Levels of Anxiety and Stress during Pandemic of COVID-19 among the General Population of Karachi, Pakistan

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Authors’ contributions

This work was carried out in collaboration among all authors. Authors SS, ZUN designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors SIA, IULH, HA and IA managed the analyses of the study. Authors NK and RF managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Background: The COVID-19 pandemic has affected not only the physical health, but mental health of general population.

Objective: The objective of the study was to assess the anxiety and levels of stress during COVID-19 among the population of Karachi.

Methodology: A cross-sectional study was conducted for the period of 8 months May 2020-
December 2020, the required variables were collected on a questionnaire. Data was analyzed and descriptive statistics was applied using SPSS version 21 with 95% CI.

**Results:** Out of 450 participants, 45.8% males, 54.2% females. The majority (39.1%) of patients were in group of 51-70 years of age. The levels of anxiety were categories in mild (21.5%), moderate (38.2%) severe (15.2%) and no anxiety (25.1%). The contributing factors in stress and anxiety were the fear (68.3%), panic situation by media (58.5%) and stress due to pandemic (64.2%).

**Conclusion:** The pandemic of COVID-19 is a stressful situation which needs a proper management and counselling of community regarding the precautionary measures and guidance to control the psychological parameters.

**Keywords:** COVID-19; pandemic; stress; anxiety.

### 1. INTRODUCTION

The Novel corona virus (n-COV) was recognized as viral agent causing severe respiratory symptom and rapidly spreading from person to person across the world hence led to the pandemic of coronavirus (COVID-19) [1] The pandemic of SARS and H1N1 has greatly affected the general population in the past, similarly the unavailability of appropriate treatment, vaccines, and misleading thoughts of the pandemic made the situation worse [2]. Various preventive measures were adopted initially to prevent the infections and its emergence [3]. The emergence of Pandemic of COVID-19 was initially observed in late 2019, that initiated from the Wuhan China the current pandemic of COVID-19 was observed with the certain psychological effects on population [4]. The symptoms of anxiety were observed among the population at various health care settings, since the hospital are the direct source of information [5] On the other hand the severely anxious individual may present the reluctant behaviors in seeking the medical advices [6]. The high number of visits were observed during the outbreak of COVID-19 to satisfy the self-thoughts [7]. The pandemic carried the challenge to the psychological behavior with few personal concerns of public [8]. The objective of the study was to assess the anxiety among the general population of Karachi.

### 2. METHODOLOGY

A cross sectional study was conducted for the period of 8 months starting from May 2020-December 2020. The data included the socio demographic details including the gender, age, and their personal perception regarding COVID-19. The level of anxiety was categorized into mild, severe, moderate and none with no sign of anxiety. all the possible COVID-19 related stress factors were included into questionnaire to generate the self-exploring relation of anxiety with COVID-19. For data analysis the micro soft excel was used to gather the data and later on, it was analyzed by 95% of confidence interval (CI). with SPSS version 21.

### 3. RESULTS

The data of patients showed 45.8% (n=206) male while 54.2% (n=244) respondents were females. The majority 39.1% (n=176) were with age group between 51-70 years as shown in Table 1.

The level of anxiety was assessed among the participants, which showed that 25.1% (n=114) had no anxiety at all, majority presented the moderate level of anxiety that is 38.2%, (n=172) and 15.2% (n=68) were having severe anxiety issues shown in Table 2.

### Table 1. Sociodemographic details of Participants

| Details of Participants        | Frequency (n) | Percentage (%) |
|-------------------------------|---------------|----------------|
| Gender of respondents         |               |                |
| Male                          | 206           | 45.8%          |
| Female                        | 244           | 54.2%          |
| Age of respondents            |               |                |
| 20-35 years                   | 85            | 19.0%          |
| 36-50 years                   | 154           | 34.3%          |
| 51- 70 years                  | 176           | 39.1%          |
| 71 years and above            | 34            | 7.6%           |
| Locality                      |               |                |
| Residing in rural areas       | 230           | 51.2%          |
| Residing in Urban areas       | 220           | 48.8%          |
During the pandemic the major predictor of severe anxiety were demographic factors, people combating the pandemic and stress, the majority were worried about family and fear of infecting their child and family members and an important concern of feeding their family.

