. However, women still face difficulties in balancing their own demand and the demand from their families and society, which may deteriorate their MWB. Moreover, the factors responsible for MWB may not be the same for men and women because of the nature of the roles played by them in a society.

5. RESEARCH METHODOLOGY

Variables for the study were identified based on literature review. For quantitative analyses, a questionnaire survey was done on MBA students at two public universities in Dhaka. The primary goal of this research was to focus on the mental state of final year students. The population of this study was final year students of these two public universities. Participants were initially briefed on the aims and objectives of the study, and informed about its confidential, anonymous and voluntary nature through online classes. The link to the questionnaire was sent to the participants, and they were allowed to complete the questionnaire within 20 minutes. The participation rate for of the students was 100%. The secondary data were taken from journals, websites and other references.

Responses were collected from 196 MBA students (125 male students and 71 female students), aged 24 to 30, who are in the last semester of their MBA program, and looking for job. A few of them have already joined different organizations. However, majority of them is facing job insecurity. The following table shows respondents' gender-based profile:

Table 1: Respondent's Gender-based profile

		Number of respondents
Gender	Male	125 (63.78%)
	Female	71 (36.22%)

The study used Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) developed by Professor Sarah Stewart-Brown and supported by Professor Stephen Platt from the University of Edinburgh (2006). In 2005, NHS Health Scotland provided the funding to develop this scale for improving and mental health and well-being in Scotland.

WEMWBS has two scales: the original 14-items scale and the short 7-items scale. The scales have been validated for use in: (i) a wide variety of different geographical locations regardless of their language and cultural contexts, and (ii) many different settings, such as, workplace, schools, health services and community.

The instrument consists of 14-items scale (Table 1 in Appendix) with 5 response categories, summed up to provide a single score. These items are worded positively and cover both feeling and functioning aspects of MWB. The respondents were asked to mark the scale (1-5), which best describes their experience over the last 2 weeks from that specific time. The theoretical range of scores for WEMWBS is 14-70, with higher scores indicating a higher level of MWB. Respondents indicated their level of agreement using a 5-point Likert scale ranging from 1 (1= strongly disagree) to 5 (5= strongly agree). All the items were coded at the time of analysis as shown in Table 2.

Table 2: Factors Responsible for Student's MWB under WEMWBS

Factors and Items		Factors and Items		Factors and Items	
F1	Feeling Cheerful	F2	Feeling Close to Others	F3	Feeling Confident
F4	Dealing Problems Well	F5	Feeling Good about Own-self	F6	Can make-up Own Mind
F7	Interested for Others	F8	Feeling Loved	F9	Interested in New Things
F10	Optimistic about Future	F11	Feeling Relaxed	F12	Have Energy to Spare
F13	Can Think Clearly	F14	Feeling Useful		--

For the study, both descriptive and inferential analyses have been used. Descriptive analysis (mean) has been used to measure MWB and the Independent Samples T- test has been used for hypotheses testing. A bivariate analysis was also done to find correlations among the 14 factors of MWB.

6. FINDINGS AND ANALYSIS

6.1 Reliability Test

Cronbach's alpha is used to test the reliability of the instruments used. Empirically, alpha can take on any value less than or equal to 1, including negative value. Some researchers suggested that generally, a social science research requires a reliability of 0.70 (Kothari, 1990). The value of Cronbach's Alpha for the questionnaire used in this research is 0.72989 for 14 items.

