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Covid-19: People Perception Knowledge and Experience: an Evidence from Gilgit-Baltistan Pakistan

Wajid Ali[1*], Iqtidar Hussain[2], Sabbor Hussain[3]

[1] Department of Mathematical Sciences, Karakoram International University, Gilgit PAKISTAN.
[2] School of International Relations and Public Affairs, Shanghai International Studies University, CHINA.
[3] College of Business, Chung Yuan Christian University, Taoyuan TAIWAN.
**Corresponding Author (Tel: +923462479182, Email: wajid.ali@kiu.edu.pk).*

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Abstract

The coronavirus (Covid-19) has become a major cause of human morbidity and mortality due to its transmitted mode in human beings. The public must follow precautionary practices to protect themselves from this world pandemic. Due to a lack of public practices, knowledge, and sensitivity, this transmitted disease suffers a large number of new cases around the world. This study examines the public's practices, knowledge, and sensitivity related to the Covid-19 in the Gilgit-Baltistan Pakistan area. We applied the exploratory methodology by reviewing the secondary data sources. We survey to collect the data and present the empirical evidence. We distributed five hundred questionnaires via the online and face-to-face approach and received 382 valid responses. The received data were analyzed by using descriptive statistics and a chi-square test. The empirical results indicate that majority of respondents are conscious and aware of the Covid-19 and moderately taking precautionary measures such as social distancing, washing hands, wearing the mask, avoid to handshaking/hug and avoiding unnecessary traveling. It has been observed that participants are well aware of the sensitivity and the belief that the Covid-19 causes harm, changes expenditure life, exhausted, nervous, lonely, and fear for their individual life. Respondents have trust in social confidence and the roles of electronic media information regarding taking precautionary measures against the covid-19. Inversely, people have not to trust economic and safety measures taken by the government to control the Covid-19 pandemic.

Disciplinary: Public Health & Management (Epidemics, Pandemics & Outbreaks), Social Science, Public Administration, Mathematical Sciences.

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1 Introduction

The coronavirus (Covid-19) has been outbreak from Wuhan city of China in December-2019. Substantially the Covid-19 has proliferated across the world in January 2020 and social life was badly affected particularly, in the context of the living standard [1-4]. The Covid-19 has become a major cause of human morbidity and mortality due to its transmitted mode in human beings. Therefore, it is noteworthy for global health institutions. The nature of Covid-19 has been found mild to severe disease in the human body and some studies indicated that approximately 75% of infectious diseases are zoonotic [5-7]. Genetically, Covid-19 is a member of Coronaviridae and sub-member of Coronavirinae [8-12] and further clusters into sub members alpha-corona-virus, beta – corona-virus, gamma-corona-virus, and delta-corona-virus [13]. The beta coronavirus has been materialized as a SARS-CoV epidemic in 2002 and 2003 in China [14, 15], as well as appeared as a MERS-CoV (Middle East Respiratory Syndrome) in Saudi Arabia in 2012 [2, 16-18]. The current virus is tentatively called Covid-19 by the World health organization on February 11, 2020 [19]. The Covid-19 belongs to the same gene as SARS-CoV and MERS-CoV however, it is more infectious than the SARS-CoV and MERS-CoV [20, 21]. According to the World Health Organization (WHO), 77,228,903 were confirmed cases including 1,718,870 confirmed deaths across the world by December 24, 2020. The fever, shortness of breath, cough, fatigue, dyspnea, and headache are common symptoms of Covid-19 [22-24]. The Covid-19 pandemic has directly and indirectly affected the socio-economic profile of the people due to its high ratio of morbidity, and mortality [30]. In this regard, several countries have taken precautionary measures including special budget allocations to overcome the economic crises due to this epidemic outbreak [26]. The world health institutions have not recommended any effective vaccine to prevent Covid-19. Therefore preventive measures are incredibly significant to control the probable infection of Covid-19. Initially, the neighboring countries of Pakistan were highly affected by the Covid-19 pandemic such as China and Iran. Therefore, the first case of Covid-19 in Pakistan was officially confirmed in the Sindh province on February 26, 2020. The confirmed cases of Covid-19 have been increased day by day in Pakistan, with time [27], [28]. Gilgit-Baltistan is an administrative province of Pakistan that connects Pakistan with China via Karakorum Highway (K.K.H) [25]. The estimated population of Gilgit-Baltistan is around 1.8 million with having a covered area of 72,971 sq km. The first positive case was conformed in Gilgit-Baltistan on March 2, 2020. According to the health department of Gilgit-Baltistan, the confirmed cases of Covid-19 are 5312 with a mortality of 107 patients, and 5087 patients have been recovered till May 3, 2021 [29]. The health department of Gilgit-Baltistan is working with poor management and facilities to fight against the Covid-19. Such as lack of medical staff, equipment, testing kits, P.P.E (personal protective equipment) kits, laboratories, few quarantine centers. Consequently, the people of Gilgit-Baltistan are facing solemn perils regarding their health and still challenging issues. The objective of this study is to investigate the people's practices their level of knowledge and sensitivity toward Covid-19 and identifies a clustering