The study also aimed to assess the reason for the anxiety among the individuals during the pandemic situation. The results revealed that practicing the precautionary measure was important during the covid-19 pandemic, to which majority stated they try to practice the precautionary steps as shown in Table 3.

Pandemic related stress factors were assessed through structured questionnaire by asking the participants perception and disruption in their daily life as represented in Fig. 1.

4. DISCUSSION

The presence of any disease/ infection can be a stressful situation in any community, similarly the findings of the current study carried the initial insights on levels of anxiety and all possible predictors of adult-general populations [9-10]. Pandemic situation has a great impact on every group of individual regardless of gender, residential detail, since the pandemic accessed possibly the 80% of countries of world [11-14]. During the early pandemic period of COVID-19 the anxiety was found among majority of population and few associated factors e.g., lockdown, lesser jobs spaces, and panic created

Table 2. Levels of anxiety among Participants

| Levels       | Response to Anxiety | Number of Cases (n) | Percentage (%) | P-value |
|--------------|---------------------|---------------------|----------------|---------|
| Level of anxiety | NO              | 114                 | 25.1%          | 0.05    |
|              | Moderate anxiety    | 172                 | 38.2%          | 0.001   |
|              | Mild anxiety        | 96                  | 21.5%          | 0.600   |
|              | Severe anxiety      | 68                  | 15.2%          | 0.017   |

Table 3. The current status of precautionary measure followed by Participants

| Current status of precaution                                      | Practicing individuals n (%) | Non-practicing individuals n (%) | P-Value |
|------------------------------------------------------------------|------------------------------|---------------------------------|---------|
| Wearing gloves and mask properly                                 | 213 (47.3%)                  | 237 (52.7%)                     | 0.001   |
| Washing hands multiple times, a day                             | 264 (58.6%)                  | 186 (41.4%)                     | 0.0021  |
| Avoid touching the areas/surfaces unnecessary                    | 231 (51.3%)                  | 219 (48.7%)                     | 0.0171  |
| Following the guidelines of media/Tv news                        | 251 (55.8%)                  | 199 (44.2%)                     | 0.0335  |
| Practicing the social distances                                  | 210 (46.8%)                  | 239 (53.2%)                     | 0.034   |
| Avoiding the unhygienic food                                     | 232 (51.7%)                  | 217 (48.3%)                     | 0.216   |

Fig. 1. Stress and contributing factors
by media [15-16]. The prevalence of anxiety found in this study is not remarkably differ from the reported literature around the world. The pandemic is worldwide situation and media coverage plays a huge role in worsening the condition, the panic situation due to news, and the mortality cases shown on TV had made the situation worse [17]. The pandemic is more severe due to high contagious nature of virus as stated by WHO, the general population lacked the knowledge regarding the infection, nature of prevalence and appropriate precautionary to measure to be observed [18]. The possible predictors found in the study were the media news and obtained information possibly from internet and television, such media news is mixture of bad and good impacts on general population [19]. The initial increasing cases has terrified the population, the fear of getting infected was on top amongst the other contributing stress factors [20-21]. A potential pandemic is believed to cause the anxiety among the general population, more than half of the population have indirect contact with medical personals with inadequate approach to health care system [22]. The long-term consequences are crucial which greatly influence the community. Additionally, our finding suggested the high level of anxiety which is in line with a recently reported data on mental health and outcomes during pandemic of COVID-19.

5. CONCLUSION

The study showed that participating individuals had mild to moderate level of anxiety among the general population of Karachi Pakistan. The COVID-19 pandemic has significantly influenced the daily life and mental health of population.

CONSENT

As per international standard or university standard, Participants’ written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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