Table 3: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.73989	0.73989	14

6.2 Descriptive Analysis

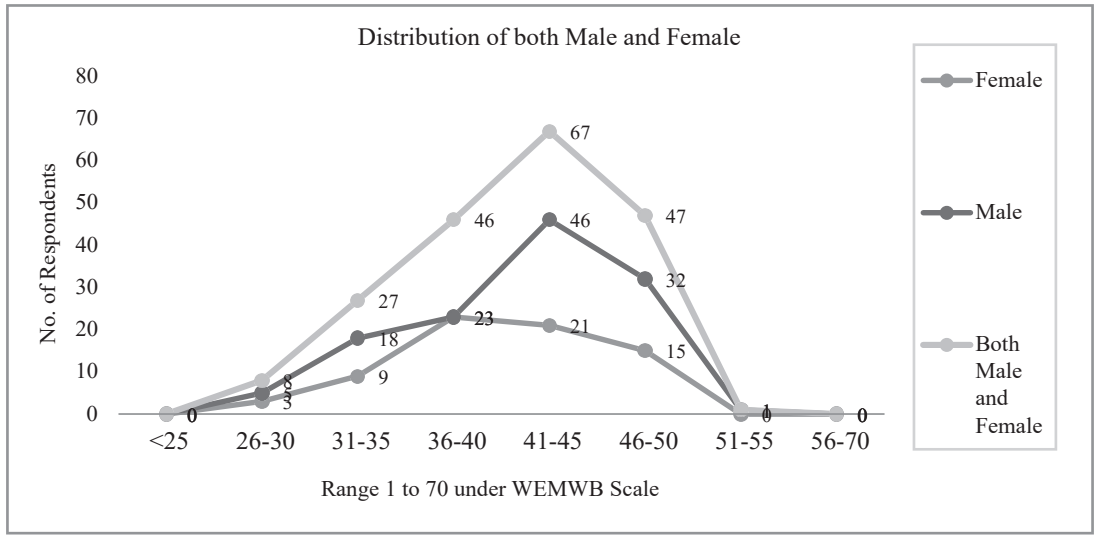
The theoretical range of scores for WEMWBS is 14-70, with higher scores indicating a higher level of MWB. Respondents indicated their level of agreement using a 5-point Likert scale ranging from 1 (1= strongly disagree) to 5 (5= strongly agree).

Table 4: Average Score of the Respondents under WEMWBS

Range	Both Male and Female	Percentage of total	Male	Percentage of male	Percentage of total	Female	Percentage of female	Percentage of total	
<25	0	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	81
26-30	8	4.08%	5	4.00%	2.55%	3	4.23%	1.53%	
31-35	27	13.78%	18	14.40%	9.18%	9	12.68%	4.59%	
36-40	46	23.47%	23	18.40%	11.73%	23	32.39%	11.73%	
41-45	67	34.18%	46	36.80%	23.47%	21	29.58%	10.71%	67
46-50	47	23.98%	32	25.60%	16.33%	15	21.13%	7.65%	48
51-55	1	0.51%	1	0.80%	0.51%	0	0.00%	0.00%	
56-70	0	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	
Total	196	100.00%	125	100%	63.78%	71	100%	36.22%	196

*Cutoff Point= 44/14= 3.1429, 40/14=2.875

According to this scale, scoring less than 40 (average mean= 2.85) indicates "probably depressed", and scoring between 40- 44 (average mean is between 2.85- 3.14) indicates "possibly depressed". Among the 196 students, 67 students' scores were between 41-44, who are "possibly depressed", and 81 students' scores were less than 40, which indicates that they are "probably depressed". Only one student's (male) score was found to be between 51-55. No the score was more than 55 (3.92 out of 5). According to this WEMWBS, the majority of these students are either depressed, or pessimistic about life (Table 4).



From this descriptive analysis (Table 5), the mean value for all the students is 2.942 (41.188 out of 70), for the males it is 2.958 (41.412 out of 70), and for the females it is 2.913 (40.782 out of 70). In majority of the cases, values are less than 2.85, and in only four cases, the values are more than 3.14. According to WEMWBS, scoring less than 2.85 are "probably depressed", and scoring between 2.85- 3.14 are "possibly depressed". That means, students are confident to deal with problems, or are interested in new things, or have energy to spare, but are not optimistic about their future. Students are not feeling cheerful or feeling close to others. It is very alarming for the young generation (aged between 24 to 30) who should be what does this mean confident about their future (2.368), should feel good about themselves (2.48), should be able to make up their own mind (2.488), can think clearly (2.472), etc. Again, 21.13% of females scored above the cut-off point, whereas it is 24.49% for the males.

