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**Report on: An Evaluation of Functional and Economical Crisis in  
Bangladesh Due to Covid-19**

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# 1 Abstract

The unfold of the COVID-19 pandemic, the partial lockdown, the ailment intensity, susceptible governance withinside the healthcare system, inadequate clinical facilities, unawareness, and the sharing of incorrect information withinside the mass media has brought about human beings experiencing worry and anxiety. The gift examine meant to behavior a perception-primarily based totally evaluation to get an concept of human beings's psychosocial and socio-financial crisis, and the viable environmental crisis, amidst the COVID-19 pandemic in Bangladesh. A perception-primarily based totally questionnaire turned into placed on line for Bangladeshi residents of 18 years and/or older. The pattern length turned into 1,066 respondents. Datasets have been analyzed via a hard and fast of statistical strategies which includes predominant thing and hierarchical cluster evaluation.

## 2 Introduction

The novel Covid illness (COVID-19) started spreading in November 2019, in Wuhan, China. Following this, the World Health Organization (WHO) reported COVID-19 as a worldwide pandemic on March eleventh, 2020. Social separation, institutional and domestic isolate, social removing, and nearby area manipulate measures had been carried out immediately. Through fast regulatory activity and bringing issues to light for people on friendly removing, rigid advances were taken to deal with the spread of the illness by dropping huge number of areas that elaborate get-together including workplaces, homerooms, gathering focuses, clubs, transport administrations, and travel limitations, leaving numerous nations in complete lockdown. Nonetheless, a flood of COVID-19 episodes in every inhabitable mainland, with 84,187 passing's alone in the USA, shows that the contamination had passed the tipping point (1, 6). Today, as of the 26th of May 2020, absolute worldwide COVID-19 cases have ascended to 5,637,381, with the all-out number of passing's heightening to 3,49,291 (7). Bangladesh affirmed their first COVID-19 case on the eighth of March 2020 (9), trailed by a cross country lockdown from 26 March which had been expanded a few times until 30th May 2020 to forestall human transmission.

The IEDCR, under the Ministry of Health and Family Welfare (MFHW) and Directorate General of Health Services (DGHS), is liable for exploring epidemiological and transmittable sicknesses, for example, COVID-19 in Bangladesh. Although the quantity of research facilities for COVID-19 testing has expanded to 48, every one of these labs are in major metropolitan spaces of Bangladesh and to get tried requires long holding up hours. over 15 percent of those tried every day have tried as certain, and the proportion of testing is 1,620/1 million individuals. the medical care staff and specialists were given bad quality/no close to home defensive hardware (PPE) which has caused a high contamination rate among them. Additionally, as research facility staff, medical care staff, and specialists have gotten progressively contaminated, there is likewise a lack of particular prepared individual to perform COVID-19 tests, which means patient therapy will be upset. Thinking about the populace thickness, instructive status, social design, social standards, medical services limit, and frequently defective arrangements taken by the Government of Bangladesh, it is difficult to secure a nation of 165 million individuals.

### **3 Study Procedure**

To comprehend the conceivable psychosocial, financial, and natural effect of the COVID-19 flare-up in Bangladesh, we considered and distinguished a few pertinent and potential things dependent on the financial circumstance, political investigation, the current medical care framework, ecological examination, conceivable arising issues used from situation improvements, examination of neighborhood and worldwide reports of the COVID-19 pandemic from the print and electronic media, and a writing audit. We arranged the online-based poll through Google to work the study across the country. An initial section depicting the goal of the survey was imparted to the respondents through email and through friendly stages generally utilized by Bangladeshi gatherings on Facebook, Messenger, LinkedIn, and WhatsApp. The tests bunch was focused on thinking about Bangladeshi citizenship, their age, current exercises, occupation, social and monetary duties, and commitment identified with COVID-19 reaction, arranging, and policymaking. Following the expulsion of 16 fragmented polls, 1,066 reactions were at long last held for this examination.

Sector	Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	Mean
2*Mental health condition	2*I am afraid of outbreak of corona virus	2.9 -310	2*5 (53)	2*12.4 (132)	2*33.5 (357)	2*46.2(493)	2*4.152
	I am afraid of getting infected of corona virus	3.7 (39)	7.8 (83)	22.3 (238)	33.5(357)	32.7(349)	3.839
Health System in Bangladesh	System fragile due to outbreak of Corona virus	3.2 (34)	3.8 (41)	8.7 (93)	22.3 (238)	61.9(660)	4.359
	Lack of awareness	1.3 (14)	1.3 (14)	5.9 (63)	24.1 (257)	67.4 (718)	4.515
Govt and political issues	The Bangladeshi govt can deal with this out break	28 (299)	26.2(279)	21.9(233)	15 (160)	8.9 (56)	2.506
	Taking outbreak seriously	19.9 (212)	25.2 (269)	22.5 (240)	23.5 (251)	8.8(94)	2.762
Socio economic issue	Shut down or lock down of regular activities	1.5 (16)	1.2 (13)	4.8 (51)	27.4 (292)	65.1 (694)	4.534
	Social impact due to covid	1.1(12)	1.4 (15)	6.5 (69)	27.2(290)	63.8 (680)	4.511
Immediate emerging issues	Community transmission of covid 19	0.91	1.2 (13)	12.2 (130)	29.3 (312)	56.4 (601)	4.389
	Vast number people will be affected	1.2 (13)	3.5 (37)	16.9 (180 )	30.1 (321)	48.3 (515)	4.208

Table 1: Descriptive statistics and item-total correlation.