analysis of respondents regardingCovid-19.The data collection relied on survey questionnaires and secondary data sources. Secondary sources contribute to corroborate the literature review and the result of the survey questionnaires.

Table 1: Number of Positive cases reported and Total deaths in Gilgit-Baltistan

Month	Total positive cases	Total Deaths
20 Mar 2020	184	2
20 Apr 2020	339	3
20 May 2020	711	11
20 Jun 2020	1489	26
20 Jul 2020	2134	54
20 Aug-2020	2903	67
20 Sep 2020	3787	88
20 Oct 2020	4261	92
28 Nov 2020	4619	97
09 Dec 2020	4761	98
21 March 2021	5033	103

Source: The Ministry of National Health Services, Regulation, and Coordination, 2020.

In Table 1, the total number of positive cases and total death patients are increasing over time. If this situation continues it will become worse and more challenging for concerned authorities.

2 Method

This study applied a simple random sampling technique and the sample size of the research consisted of 500 adult respondents. The respondents from all ten districts of Gilgit-Baltistan. We have distributed 500 questionnaires via the soft and hard forms of survey approach during December 2020. We have collected 382 valid responses and the responding ratio was 76.4%. The survey questionnaire consisted of two parts. The first part contains demographic details including gender, age, occupation, income level, and district. The second part of the questionnaire contains the key variable, such as protection measure practices taken against Covid-19, their knowledge, and sensitivity toward Covid-19. The internal reliability was measured by using McDonald's omega and the internal reliability is (0.774).

3 Data Analysis and Results

The received data from respondents were analyzes by SPSS®23.0. We applied descriptive statistics to calculate frequencies and proportions and the Chi-square test was used to investigate the level of association among variables. A p-value approach was used to accept or reject the null hypothesis with a 0.05 level of significance. Table 2 provides the demographic characteristics of respondents. In this study there were 54.97 % (n_1=210) male respondents, and 45.03% (n_2=172) female respondents.

3.1 Demographic of the Participants

Table 2 represents the summary of demographic variables such as gender, age, occupation, income level, and region. The most representative value of variable age is 25.27 with a standard deviation of 4.30. This shows the majority of the respondents' age is around 25-27 years old. The educational detail of respondents indicates that 9.4% of respondents have PhDs, 60.7% Master's,

and 29.8% have BS levels (undergraduates). The occupational background indicates that 29.32% from the educational sector, 13.09% from the business sector, 20.94% from both public and health sectors, and 15.71% from the private sector. We categorized the monthly income of respondents into four parts that 51.83% have earned below twenty-five thousand, 26.18% have earned around twenty-five to fifty thousand, 17.28% have earned around twenty fifty to hundred thousand, and only 4.71 have earned above hundred thousand. Furthermore, 51.05 % were from rural areas and 48.95 % from urban areas.

Table 2: Frequency distribution of demographic variables (N=382)

Class	% (n)	Class	% (n)
Gender		Income Level	
Male	54.97 (210)	Below 25000	51.83 (198)
Female	45.03 (172)	25000-50000	26.18 (100)
Age, Mean (SD)	25.46 (4.30)	51000-100000	17.28 (66)
Occupation		Above 100000	4.71 (18)
Education sector	29.32 (112)	Region	
Business sector	13.09 (50)	Rural	51.05 (195)
Public sector	20.94 (80)	Urban	48.95 (187)
Health sector	20.94 (80)		
Private sector	15.71 (60)		