Table 5: Individual Score under WEMWBS

Factors of MWB		Male		Female		Both	
		Average	Std. dev	Average	Std. dev	Average	Std. dev
F1	Feeling Cheerful	2.792	0.836	2.873	0.716	2.821	0.793
F2	Feeling Close to Others	2.872	0.933	3.042	0.901	2.934	0.923
F3	Feeling Confident	2.544	0.828	2.521	0.808	2.536	0.819
F4	**Dealing Problems Well**	**3.736**	**0.637**	**3.268**	**0.696**	**3.566**	**0.695**
F5	Feeling Good about Own-self	2.48	0.858	2.62	0.884	2.531	0.868
F6	Can make-up Own Mind	2.488	0.819	2.549	0.842	2.51	0.826
F7	Feeling Interested for Others	3.056	0.776	2.761	0.836	2.949	0.809
F8	**Feeling Loved**	**3.16**	**0.837**	**3.31**	**0.748**	**3.214**	**0.807**
F9	**Interested in New Things**	**3.816**	**0.409**	**3.451**	**0.604**	**3.684**	**0.518**
F10	Optimistic about Future	2.368	0.828	2.746	0.84	2.505	0.85
F11	Feeling Relaxed	2.936	0.716	2.887	0.785	2.918	0.74
F12	**Have Energy to Spare**	**3.648**	**0.663**	**3.282**	**0.614**	**3.515**	**0.668**
F13	Can Think Clearly	2.472	0.848	2.493	0.734	2.48	0.807
F14	Feeling Useful	3.048	0.851	2.986	0.686	3.026	0.794
Average		**2.958**	**0.408**	**2.913**	**0.365**	**2.942**	**0.393**
Total		**41.416**	**5.711**	**40.789**	**5.116**	**41.189**	**5.498**

Gender and WEMWB Scale

From the descriptive analysis (Table 5), we may conclude that factors accountable for students MWB are mixed between male and female in majority of the cases, though average score (2.913) of female is less than average score (2.958) of male. Among the 14 factors of the WEMWB scale, females scored less in cases of feeling confident, dealing with problems well, feeling interested for others, feeling relaxed, having energy to spare, and feeling useful.

6.3 Hypotheses Testing

The analysis of major hypotheses of this research is: H0_gender: Mean value of MWB is equal for both males and females.

Wellbeing consisted of 14 factors, thus, 14 working hypotheses have been developed to support the main hypothesis. These hypotheses have been tested by using Independent sample T-test (Table 6 and Appendix 2).

Assuming equal variance, the value of t-test is 0.000 (<0.05) for 'Dealing with problems well'; the value of t-test is 0.014 (<0.05) for 'Interested for others'; the value of t-test is 0.000 (<0.05) for 'Interested in new things'; the value of t-test is 0.003 (<0.05) for 'Optimistic about future'; and the value of t-test is 0.000 (<0.05) for 'Have energy to spare'. Hence, we rejected the null hypothesis at 5% level of significance for these five hypotheses.

Thus, the mean value of 'Dealing problems well'; 'Interested for others'; 'Interested in new things'; 'Optimistic about future'; and 'Have energy to spare' do not equal for all male and female.

Table 6: Summary Table Independent Samples Test

Factors responsible	Assumption of variances	LTEV*		t-test for Equality of Means					
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval	
								Lower	Upper
Dealing with Problems Well (F6)	EVA	6.662	**.011**	-4.784	194	**.000**	-.4684	-.6615	-.2753
	EVNA			-4.668	135.139	.000	-.4684	-.6668	-.2700
Interested in Others (F4)	EVA	3.814	.052	-2.491	194	**.014**	-.2954	-.5293	-.0616
	EVNA			-2.440	136.731	.016	-.2954	-.5349	-.0560
Interested in New Things (F13)	EVA	44.133	**.000**	-5.029	194	**.000**	-.3653	-.5086	-.2220
	EVNA			-4.536	107.096	.000	-.3653	-.5250	-.2056
Optimistic about Future (F1)	EVA	.244	.622	3.059	194	**.003**	.3785	.1344	.6225
	EVNA			3.046	143.839	.003	.3785	.1329	.6241
Have Energy to Spare (F5)	EVA	.002	.967	-3.818	194	**.000**	-.3663	-.5556	-.1777
	EVNA			-3.900	155.096	.000	-.3663	-.5519	-.1808

** LTEV means Levene's Test for Equality of Variances.*

*** EVA= Equal variances assumed; and EVNA= Equal variances not assumed*

6.4 Bivariate Correlation Analysis

A bivariate correlation analysis was also done among 14 factors of MWB among students at the 0.05 and 0.01 level of significance. Details of the analysis have been presented in Appendix 3. Correlation also has been found significant (at the 0.01 level) between different factors of MWB (Table 8). All the 14 factors are positively correlated with other factors in most of the cases. No cases have been found negatively correlated here.