## 4 Data Analysis

An examination of psychometric qualities was remembered for the Classical Test Theory (CTT) investigation. A bunch of factual methods, including straight relapse investigation (LRA), head segment examination (PCA), and progressive group examination (CA), were applied to investigate the relationship between the things. PCA is an information decrease instrument that exhibits every possibility of boundaries and their certainty level in huge example datasets. Prior to directing the PCA, Kaiser-Maier-Olkin (KMO) and Bartlett's sphericity tests were applied to affirm the need of this investigation. The consequences of the KMO at  $\zeta 0.5$  (the KMO esteem was 0.931 in this work) and the meaning of Bartlett's sphericity test at  $p < 0.01$  upheld our datasets to be fitted for the PCA (16). The quantity of components picked depended on the Kaiser's rule, where the just factors with eigenvalues  $> 1.0$  were thought of. Cronbach's alpha was utilised to check the consistency and unwavering quality of the issue loadings during this investigation. Cronbach's alpha qualities at  $\zeta 0.06$  (the Cronbach's alpha worth was 0.896) are respected to be appropriate in sociology research (17). The CA is a pivotal method for recognizing relationship among numerous psycho social and ecological boundaries. CA helps to outline a populace into different gatherings dependent on a similar element of a bunch of the dataset that might uncover causes, impacts, and additionally the wellspring of any unidentified connections among the things. Moreover, progressive bunching was utilized to decide the plausible number of groups. Measurable Package for the Social Sciences (SPSS) v. 25.0 was utilized for the examination of the data-sets.

## **5 Morals Statement**

The assent of the respondents was taken before the study, and their namelessness was ensured. All the members were educated about the target of this investigation prior to continuing to the survey. Members had the option to finish the overview as it was

## **6 Demographic Information**

An aggregate of 1,066 (=n) reactions were recorded in this investigation. The extent of male to female respondents was 3:2 [males (n = 661; 61.5%) and females (n = 405; 38.5%). 75.2% (18–30 years of age), 16.7% (31–40 years of age), 6.7% (41–50 years of age), 1.1% (51–60 years of age), and 0.3% ( $\geq$ 60 years old). The normal age of the respondents was 27.80 years ( $SD \pm 10.05$ ). By and large, the respondents had 12.5 long stretches of formal instruction ( $SD \pm 8.1$ ). 60% of the young gathering were undergraduates or near the very edge of completing their investigations.

## **7 A Descriptive Overview of the People's Perception**

The expressive measurements containing the 46 assertions are displayed in Table 1. The classification of explanations was gathered as follows: Mental medical issue (MH) contained five articulations (MH1-5), the medical services arrangement of Bangladesh (HSB) included ten proclamations (HSB1-10), the administration and policy centered issues (GPI) involved 7 articulations (GPI1-7), the financial issues involved 11 proclamations (SEI1-11), the prompt arising issues included 7 proclamations (IEI1-7), and for suffering arising issues 6 explanations were thought of (EEI1-6). In the accompanying part of Mental Health Status, Healthcare System, Governance and Political Perspective, Socio-Economic Aspects, and Emerging Issues, we have examined the expressive insights.

## **7.1 Emotional well-being Status**

In the proclamation of "I'm anxious about the new flare-up of Covid in Bangladesh" (MH1) 46.2% of the respondents unequivocally concurred, followed with a mean of  $4.15 \pm 1.01$ . In the subsequent articulation (MH2), "I'm apprehensive about getting tainted with Covid" the distinction among emphatically concurred (32.7%) and concurred (33.5%) proclamation with a mean worth of  $3.89 \pm 1.08$ . For articulation three, 46.5% of the respondents emphatically consented to the (MH3) "I'm apprehensive about losing my life or my family members' life because of this flare-up" with a mean worth of  $4.08 \pm 1.08$ . In the fourth proclamation (MH4), "All the information on contamination and passings from COVID-19 in various media is expanding my dread" 43.5% of the respondent firmly concurred, with a mean reaction of  $4.07 \pm 1.05$ . 51.7% of the respondents emphatically concurred with the fifth assertion (MH5) "It makes me awkward to be isolates from normal exercises because of lockdown" with a mean worth of  $4.19 \pm 1.05$ .

