Original Article

Impact of COVID-19 Pandemic in Pakistani Population

Shamaila Hassnain,[1] Aqsa Iqbal,[2] Muhammad Waleed Usama,[3] Fayyaz Atif[4]

Abstract

Objective: The objective of this study was to assess the impact of COVID-19 pandemic on the economic, social and mental health of families living in Lahore, Pakistan.

Methodology: A cross-sectional survey conducted for six months included total 200 participants filled a self-designed questionnaire through convenient sampling. The structured questionnaire collected information on socio-demographic profile and data on impact of COVID-19 on economic, social and mental status of residents of Lahore.

Results: The mean age of the respondents was 42 ± 10.28 in years. Nearly 50% of the participants were affected from stress. Most of the participants were stressed, living in nuclear families.

Conclusion: COVID-19 pandemic has strong impact on family income. Stress levels were raised especially among male respondents and discord in the family was highlighted. The participants engaged in private jobs were more stressed. Access to friends and families were restricted in this pandemic.

Keywords: COVID-19, Stress, Mental health.

Introduction

In December 2019, the epidemic of novel corona-virus disease 19 also known as COVID-19 broke out in Wuhan, China[1]. The epidemic was declared a pandemic by the World Health Organization (WHO) on 13 March 2020 due to its spread across the world. Because it was a new virus from the corona family, health professionals did not know how to deal with it. There was no vaccine or permanent treatment available. This created a situation of uncertainty, ambiguity, and vagueness in society. Physical and mental health issues begin to rise. It has not only affected the health of the public but also caused financial, social, emotional, and political damage[2].

According to the WHO, mental health is defined as "a state of well-being in which the individual realizes his or her abilities, can deal with the normal stresses of life, can work productively and fruitfully, and can contribute to his or her community". During COVID-19 pandemic, results of researches done in Italy, Iran, China, the US, Turkey, Spain, Nepal, and Denmark showed that rate of symptoms of anxiety (6.33% to 50.9%), stress (8.1 to 81.9), depression (14.6 % to 48.3%), psychological distress (34.43% to

1.   Shamaila Hassnain
2.   Aqsa Iqbal
3.   Muhammad Waleed Usama
4.   Fayyaz Atif
1-4: Department of Community Medicine Central Park Medical College, Lahore

Correspondence:
Dr. Shamaila Hassnain, *Department of Community Medicine, Central Park Medical College, Lahore sash_04@yahoo.com*

38%) and post-traumatic stress disorder (7% to 53.8%) are relatively high in the general population.[3] Some of the stress-related risk factors are female gender, younger age, unemployment, presence of psychological illness, and misinformation on new \ social media about COVID-19[3]. A survey conducted in Pakistan shows that residents who belong to a middle class, especially with medical knowledge, are more optimistic during the COVID period.[4]

The director of Infectious Hazards Management at WHO Health Emergencies Program and architect of WHO's strategy to counter the infodemic risk said "We know that every outbreak will be accompanied by a tsunami of information, but also within this information you always have misinformation, rumors, etc. We know that even in the Middle Ages there was this phenomenon".[5] A small number of researches have been conducted about COVID-19 related mental health in developing countries of Asia. The available researches show that mental health issues related to COVID-19 are enormous and need great attention.[6] The world has gone through such situations in the past too. Studies have shown that during the Middle East Respiratory Syndrome (MERS) epidemic 7.6 % of 1656 patients in Korea developed anxiety and 16.6% of them exhibited anger during the quarantine period[7]. Another study which was conducted in Canada during the Severe Acute Respiratory Syndrome (SARS) outbreak of 2003 also showed similar results.[8]

This pandemic has left the world with irrevocable damage. It has a far-reaching effect on the economy of not only developing countries but also developed countries like the USA. The unemployment rate has increased. Families who depend on daily wages are more affected by the lockdown because such families do not have much savings. There is a decrease in the manufacturing of products in most of the countries[9] It is observed in history that pandemics of the last one thousand years have been associated with low returns on assets.[10]

At the society level, we were not prepared to deal with such a huge outbreak. We were so much indulged in our social lives. Everyone was busy earning money and making their lifestyle better. Priorities of the people of the 21st century had changed completely.[11] Especially people living in urban areas had become more habitual of luxuries and comforts. We used to go to parties, family dinners, and spend time with loved ones. Man was running after technology and getting away from nature. The daily life of citizens is badly affected. Research shows that there is a marked decrease in social activity through family (-58%), neighbors (-44.9%), and entertainment (-46.7%). These negative effects during the confinement period leads to lower life satisfaction (-30.5%).[12] In a nutshell, COVID-19 has rapidly affected our physical health, mental health, day to day life, businesses, disrupted global trade, and movements.[9] The aim of this study was to explore the important aspects, not highlighted on forums but affected most of the families during this pandemic.