3.2 People Practices, Knowledge and Sensitivity Regarding Covid-19

Table 3 provides descriptive statistics of the main variables of the questionnaire based on people's practices, knowledge, and perception toward Covid-19. When asked about practices they responded with the following results. The mean ($\bar{x}$) & *SD* in term of protection practices against Covid-19 regarding social distancing ($\bar{x}$ 3.57, *SD* 1.06), carry hand sanitizer ($\bar{x}$ 3.51, *SD* 1.04), avoid to handshake/hug ($\bar{x}$ 3.30, *SD* 1.05), afraid to participate in all kind of public gatherings ($\bar{x}$ 3.38, *SD* 0.51), wash hands more frequently ($\bar{x}$ 3.05, *SD* 1.10), have sufficient knowledge of covid-19 ($\bar{x}$ 3.68, *SD* 0.93), stay at home ($\bar{x}$ 3.58, *SD* 1.08), avoid in all kind of unnecessary traveling ($\bar{x}$ 3.58, *SD* 1.14) and wearing mask/hand gloves as protection against COVID-19 is ($\bar{x}$ 2.90, *SD* 1.17). The results indicate that society has a moderate tendency of protection practices against the pandemic of Covid-19.

The descriptive statistics in terms of sensitivity against Covid-19 regarding feeling exhausted ($\bar{x}$ 3.33, *SD* 1.20), feel nervous ($\bar{x}$ 3.97, *SD* 1.32), feel lonely ($\bar{x}$ 4.10, *SD* 1.18), and feel fear ($\bar{x}$ 4.20, *SD* 1.76). The respondents rejected that the Covid-19 does it cause harm to us ($\bar{x}$ 3.09, *SD* 1.19), Covid-19 has boosted my acuteness concerning pandemics ($\bar{x}$ 2.63, *SD* 1.26) and exaggerated unnecessarily it is something to fear ($\bar{x}$ 2.33, *SD* 1.10). The respondents moderately agreed that Covid-19 has changed expenditure perceptive regarding the economic point of view ($\bar{x}$ 3.38, *SD* 1.06), and Covid-19 has shown the real picture of countries regarding the development of the medical sector ($\bar{x}$ 3.90, *SD* 1.30). In term of knowledge, results showed that the majority of respondents knew the symptoms of covid-19 i.e. ($\bar{x}$ 3.50, *SD* 0.97), agreed regarding social confidence to fight against covid-19 ($\bar{x}$ 3.59, *SD* 0.99) and media information regarding the fight against the covid-19 ($\bar{x}$ 3.75, *SD* 0.99). While they are not satisfied with economic measures taken by the government

against the Covid-19 ($\bar{x}$ 2.38, SD 0.60) and the accurateness of safety measures taken by the government against the Covid-19 ($\bar{x}$ 2.29, SD 0.67).

Table 3: Descriptive statistics of participants.

Item	$\bar{x}$	σ	min	max
I practice social distancing as protection against Covid-19	3.57	1.06	1	5
I carry a hand sanitizer all the time	3.51	1.04	1	5
I avoid handshake/hug to protect myself from Covid-19	3.30	1.05	1	5
I am afraid to participate in all kinds of public gatherings to protect myself from Covid-19	3.38	0.51	1	5
I wash my hands more frequently to protect myself from Covid-19	3.05	1.10	1	5
I have sufficient knowledge of covid-19	3.68	0.93	1	5
The main symptoms of Covid-19 are fever, cough, fatigue, and myalgia.	3.50	0.97	1	
I stay at home as a protection against Covid-19	3.58	1.08	1	5
I avoid all kinds of unnecessary traveling to protect myself from Covid-19	3.58	1.14	1	5
I always wearing mask/hand gloves to protect myself from Covid-19	2.90	1.17	1	5
I rejected the approach that, covid-19 does cause harm to us	3.09	1.19	1	5
The covid-19 has boosted my acuteness concerning pandemics	2.63	1.26	1	5
The covid-19 has changed my expenditure perceptive regarding the economic point of view	3.38	1.06	1	5
The covid-19 has shown the real picture of the countries regarding the development of the medical sector	3.90	1.30	1	5
The covid-19 is being exaggerated unnecessarily and it is something to fear	2.33	1.10	1	5
I feel exhausted due to the covid-19 pandemic	3.33	1.20	1	5
I feel nervous due to the covid-19 pandemic	3.97	1.32	1	5
I feel lonely due to the covid-19 pandemic	4.10	1.18	1	5
I feel fear due to the covid-19 pandemic	4.20	1.76	1	5
I trust on the social confidence to fight against covid-19	3.59	0.99	1	5
I trust the media information regarding the fight against the covid-19	3.75	0.99	1	5
I trust in the accurateness of safety measures taken by the government against covid-19	2.29	0.67	1	5
I trust the accuracy of economic measures taken by the government concerning covid-19	2.38	0.60	1	5

Note: 1 = Totally disagree; 2 = Disagree; 3 =;Partially agree 4 = Agree; 5 = Totally agree.