## **7.2 Medical care System**

62% of the respondents emphatically consented to the explanation that the medical care arrangement of Bangladesh is delicate and incapable to manage the new flare-up of COVID-19 (HSB1), with a mean worth of  $4.36 \pm 1.01$ . For the subsequent assertion, 68% of respondents with a mean worth of  $4.51 \pm 0.87$  unequivocally concurred that "a tremendous populace is a strain to the current medical care framework to manage COVID-19" (HSB2). 52% of the respondents with a mean worth of  $4.22 \pm 1.0$  emphatically concurred that there is "an absence of prepared specialists and medical services experts to manage the COVID-19" (HSB4). With a mean worth of  $4.64 \pm 0.73$ , 75.4% of the respondents emphatically concurred that "the absence of medical services offices will not be able to battle the COVID-19 episode in Bangladesh" (HSB5).

## **7.3 Administration and Political Perspective**

As to proclamation of "the Bangladesh government can manage this flare-up" (GPI1), the popular assessment didn't fluctuate fundamentally with a mean worth of  $2.50 \pm 1.28$ . Comparable reactions were additionally found in light of "the Government is approaching this flare-up in a meaningful way"

(GPI2) with a mean worth of  $2.76 \pm 1.26$  and "the Government is taking appropriate choices at the ideal opportunity".

## 7.4 Financial Aspects

61–65% of respondents emphatically concurred that "the shut down or lockdown of customary exercises was a decent choice to decrease the opportunity of disease of COVID-19" (SEI1) (mean  $4.53 \pm 0.77$ ), "this will have a financial and social effect later on" (SEI2) (mean  $4.51 \pm 0.77$ ), and that "both formal and casual organizations will be hampered" (SEI3) (mean  $4.5 \pm 0.71$ ). For the fourth assertion, 85.6% of respondents unequivocally concurred that "needy individuals living off every day wages will be seriously influenced" (SEI4) with a mean of  $4.78 \pm 0.60$ , while 60.5% firmly concurred that "the vast majority of the destitute individuals living in metropolitan regions need to leave the city due to not having any choices for money" (SEI5) (mean  $4.42 \pm 0.87$ ). 54.8% (mean  $4.36 \pm 0.85$ ) of the respondents concurred that "numerous individuals will lose their work/occupations right now" (SEI6). A further 42.9% (mean  $4.13 \pm 0.97$ ) unequivocally concurred that "there will be a scaled down supply of fundamental merchandise/items for day-by-day use" (SEI7) and 50.8% (mean  $4.28 \pm 0.89$ ) firmly concurred that "there was or will be expanded costs for essential items" (SEI8). Therefore, "destitute individuals will endure food and nourishing inadequacy" (SEI9) was firmly concurred with by 69.4% respondents (mean worth of  $4.6 \pm 0.712$ ). "The closure of instruction foundations will hamper those presently getting formal schooling" (SEI10), to which 57% respondents emphatically concurred (mean worth of  $4.38 \pm 0.88$ ). For "In case there is an opportunity of social clash because of this flare-up" (SEI11), the mean reaction was  $3.9 \pm 1.06$ .

## 7.5 Arising Issues

56.4% (mean  $4.39 \pm 0.82$ ) of respondents unequivocally viewed as that "there is an opportunity of local area transmission of COVID-19 in Bangladesh" (IEI1) and that "countless individuals will be contaminated" (IEI2) with a mean worth of  $4.208 \pm 0.93$ . Also, 69% of the respondents firmly concurred (mean worth  $4.56 \pm 0.74$ ) that "quite possibly many tainted patients won't be identified because of an absence of testing offices, and this won't show the real number of contaminated cases" (IEI3). "There is an opportunity of a fiasco like a flood, typhoon, or dry season in 2020 considering the weakness

of Bangladesh to environmental change” (EEI1), there was a mean reaction of  $3.7 \pm 1.0$ .

## 8 Results From Regression Analysis

### The Association of Affected Psychosocial Well being and the Fragile Health-care System During COVID-19 Outbreak

From the relapse investigation, among the 45 factors, just five factors showed measurably critical relationship with the delicate medical services arrangement of Bangladesh (HSB1) to manage the new flare-up of COVID-19 in the nation (Table 2). HSB2, HSB5, and IEI1 genuinely represent a huge beneficial outcome on the delicate medical care arrangement of Bangladesh ( $p < 0.01$ ). This supposition that is additionally approved by the quantity of passings from COVID-19 revealed in the news, after the declaration of the halfway lockdown, and the launch of RMG plants from 25 April 2020.