Methodology

A cross-sectional survey was designed to assess the impact of COVID-19 on economic, social and psychological aspects by using a structured questionnaire. A convenient sampling technique was conducted on families (based on personal links) living in Lahore. All participants were interviewed after taking informed verbal consent. IRB approval CPMC/IRB-No/1286 was taken.

A total of 200 participants were interviewed either face to face or on telephone (to maintain social distancing). The structured questionnaire collected information on socio-demographic profile and data on impact of COVID-19 on economic, social and mental status of those who were residents of Lahore, married couples above the age of 18 years with at least two or more children.

Socio-demographic profile data include age, gender, family type, education, occupation and income of the family. Whereas the impact of COVID-19 was assessed by current employment status, food afford-ability, social accessibility with relatives or friends and stress experienced during pandemic. Data was analyzed by using Statistical Package for the Social Sciences (SPSS version 21.0). The questionn-aire had a satisfactory validity and internal consis-tency with the Cronbach's alpha value of 0.656.

Results

The data was collected from 200 residents of Lahore. The mean age of the respondents was 42 ± 10.281 in years. The proportion of male respondents was higher as compared to female respondents. The

Table 1: *Socio-Economic & Demographic Factors of Respondents*

Variables	Categories	n	%
Gender	Male	122	61
	Female	78	39
Family Type	Nuclear	138	69
	Extended	62	31
Total number of family members	<=4	48	24
	5-8	112	56
	9-12	34	17
	>=13	06	3
Educational Level	Illiterate	13	6.5
	Primary	12	6
	Middle	10	5
	Matric	30	15
	Intermediate	41	20.5
	Graduation	54	27
	Post-Graduation	40	20
Household Income	<= 50,000	92	46
	50,001-1,00,000	67	33.5
	1,00,001-2,00,000	35	17.5
	>2,00,000	06	3
Occupation	Unemployed/ Jobless	43	21.5
	Private Job	76	38
	Government Job	29	14.5
	Business	37	18.5
	Daily Wager	15	7.5

socio-economic & demographic information of the

respondents is given in Table 1.

Household income of more than 50% of the participants was affected during COVID-19 pande-mic. Nearly 50% of the participants showed moderate stress due to COVID-19. Food affordability and

Table 2: *List of Factors with its Severity Levels Effected by COVID-19 Pandemic*

Factors	No Change	Mild	Mode-rate	Severe	Total
Family Income	46 (23%)	53 (26.5%)	60 (30%)	41 (20.5%)	200 (100%)
Food Affordability	93 (46.5%)	41 (20.5%)	51 (25.5%)	15 (7.5%)	200 (100%)
Access to Friends & Family	30 (15%)	45 (22.5%)	87 (43.5%)	38 (19%)	200 (100%)
Stress	17 (8.5%)	47 (23.5%)	97 (48.5%)	39 (19.5%)	200 (100%)
Discord in the family	47 (23.5%)	76 (38%)	66 (33%)	11 (5.5%)	200 (100%)

discord in family were the two factors that effected 7.5% and 5.5% of the sample (Table: 2).

Nearly 50% of the participants who fall in low-income group were moderately stressed. The level of stress was higher among male respondents. The

Table 3: *Crosstab of Stress and Discord in Family with Various Factors*

Family Gender Factors	Categories	Stress No change	Mild	Mode-rate	Se-vere	Chi-square	p-value
Gender	Male	15	29	57	21	6.353	0.096
	Female	02	18	40	18		
Family Type	Nuclear	05	29	76	28	17.733	0.000
	Extended	12	18	21	11		
Household Income	<= 50,000	08	18	44	22		
	50,001-1,00,000	04	21	05	03		
	1,00,001-2,00,000	44	30	20	03	11.220	0.261
	>2,00,000	22	12	05	0		
Occupation	Unemployed/ Jobless	13	11	17	02		
	Private Job	12	32	29	03		
	Government Job	10	12	04	03	17.794	0.097
	Business	10	17	08	02		
	Daily Wager	02	04	08	01		

gender was found as insignificantly associated with stress. More of the respondents who were living in nuclear family had stress. The prevalence of stress was found comparatively higher among jobless participants and those who involved in private job (Table: 3).