Table 7: Summary Table of Correlation at 0.01 Level of Significance

X=Pearson Correlation, Y=Sig. (2-tailed)		**Pearson's Correlations**													
		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14
F1	X	1	.376**	.306**		.421**			.252**		.188**	.255**			.309**
	Y		.000	.000		.000			.000		.008	.000			.000
F2	X		1	.475**		.223**	.146*	.394**	.467**		.226**	.247**	.205**	.160**	
	Y			.000		.002	.042	.000	.000		.001	.000	.004	.025	
F3	X			1		.536**	.231**	.274**	.322**	.184**	.302**	.259**	.158*	.370**	.405**
	Y					.000	.001	.000	.000	.010	.000	.000	.027	.000	.000
F4	X				1	.237**							.186**		
	Y					.001							.009		
F5	X					1	.221**		.298**	.147*	.267**	.260**		.484**	.345**
	Y						.002		.000	.040	.000	.000		.000	.000
F6	X						1		.266**		.193**				.105*
	Y								.000		.007				.142
F7	X							1	.315**	.194**					.226**
	Y								.000	.006					.001
F8	X								1	.212**	.275**	.253**	.298**	.298**	.392**
	Y									.003	.000	.000	.000	.000	.000
F9	X									1			.296**		
	Y												.000		
F10	X										1			.228**	.247**
	Y													.001	.000
F11	X											1		.289**	.274**
	Y													.000	.000
F12	X												1	.053*	.159**
	Y													.461	.026
F13	X													1**	.189*
	Y														.008
F14	X														.1**
	Y														

** Correlation is significant at 0.05 level (2-tailed); and ** Correlation is significant at 0.01 level (2-tailed).*

Correlation at 0.05 level of Significance: Correlation has been found significant (at the 0.05 level) and positive between:

- 'Feeling Cheerfulness (F1)' and 'Have Energy to Spare (F12)';
- 'Feeling Close to others (F2)' and Can make-up Own Mind (F6)';
- 'Feeling Close to others (F2)' and 'Can Think Clearly (F13)';
- 'Feeling Confident (F3)' and 'Have Energy to Spare (F12)';
- 'Feeling Good about Own-self (F5) and 'Interested in New Things (F9); and
- 'Feeling Useful (F14)' and 'Have Energy to Spare (F12)'.

Table 8: Summary Table of Correlation at 0.05 Level of Significance

X=Pearson Correlation, Y=Sig. (2-tailed)		**Pearson's Correlations**								
		F1	F2	F3	F5	F6	F9	F12	F13	F14
F1	X	1						.165*		
	Y							.021		
F2	X		1			.146*			.160*	
	Y					.042			.025	
F3	X			1				.158*		
	Y							.027		
F5	X				1		.147*			
	Y						.040			
F6	X		.146*			1				
	Y		.042							
F9	X				.147*		1		.168*	
	Y				.040				.018	
F12	X	.165*		.158*				1		.159*
	Y	.021		.027						.026
F13	X		.160*						1**	
	Y		.025							
F14	X							.159*		.1**
	Y							.026		

** Correlation is significant at 0.05 level (2-tailed); and ** Correlation is significant at 0.01 level (2-tailed)*

7. CONCLUSION

In Bangladesh, we lack knowledge about psychological aspects of people and we also emphasize less on MWB. It is pay attention to improve the MWB of students, who are the future leaders of this ever-growing country. According to Buchanan JL. (2012) university students are a special group of people who are going through a critical transitory period, when they are growing up from adolescence to adulthood. This can be one of the most stressful time in a person's life. This stress is much higher at the time of COVID-19. There is evidence to suggest that investment in wellbeing of people improves productivity for the wider society (Coast and Max, 2005; Dunham, 2001). Therefore, we should observe MWB and support mental well-being. Xiang et al. (2020) suggested timely mental health care during COVID-19 through telemedicine (Qiu et. al., 2020) and counselling by describing what is happening and what to do in that situation (Brooks et. al., 2020).

In this research it is marked to have mental stress in all students at business school. When they need to nurture their brain child of innovation, they are suffering to live their life. Students those are only earning member of their family are suffering from physical illness too. On average all student's mental well-being score is less than average. At this time positive it is very important for all policy makers to understand their need and to develop all policies considering these new generations too. Positive attitude from policy makers related with tertiary level and corporate level is very important and expected for the positive psychological health of this group. Exposure to positive news/events brings up a progressive psychological attitude. Family members and seniors must expose a favorable and positive attitude towards young generation. Sometimes online counselling also may work. In Ireland online counselling has increased by 10 times (Tarlton, 2020). A fearless, friendly, and affirmative environment is required for the students to stay positive and happy. Mass Media can improve MWB by spreading more positive news and events, instead of highlighting news that disseminates fear and anxiety.