### 8.1 The Affected Psychosocial Wellbeing and Socio-Economic Fear of COVID-19 and the Government’s Decision to Lockdown

The consequences of straight relapse showed that among the 45 factors, just 10 factors showed genuinely critical relationship with dread of the COVID-19 flare-up (Table 2). For example, emotional wellness factors MH2, MH3, and MH4 measurably represent a critical beneficial outcome on dread of the COVID-19 flare-up ( $p < 0.01$ ). Then again, there is a genuinely sure relationship between dread of the COVID-19 episode ( $p < 0.05$ )and the medical care framework in Bangladesh (HSB1 and HSB8).

Perception statement (multiple R2 value)	Constant of model	Significant (1% and 5% level) regression coefficients for independent variables (standard error of regression coefficients)									Standard error of regression model (ANOVA, F-statistic)
MH1 (0.472)	0.297	+0.314 MH2 (0.03)	+0.14 MH3 (0.03)	+0.181 MH4 (0.026)	0.053 (0.026)	0.087 (0.026)	+0.049 GP17 (0.025)	-0.075 (0.025)	+0.104 IE11 (0.030)	0.117IE12 (0.033)	0.75162 (20.264)
HS81 (0.252)	0.514	0.075 MH1 (0.037)	0.130 HSB2 (0.036)	0.295 HSB5 (0.036)	HS81 (0.026) (0.032)	HSB8 (0.046) (0.032)	GP13 (0.025) (0.028)	IE11 (0.025) (0.028)	SE110 (0.032) (0.030)	SE110 (0.032) (0.033)	0.89242 (7.619)
GPI1 (0.242)	1.847	-0.083 (0.027)	-0.206 (0.030)	0.253 GP12 (0.030)	0.149 GP13 (0.031)	0.127 GP17 (0.031)	0.22 SE12 (0.028)	-0.225 SE13 (0.028)	0.084 SE111 (0.028)	0.14184 (7.237)	
		HS84 (0.041) (0.023)	HS89 (0.033) (0.023)	HS85 (0.033) (0.023)	HS84 (0.041) (0.023)	HS85 (0.033) (0.023)	SE114 (0.028) (0.028)	SE114 (0.028) (0.028)	SE114 (0.028) (0.028)	SE114 (0.028) (0.028)	
SE12 (0.479)	-0.238	0.054 MH3 (0.023)	0.085 HS85 (0.038)	0.056 GP11 (0.016)	0.045 GP13 (0.02)	0.517 SE13 (0.032)	0.098 SE14 (0.034)	0.049 SE18 (0.025)	0.048 SE110 (0.025)	0.084 EE16 (0.025)	0.57089 (20.859)
IE11 (0.396)	0.66	0.078 MH1 (0.027)	0.077 MH3 (0.026)	0.062 HS81 (0.023)	0.169 HS87 (0.030)	0.082 SE36 (0.031)	0.075 SE111 (0.023)	0.2461E12 (0.028)	0.178IE13 (0.036)	0.64904 (14.864)	
EE12 (0.428)	0.495	-0.047 MH2 (0.022)	0.046 HSB2 (0.021)	0.09 SE44 (0.036)	0.11 SE9 (0.031)	0.088 IE5 (0.031)	0.085 EE11 (0.018)	0.112 EE33 (0.024)	0.178 EE14 (0.037)	0.07 EE6 (0.034)	0.52213 (16.989)

Table 2: Multiple linear regression models for selected statements using perceptions as independent variables (n = 1,066)

## 8.2 The Potential Arising of Social Conflicts From COVID-19 and Governance and Political Association

Notwithstanding, the negative relationship among administration and policy centered issues (GPI1) and the medical care arrangement of Bangladesh (HSB9) ( $p < 0.01$ ) shows that an apparent absence of financial plan made a hole in the reaction to COVID-19 (Table 2). Also, a terrible courting of management and coverage pushed issues (GPI1) with the medical care arrangement of Bangladesh (HSB4) and financial issues (SEI3) ( $p < 0.05$ ) shows an apparent absence of prepared specialists and medical services experts, and that a hampering of formal and casual business exercises are diminishing the public authority's ability to manage the COVID-19 flare-up.

## 8.3 The Potential Socioeconomic Crisis of the COVID-19 Outbreak and the Suffering Poor Communities:

The relapse investigation showed that, among the 45 factors, nine showed a huge factual relationship with the future effects of executing lockdown and social-removing exercises (SEI2). A critical positive relationship of financial issues (SEI2) with administration and policy centered issues (GPI1) and financial issues (SEI3) ( $p < 0.01$ ) shows that the Government took the right choice by closing down customary exercises and carrying out the social removing approach (Table 2)

## **8.4 Other Infectious Disease Risk Management During COVID-19 Outbreak**

In the relapse investigation, eight factors are measurably connected with the chance of local area transmission of COVID-19 (IEI1). A huge positive relationship between emotional well-being factors (MH1, MH3), medical care framework factors (HSB1, HSB7), Socioeconomic factors (SEI6, SEI11), and quick arising issues (IEI2, IEI3) ( $p < 0.01$ ) uncovers that local area transmission will build the quantity of tainted individuals which will make further dread and mental pressing factor of others of losing their lives because of COVID-19 contamination.