There may be one reason that out of the total sample, comparatively more participants were engaged in private jobs. Further studies con be conducted to observe the effect of COVID-19 pandemic on stress due to the occupation as a contributing factor.

Discussion

The COVID-19 pandemic is instigating panic among the population for numerous reasons. As it's a new virus, vaccine trials are in process. So, along with fear and panic, its impact on economic, social and psychological status of individuals whose livelihoods have been affected due to the lockdowns occurring in many countries around the world are the important aspects to follow. For this reason, this study was conducted among 200 residents of Lahore. It is different from a study conducted in New Delhi, India where the participants mean age was 35.92 + 15.09 years.[13] Our study participants were 61% males and 39% females. This gender distribution is similar to a study conducted in Italy in May 2020 in which 60.4% were males and 39.6% were females.[14] Whereas this distribution can be seen in 50:50 in a study conducted in Karachi Pakistan.[15]

In our study majority (93.5%) were literate while only 6.5% were illiterate. Out of these literates, 27% graduated and 20% were masters/postgraduate. Whereas 46.5% were undergraduates. These results are in contrast as well as similar with a study conducted nationally, where the undergraduates were almost similar to our results (45%), but graduates were more than our results (65%).[15] In this study majority families were of nuclear type (69%). These results are similar to a study conducted in Nepal

with nuclear families 64.8%.[16]

This study results show that 20.5% were severely affected in terms of employment and family income. Whereas 30% were moderately affected followed by 26.5% had mild impact like salary cuts and 23% had no impact of pandemic on their employment or family income. Several economic surveys conducted in different parts of the world clearly stated that this pandemic disrupted many people and the face-to-face contact jobs have greater employment losses.[17,18] The association among education and family income of the participants showed significant p value (0.001) which clearly depict that those who are less educated were more severely affected in this pandemic.

Our study showed the economic reason for food affordability due to COVID pandemic were severe in 7.5%, only 20.5% had mild difficulty and 46.5% had no issues regarding food security. These results are quite different from a preliminary report generated by King's college London in 2020 which stated that 60% had food instability, out of which 16% due to economic reasons, 15% due to isolation or lockdown and rest are other reasons.[19] Another article from US showed that 18.8% of households experienced food insecurity at some point during the COVID19 pandemic.[20]

This study results depicted that 15% of our participants had no reservations to access other families or friends and only 19% severely restricted themselves and kept social distancing. In contrast to these findings, a study conducted in China observed more strict group activities. 97% of the study participants were not permitted to visit other homes even within the same area.[21] This study manifests the significant association of education and social distancing with a p value 0.026 which revealed that those who are more educated they more follow the instructions given by WHO regarding social distancing.[22]

The impact of COVID-19 pandemic in experiencing stress showed no stress in 8.5% individuals but borderline or mild stress reported in 23.5% and severe stress among 19.5% participants. These results are similar to a study conducted in Nepal where 18.3% individuals experienced severe stress, 23.6% had borderline or mild stress whereas 58.1% had no stress during this pandemic16. Stress and discord in the families during COVID19 pandemic was another highlighted area. 76.5% of our study participants experienced discord and distress among families during this pandemic. Multiple reasons could be there which may include economic or financial reasons, job loss, lockdown and false or multiple information sources regarding COVID19.[23] This pandemic has been characterized as a "perfect storm" of risk factors. These results are consistent with the findings that 65.8% participants felt agitated and irritated in this outbreak.[24]

The study highlighted common experiences among families of Lahore during this COVID-19 pandemic and revealed that this pandemic has economic, social and mental impact on the individuals with mild effects to severe. The use of convenient sampling makes us unable to generalize the results and limited sample size can just represent a portion of the whole population. More research is needed in this area as people are getting frustrated day by day due to COVID variants mutation, financial issues and the rising cases.

Conclusion

The study concluded the impact of COVID-19 pandemic economically, socially and mentally. It showed that this impact is less severe on food affordability which may be because of our religious activities of Zakat, Sadqa and philanthropic acts of food drive as compared to the rest of the population in the world. The impact on employment was severe (20.5%) as more jobs demanded physical presence and this pandemic executed demand of social distancing and online work. Mental state was also much less affected as compared to other populations, due to our close netted customs.

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Authors Contribution

S.H.: Conception and design drafting
A.I.: Data collection and Introduction
M.W.U.: Data collection and analysis
F.A.: Final approval and questionnaire