Target audience of this article is predominantly students of tertiary level. Future researchers may focus on students of school and college level. Future studies may focus on different contingencies related with mental well-being rather than only 14-items of the Warwick–Edinburgh Mental Well-being Scale (WEMWBS) to minimize the gap of theoretical and practical aspects of mental well-being.

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Appendices

Appendix 1 : The Warwick–Edinburgh Mental Well-being Scale (WEMWBS)

Sl. No.	STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
1.	I've been feeling optimistic about the future	1	2	3	4	5
2.	I've been feeling useful	1	2	3	4	5
3.	I've been feeling relaxed	1	2	3	4	5
4.	I've been feeling interested in other people	1	2	3	4	5
5.	I've had energy to spare	1	2	3	4	5
6.	I've been dealing with problems well	1	2	3	4	5
7.	I've been thinking clearly	1	2	3	4	5
8.	I've been feeling good about myself	1	2	3	4	5
9.	I've been feeling close to other people	1	2	3	4	5
10.	I've been feeling confident	1	2	3	4	5
11.	I've been able to make up my own mind about things	1	2	3	4	5
12.	I've been feeling loved	1	2	3	4	5
13.	I've been interested in new things	1	2	3	4	5
14.	I've been feeling cheerful	1	2	3	4	5

Appendix 2 : Independent Samples Test

Factors responsible	Assumption of variances	LTEV*		t-test for Equality of Means					
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval Difference	
								Lower	Upper
Feeling Cheerful (F1)	EVA	5.003	.026	.688	194	.492	.0812	-.1516	.3141
	EVNA			.718	164.645	.474	.0812	-.1422	.3046
Feeling Close to Others (F2)	EVA	.059	.808	1.234	194	.215	.1703	-.0999	.4404
	EVNA			1.255	149.81	.211	.1703	-.0978	.4383
Feeling Confident (F3)	EVA	.044	.835	-.188	194	.851	-.0229	-.2635	.2177
	EVNA			-.189	148.544	.851	-.0229	-.2623	.2166
Dealing_Problems Well (F4)	EVA	6.662	.011	-4.784	194	.000	-.4684	-.6615	-.2753
	EVNA			-4.668	135.139	.000	-.4684	-.6668	-.2700
Feeling Good about Ownself (F5)	EVA	.118	.731	1.084	194	.280	.1397	-.1145	.3939
	EVNA			1.075	141.914	.284	.1397	-.1172	.3967
Can make-up Own Mind (F6)	EVA	.142	.707	.499	194	.619	.0613	-.1812	.3038
	EVNA			.495	142.360	.621	.0613	-.1836	.3062
Interested for Others (F7)	EVA	3.814	.052	-2.491	194	.014	-.2954	-.5293	-.0616
	EVNA			-2.440	136.731	.016	-.2954	-.5349	-.0560
Feeling Loved (F8)	EVA	2.016	.157	1.251	194	.212	.1497	-.0863	.3861
	EVNA			1.291	159.369	.199	.1161	-.0795	.3792
Interested in New Things (F9)	EVA	44.133	.000	-5.029	194	.000	-.3653	-.5086	-.2220
	EVNA			-4.536	107.096	.000	-.3653	-.5250	-.2056
Optimistic about Future (F10)	EVA	.244	.622	3.059	194	.003	.3785	.1344	.6225
	EVNA			3.046	143.839	.003	.3785	.1329	.6241
Feeling Relaxed (F11)	EVA	2.675	.104	-.442	194	.659	-.0487	-.2660	.1686
	EVNA			-.431	134.771	.667	-.0487	-.2722	.1748
Have Energy to Spare (F12)	EVA	.002	.967	-3.818	194	.000	-.3663	-.5556	-.1777
	EVNA			-3.900	155.096	.000	-.3663	-.5519	-.1808
Can Think Clearly (F13)	EVA	2.118	.147	.174	194	.862	.0210	-.2161	.2580
	EVNA			.181	163.301	.856	.0210	-.2072	.2491
Feeling Useful (F14)	EVA	10.083	.002	-.525	194	.600	-.0621	-.2952	.1710
	EVNA			-.557	171.637	.578	.0621	-.2821	.1579
Total	EVA	.582	.446	-.767	194	.444	-.6273	-2.2404	.9858
	EVNA			-.791	159.162	.430	-.6273	-2.1942	.9397