## **8.5 Battling Environmental and Climate-Induced Natural Disaster Risks During the COVID-19 Outbreak**

The relapse examination further distinguished nine factors that are altogether connected with the chance of environment instigated outrageous regular occasions (flood, twister, avalanches, and so on) happening during/after the COVID-19 pandemic. The pandemic alongside cataclysmic events may make a twofold weight to the nation because of suffering arising issues (EEI2). The positive relationship between EEI2, SEI9, IEI5, EEI1, EEI3, and EEI4 ( $p < 0.01$ ) shows that there is an apparent chance of an environmental change-instigated fiasco after the COVID-19 circumstance which would make serious food frailty (Table 2). Needy individuals will experience the ill effects of food and dietary insufficiency and the nation will confront tremendous financial misfortune. Additionally, after the COVID-19 circumstance, an absence of bio-clinical and strong waste administration will add more issues.

## **9 Overall Relationship Assessment Among the Variables From CTT, PCA, and CA**

CTT and PCA uncovered a certainty level of controlling elements in Bangladesh during the COVID-19 episode and how these parts are connected to the psychosocial, financial, and natural emergency segments (Tables 1, 3). Bunch investigation (CA) further distinguished the complete status of provincial

varieties, and how financial and ecological emergencies impacts psychosocial advancement .

## 9.1 Results From CTT and PCA

From the CTT examination, as indicated by the remedied between thing relationship investigation, among 46 factors, four factors have low rectified thing absolute connections (i.e., the capacity of the public authority to bargain the flare-up, 0.054; reality of the public authority, 0.011; government is taking an appropriate choice, 0.078; and other sectoral association to COVID-19, 0.04). The leftover 42 factors in the scale had a satisfactory revised thing complete connection (0.257 to 0.602) and the Cronbach's alpha (0.896) was worthy.

From PCA, nine head parts (PCs) were initially founded on standard eigenvalues (outperformed 1) that extricated 55.28% of the complete difference as shown in Table 3. The scree plot was received to recognize the quantity of PCs to be held to give understanding into the hidden variable inside structure (Figure 2). The stacking scores were outlined into three gatherings of powerless (0.50–0.30), moderate (0.75–0.50), and solid (>0.75) (18–20).

## 9.2 Results From the Cluster Analysis (CA)

In the CA every one of the boundaries were ordered into four significant gatherings: bunch 1(C1), group 2 (C2), bunch 3(C3), and bunch 4(C4) (Figure 3). C1 was made out of two sub-bunches of C1-An and C1-B; C1-A was made out of issues encompassing an expansion in the quantity of passings due to not having appropriate wellbeing offices, an absence of bio-clinical waste administration offices in Bangladesh that will make more issues, numerous individuals encountering psychosocial issues because of this episode, with an enormous number of individuals becoming tainted, and there being an opportunity of not recognizing a large portion of the contaminated patients because of the absence of wellbeing offices prompting underestimating the genuine tainted cases (IEI4-6, IEI2-3)