We further applied the Chi-square test to check the significant effect of people sensitivity due to Covid-19. The findings of sensitivity on Covid-19 were compared regarding the gender (male/female), age (below & above 25), and education (undergraduates, Graduates, and PhDs). This study reveals that female was more nervous than male and gender has a significant effect on nervous, anxious and stress due to the pandemic of Covid-19 (the p-value < .05). Whereas gender had no significant effect on loneliness and exhaustion because the p-value is > .05. The age factor had a significant effect on nervousness, anxiety, and stress as the p-value is <.05. While had no significant effect of exhaustion and loneliness, and the p-value is > .05. Moreover, students having graduation degrees (39.65%) are more nervous and lonely than others while having a significant effect on education, and the p-value is <.05. Furthermore, p values indicate that the variables anxious, exhausted, lonely, and stress had no significant effect on education, and the p-value > .05.

Table 4: Chi-square test.

Due to Covid-19, I felt	Gender		p-value	Age		p-value	Education			p-value
	M	F		less 25	>25		Undergraduate	Graduate	PhD	
Nervous	209 (38.71%)	173 (39.15%)	<0.001	258 (39.92%)	124 (37.09%)	0.020	114 (37.71%)	232 (39.65%)	36 (38.88%)	<0.001
Anxious	209 (38.15%)	173 (57.80%)	0.706	258 (73.64%)	124 (68.54%)	0.046	114 (74.56%)	232 (60.34%)	36 (44.44%)	0.804
Exhausted	209 (60.28%)	173 (53.17%)	0.162	258 (56.20%)	124 (59%)	0.621	114 (58.63%)	232 (57.75%)	36 (48%)	0.312
Lonely	209 (50.23%)	173 (76.24%)	0.437	258 (49.61%)	124 (45.96%)	0.505	114 (47.36%)	232 (48.70%)	36 (41.66%)	0.901
Stress	209 (48.12%)	173 (52.02%)	0.437	258 (46.51%)	124 (48.38%)	0.024	114 (48.24%)	232 (43.10%)	6 (27.77%)	0.683

4 Conclusion

The Covid-19 pandemic has severely affected the social profile of people across the world due to its high ratio of morbidity, and mortality. In this regard, several countries have taken precautionary measures including special budget allocations to overcome the socio-economic crises due to this pandemic outbreak [26]. We surveyed to examine the social effects of the Covid-19 on the people of Gilgit-Baltistan (an administrative province of Pakistan). We have collected data from across the region of Gilgit-Baltistan. We assumed three main variables such as protection measures, their sensitivity, and social trust regarding the Covid-19 to check the social profile of the citizens. This study reveals that the community of Gilgit-Baltistan is conscious about the Covid-19 and moderately taking precautionary measures such as social distancing, washing hands, wearing the mask, avoid to handshaking/hug and avoiding unnecessary traveling. It has been observed that participants are well aware of the sensitivity and the belief that the Covid-19 causes harm, changes expenditure life, exhausted, nervous, lonely, and fear for their individual life. Respondents have trust in social confidence and the role of electronic media information regarding taking precautionary measures against the covid-19. According to the findings of this research, the people do not trust economic and safety measures taken by the government to control the Covid-19 pandemic. This study suggests that the provincial government of Gilgit-Baltistan should be formed a socio-economic strategy regarding the coronavirus as how to simultaneously wage the battle of protecting the human being via fighting against Covid-19 as well as protecting the employment earnings.

5 Availability of Data And Material

Data can be made available by contacting the corresponding authors.

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Wajid Ali is a Ph.D. candidate and a Lecturer at the Department of Mathematical Sciences, Karakoram International University (KIU) Gilgit, Pakistan. His research areas are Applied Statistics, Clustering Algorithms and Fuzzy Model-based Clustering.

Iqtidar Hussain is a Ph.D scholar. His research areas are Regional Politics, Regional integration, Political Economy, Geopolitics, China's Belt and Road Initiative, China-Pakistan Economic Corridor.

Sabbor Hussainis is a PhD candidate at the College of Business, Chung Yuan Christian University, Taoyuan City, Taiwan (ROC). His research areas are International Finance and Investments, International Trade, Cryptocurrency, Economics, and finance.