**LTEV means Levene's Test for Equality of Variances.*

***EVA= Equal variances assumed; and EVNA= Equal variances not assumed*

Appendix 3 : Correlation Matrix

X=Pearson Correlation, Y=Sig. (2-tailed)		**Pearson's Correlations**													
		F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14
F1	X	1	.376**	.306**	-.104	.421**	.132	.082	.252**	.074	.188**	.255**	.165*	.215	.309**
	Y		.000	.000	.147	.000	.065	.255	.000	.303	.008	.000	.021	.003	. 000
F2	X	.376**	1	.475**	.003	.223**	.146*	.394**	.467**	.085	.226**	.247**	.205**	.160**	.247*
	Y	.000		.000	.968	.002	.042	.000	.000	.239	.001	.000	.004	.025	.000
F3	X	.306**	.475**	1	-.022	.536**	.231**	.274**	.322**	.184**	.302**	.259**	.158*	.370**	.405**
	Y	.000	.000		.757	.000	.001	.000	.000	.010	.000	.000	.027	.000	.000
F4	X	-.104	.003	-.022	1	.237**	-.006	-.067	.057	.116	-.139	-.029	.186**	-.084	.132
	Y	.147	.968	.757		.001	.937	.351	.429	.107	.051	.683	.009	.239	.066
F5	X	.421**	.223**	.536**	.237**	1	.221**	.112	.298**	.147*	.267**	.260**	.092	.484**	.345**
	Y	.000	.002	.000	.001		.002	.118	.000	.040	.000	.000	.199	.000	.000
F6	X	.132	.146*	.231**	-.006	.221**	1	.131	.266**	.044	.193**	.119	-.079	.208	.105*
	Y	.065	.042	.001	.937	.002		.066	.000	.545	.007	.097	.269	.003	.142
F7	X	.082	.394**	.274**	-.067	.112	.131	1	.315**	.194**	.105	.079	.106	.187	.226**
	Y	.255	.000	.000	.351	.118	.066		.000	.006	.144	.273	.139	.009	.001
F8	X	.252**	.467**	.322**	.057	.298**	.266**	.315**	1	.212**	.275**	.253**	.298**	.298**	.392**
	Y	.000	.000	.000	.429	.000	.000	.000		.003	.000	.000	.000	.000	.000
F9	X	.074	.085	.184**	.116	.147*	.044	.194**	.212**	1	.004	-.081	.296**	.168	.232
	Y	.303	.239	.010	.107	.040	.545	.006	.003		.959	.259	.000	.018	.001
F10	X	.188**	.226**	.302**	-.139	.267**	.193**	.105	.275**	.004	1	.123	-.081	.228**	.247**
	Y	.008	.001	.000	.051	.000	.007	.144	.000	.959		.086	.257	.001	.000
F11	X	.255**	.247**	.259**	-.029	.260**	.119	.079	.253**	-.081	.123	1	.013	.289**	.274**
	Y	.000	.000	.000	.683	.000	.097	.273	.000	.259	.086		.857	.000	.000
F12	X	.165*	.205**	.158*	.186**	.092	-.079	.106	.298**	.296**	-.081	.013	1	.053*	.159**
	Y	.021	.004	.027	.009	.199	.269	.139	.000	.000	.257	.857		.461	.026
F13	X	.215**	.160*	.370**	-.084	.484**	.208**	.187**	.298**	.168*	.228**	.289**	.053	1**	.189*
	Y	.003	.025	.000	.239	.000	.003	.009	.000	.018	.001	.000	.461		.008
F14	X	.309**	.247**	.405**	.132	.345**	.105	.226**	.392**	.232**	.247**	.274**	.159*	.189**	.1**
	Y	.000	.000	.000	.066	.000	.142	.001	.000	.001	.000	.000	.026	.008	

**. Correlation is significant at the 0.05 level (2-tailed); and*

***. Correlation is significant at the 0.01 level (2-tailed)*

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