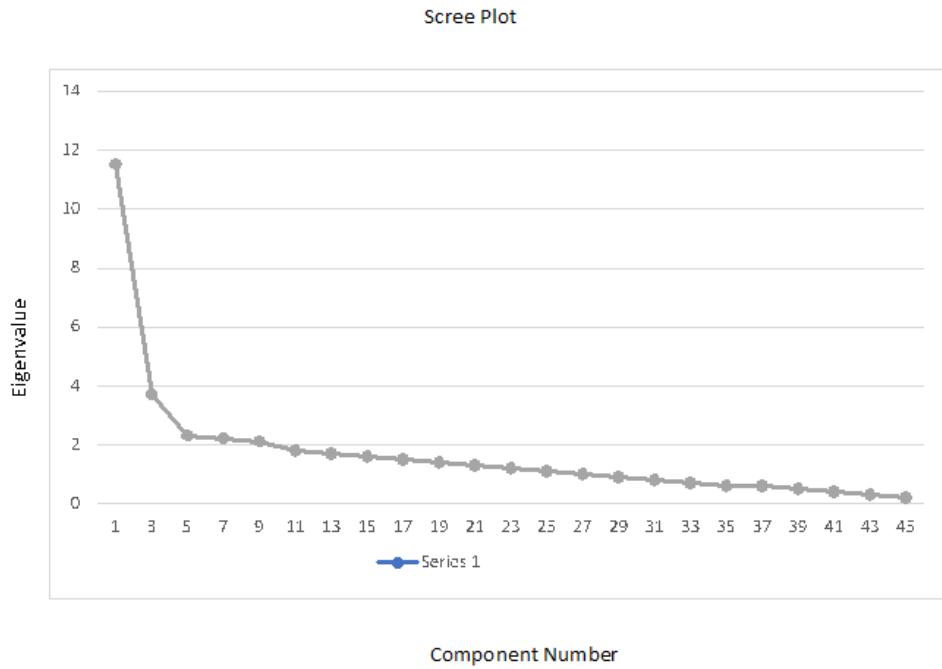


Figure 1: Scree plots of the eigenvalues of PCA

## 10 Discussion

### 10.1 Cultural Fear and Anxiety Over COVID-19 in Bangladesh

This discernment-based examination attempted to envision the psychosocial just as financial burdens because of the COVID-19 pandemic in Bangladesh. Any significant pandemic episode effectsly affects people and society (14), and individuals' dread because of COVID-19 is normal as in the casualty pace of the infection is around 1% and it can kill sound grown-ups alongside the older or those with existing medical conditions (21). It is vital to evaluate the COVID-19 pandemic freely dependent on its characteristics and

not on past pestilences like SARS or MERS (22) The revealed case numbers absolutely think little of the genuine number of contaminated people given the set number of metropolitan testing communities, the deficiency of test units, and the significant delays for tests and test results.

## **10.2 Job of Governance and Risk Communication to Reduce Societal Fear in Bangladesh**

Fruitful administration is just conceivable with an able early admonition framework, proficient examination of the circumstance, and the understanding, sharing, and utilization of significant information and data (26). General wellbeing directions ought to be set up dependent on logical proof to diminish the nervousness and trouble brought about by deception and bits of hearsay. Epidemiological results should be educated on in time with the goal that they can be precisely assessed and clarified (27). Social orders where underserved networks exist firmly dread government data and legislative issues. Public danger correspondences are in this way expected to keep falsehood from online media and electronic media. Additionally, strict pressure, individual strain, work uncertainty, monetary misfortune, and social instability could leave a few group feeling especially helpless and insane. Bangladesh had just 29 ICU beds in five committed medical clinics in Dhaka for the therapy of COVID-19 patients. There were no ICU beds in emergency clinics outside Dhaka.

## **10.3 Strength Development in Healthcare Sectors and Probable Climatic Disaster Management**

The Bangladesh Meteorological Department (BMD) had estimated weighty precipitation occasions and irregular Nor’Wester’s and tornadoes at numerous spots the nation over during April and May 2020. Reasonable and fair sharing of wellbeing assets could moderate further dangers to general wellbeing by meeting local area wellbeing needs and creating immensely significant trust and versatility (31) during additional climatic debacles. The improvement of strength is important to battle any debacles, even a pandemic. Accordingly, to foster versatility in the medical care frameworks and to handle any pandemic, great administration is critical, alongside acceptable coordination. Likewise, it additionally requires financing, administration conveyance,

medications and hardware for wellbeing laborers, and data.

## **10.4 Biomedical Waste Management Planning**

Biomedical waste ought to be discarded following public and global rules on the removal of irresistible natural dangerous materials (37). When a dramatically quick spread of a sickness or contamination breaks out, the age of biomedical waste and other related medical care dangers might be expanded inside a discernibly short period. Besides, rehashed utilization of expendable veils and not washing fabric covers could make further danger of contamination that should be managed through legitimate data to people in general (39). As the nation doesn't have legitimate cremation offices, the public authority should consider setting up versatile incinerator plants quickly to dependably oversee bio-clinical waste.

## **10.5 Comprehensive Financing for the Disadvantaged Communities**

As we have broken down the situation over the previous extended periods of halfway, a deficiency of 33 billion BDT a day to GDP is bringing about. More than 10 million individuals (about half the population of New York) are turning out to be additionally minimized because of the deficiency of wages and occupations (40). Powerless administration and strategy put crisis responders, for example, clinical specialists and medical care staff, police, security powers, and armed force faculty, in danger of disease. As of now, a great many specialists and individuals from the police power have been tainted and died during this time. The financial drop out from this pandemic is now high, especially for the hindered helpless networks, day workers, breadwinners, RMG-area laborers, and little and medium business new companies. Effectively the country's RMG area has lost numerous worldwide orders because of the pandemic, and the settlement stream is at its most minimal.

## **11 Conclusion**

Without guaranteeing crucial requirements would be met, the lockdown because of COVID-19 has forced mental weight on people in general. The frail administration in the medical services frameworks and restricted medical care offices exacerbated the overall population's dread and uneasiness. The incorporated COVID-19 testing office and impediments of devoted medical clinic units for COVID-19 patients hampered other basic patients from getting medical services administrations. As the business communities (aside from food, drug stores, and other day by day necessities) are shut, it has put further weight on the nation's economy. An irresistible episode of dengue may be in transit that might have a combined/synergistic adverse consequence with COVID-19 on general wellbeing in Bangladesh. The suggestions gathered in the discernment study can be summed up as a need to build COVID-testing rates and increment clinical offices. The decentralization of the COVID-19 clinical offices is especially significant because of the constrained relocation of in excess of 11 million individuals from Dhaka city to 64 regions of Bangladesh after the declaration of fractional lockdown. At last, this appraisal interaction could help the public authority and policymakers to pass judgment on the public insights to manage the COVID-19 pandemic in thickly populated lower-center pay nations like Bangladesh.

## 12 Contribution

### 12.1 Used Software

**Git:** We have used Git to manage and keep track of our source code history.

**Github:** And we have used Github to manage Git repositories. By using Github every member of our team can add or make changes of files.

**Latex(Overleaf):** We have used latex to create report of our selected paper. We have used latex because it helped us to keep the whole formatting in a proper shape. Latex has also the feature to give access to write to more than one person in a single report.

**Prezi:** We have used Prezi to create presentation slides of our selected paper. We have used it because it has so many features which will make our presentation slides moderate. It has also amazing presentation templates. Prezi has also collaborators options, where they can edit, view or present the presentation slides.

**Jira Software:** We have used Jira to maintain our workflow and to see our work progress time to time.

## 12.2 Timeline and Work Distribution

<b>Wahidur</b>	<b>Shampa</b>	<b>Sudman</b>	<b>Deadline</b>
Git work	Contents writing for report	Contents writing for report	27/07/2021
Contents writing for report	Contents writing for report	Jira Work	30/07/2021
Report Writing in Latex	Jira Work	Contents writing for report	31/07/2021
Report Writing in Latex	Contents writing for report	Git work	01/08/2021
<b>Meeting</b>			01/08/2021
Jira Work	Report Writing in Latex	Presentation Making in Prezi	02/08/2021
Git Work	Presentation Making in Prezi	Report Writing in Latex	03/08/2021
Presentation Making in Prezi	Report check and modification(if needed)	Report check and modification(if needed)	03/08/2021
<b>Meeting</b>			04/08/2021

Figure 2: Timeline & Work Distribution Table

### 12.3 Column Chart

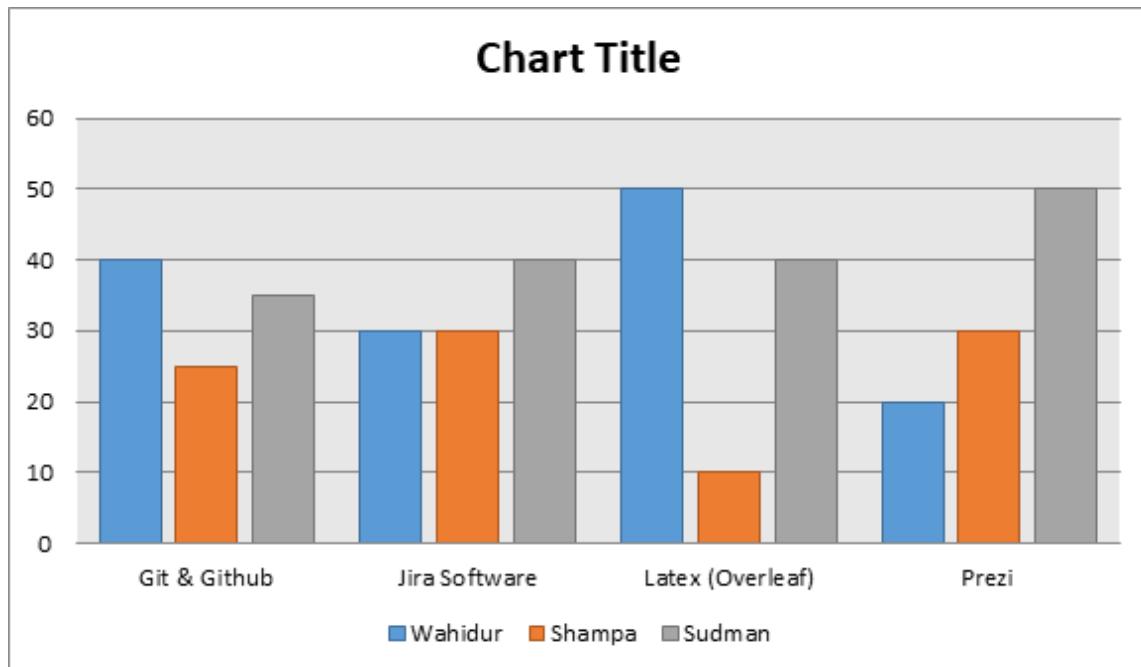


Figure 3: Column Chart Table

## References

- [1] WHO Coronavirus Illness 2019 (COVID-19) Circumstance Reports. (2020).
- [2] How will country-based moderation measures impact the course of the COVID-19 scourge? Lancet by Anderson RM, Heesterbeek H, Klinkenberg D, Hollingsworth TD (2020).
- [3] Hopman J, Allegranzi B, Mehtar S. Overseeing COVID-19 in lowand middle-income Nations. JAMA. (2020)
- [4] Cohen J, Kupferschmidt K. Nations test strategies in ‘war’ against COVID-19. Science. (2020)
- [5] COVID- 19 control: China gives critical lessons for worldwide response. Front Med. (2020) by Zhang S, Wang Z, Chang R, Wang H, Xu C, Yu X, et al.
- [6] Day M. Covid-19: surge in cases in Italy and South Korea makes widespread see more likely. BMJ. (2020)
- [7] The fear of COVID-19 by Ahorsu DK, Lin C-Y, Imani V, Saffari M, Griffiths MD, Pakpour AH.
- [8] The impacts of home control on children amid the COVID-19 episode. Lancet. (2020) by Wang G, Zhang Y, Zhao J, Zhang J, Jiang F. Moderate.
- [9] IEDCR. COVID-19 Status Bangladesh. (2020).
- [10] DGHS/MHFW/GOB. Coronavirus COVID-19 Dashboard. (2020).
- [11] The Day by day Star. Specialists at Private Clinics Cleared out Defenseless. The Daily Star Publication (2020).
- [12] Kamal RS. Fear, Scorn and Stigmatization Hold Bangladesh Amid Covid-19 Flare-up. TBS News (2020) 19
- [13] Understudy suicide risk and sex: a review consider from Bangladeshi press reports. Int J Ment Wellbeing Include. (2020) by Mamun MA, Siddique AB, Sikder MT, Griffiths MD.

- [14] Duan L, Zhu G. Mental mediations for individuals influenced by the COVID-19 scourge. *Lancet Psychiatry*. (2020)
- [15] Keeble C, Law GR, Hair stylist S, Baxter PD. Choosing a strategy to diminish determination Bi-as: a instrument for analysts. *Open J Epidemiol.* (2015)
- [16] Synchronous comparison of modified-integrated water quality and entropy weighted files: suggestion for secure drinking water in the coastal locale of Bangladesh. *Ecol Indic.* (2020)
- [17] DeVellis RF. *Scale Improvement: Hypothesis and Applications*. Newbury Park, CA: SAGE Distributions (1991).
- [18] Liu CW, Lin KH, Kuo YM. Application of figure investigation within the evaluation of groundwater quality in a Blackfoot malady zone in Taiwan. *Sci Total Environ.* (2003) 313:77 89. doi: 10.1016/S0048-9697(02)00683-6
- [19] Charaization of groundwater quality utilizing water assessment indices, multcterivariate measurements and geostatistics in central Bangladesh by Bodrud-Doza M, Islam ARMT, Ahmed F, Das S, Saha N, Rahman MS.
- [20] Characterizing groundwater quality positions for drinking purposes in Sylhet district, Bangladesh, utilizing entropy strategy, spatial autocorrelation index, and geostatistics. *Environ Sci Pollut Res.* (2017)
- [21] Doors B. Reacting to Covid-19 — A Once-in-a-Century Pandemic? *N Engl J Med.* (2020) 200:762. doi: 10.1056/NEJMp2003762 20
- [22] Hsu LY, Chia PY, Vasoo S. A midpoint viewpoint on the COVID-19 pandemic. *Singapore Med J.* (2020) 1-10. doi: 10.11622/smedj.2020036
- [23] Covid- 19 and community relief procedures in a widespread. *BMJ.* (2020) by Ebrahim SH, Ahmed QA, Gozzer E, Schlagenhauf P, Memish ZA.
- [24] Binnicker MJ. Development of a Novel Coronavirus Infection (COVID-19) and the Significance of Demonstrative Testing: Why Organization between Clinical Research facilities, Open Wellbeing Organizations, and Industry Is Essential to Control the Episode. *Clin Chem.* (2020) 66:6646. doi: 10.10

- [25] Shammi M, Bodruddoza M. Lockdown: To Pull back or not to Pull back? TBS News (2020).
- [26] Gu E, Li L. Injured community administration and smothered scientific/professional communities: a basic evaluation of fizzled early caution for the COVID-19 episode in China. *J Chi Gov.* (2020) 5:118. doi: 10.1080/23812346.2020.1740468
- [27] Xiao Y, Torok ME. Taking the proper measures to control COVID-19. *Lancet Taint Dis.* (2020) 5234. doi: 10.1016/s1473-3099(20)30152-3
- [28] UNICEF. COVID-19: Children at Increased Chance of Mishandle, Neglect, Exploitation and Viciousness In the midst of Powers Control Measures. (2020).
- [29] WHO. COVID-19 and Viciousness Against Ladies: What the Wellbeing Sector/System Can Do. (2020).
- [30] Ali I. The COVID-19 widespread: making sense of rumor and fear. *Med Anthropol.* (2020) 14. doi: 10.1080/01459740.2020.1745481. [Epub ahead of print].