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Sociodemographic Factors Associated with Fear of COVID-19 in the Pakistani General Population

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With the spread of the coronavirus 19 pandemic, many people around the world have developed high levels of Covid-19 anxiety, which has serious implications for psychological and social adjustment. The aim of this study was to increase knowledge about the level of fear of Covid-19 and associated sociodemographic factors in the general Pakistani population. Respondents included 456 Pakistani adults (62.8% women) completed a self-report questionnaire that included the sociodemographic factors of the Fear of Covid-19 scale. The data showed a significant association between high levels of Fear of Covid-19 and female gender, low educational level, and low socioeconomic status. This result suggests that Covid-19 anxiety is relatively high in Pakistan and generally higher than in other countries (although direct comparison is difficult because of differences in sample composition and data collection period). Finally, anxiety should be monitored in the general population and intervention and prevention strategies should target vulnerable populations.

Keywords. Fear of Covid-19, pandemic, anxiety

In December 2019, the world was surprised by the coronavirus pandemic COVD-19 (World Health Organization, 2021). By June

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2021, there were already more than 4 million deaths due to covid-19 in the world (Abou Ghayde et al., 2022), and the pandemic had a severe impact on the economies of countries around the world, especially for poorer or developing countries (Abodunrin et al., 2020; Nicola et al., 2020; Richards et al., 2022). The severity of the syndrome and the lack of an effective cure or vaccine have forced governments to adopt extraordinary and particularly restrictive preventive measures, such as social distancing, lockdown, closure of public educational institutions (e.g., schools and universities), work and leisure activities, travel restrictions, and commitments to the use of face masks, hand disinfection gels, and limited access to care (Longobardi, 2020; Marengo et al., 2022; Niu et al., 2022; Plümper & Neumayer, 2022).

Economic uncertainty and the severity of COVID-19 infection may have led to the emergence of fears associated with infection in the general population. Indeed, there are reports of people who have begun to isolate themselves and stop socializing to avoid infection (Abuhammad et al., 2021), and of people who have begun to stockpile food, toilet paper, and even weapons (Luo et al., 2021; Skoda et al., 2021). Given the negative impact of COVID-19 and the associated concern for one's survival, fear of COVID -19 could be considered an adaptive response to the context. However, if the fear is not appropriate to the threat, it may lead to a limitation of the person's daily functioning and increase the risk of maladaptation. In this sense, it is important to monitor the level of fear of Covid-19 in the population and determine which groups are most at risk for developing irrational or excessive fears regarding covid-19 infection, as high levels of fear may lead to negative outcomes.

Studies conducted globally during the pandemic suggest that certain demographic factors like gender, age, education, and socioeconomic status may be associated with greater fear of Covid-19. For example, some studies have found that women tend to report higher levels of fear compared to men (Balakrishnan et al., 2022; Lou et al., 2021; Metin et al., 2022). Older adults who are at higher risk from Covid-19 might also experience greater fear (Han et al., 2021; Nicola et al., 2020). Lower education levels and socioeconomic status have also emerged as potential risk factors in some studies (Bitan et al., 2020; Cori et al., 2021).

However, research on fear of Covid-19 in the general Pakistani population has been very limited. One study with medical personnel found high anxiety related to Covid-19 (Khattak et al., 2021). Another study of university students also reported elevated fear levels (Rafiq et al., 2021). But there have been no studies that examined fear of

Covid-19 and associated demographic risk factors specifically in the Pakistani public. This is an important gap, as identifying vulnerable subgroups could inform prevention and intervention efforts.

The aim of the present study was therefore to measure fear of Covid-19 in a sample of the Pakistani general population, and explore whether gender, age, education, and income are associated with greater fear, as has been found in some other cultural contexts. While moderate levels of fear of Covid-19 may encourage people to adopt the right behaviors that reduce the risk of infection (Lou et al., 2021), high levels of fear of Covid-19 tend to be associated with poorer social and psychological adjustment (Alimoradi et al., 2022; Lou et al., 2021; Şimşir et al., 2022). Therefore, it is important to monitor the level of fear of Covid-19 in the population and determine which groups are most at risk for developing irrational or excessive fears regarding covid-19 infection.

Method

Sample

A total of 456 subjects participated in this study. Before the actual study began, a pre-validation of the questionnaire was performed on 25 participants as part of a pilot study. Of the total sample, 174 (38.2%) were male and 282 (61.8%) were female respondents. With respect to age, we followed the classification used in several studies previously conducted in Pakistan general population, distinguishing three main age groups: 18-30, 31-45, and 46-60 (e.g., see Gillani, et al. 2018; Hassan et al., 2019; Malik et al., 2020). Respondents were asked about their age and monthly income. To protect the privacy of participants, data on age and income were collected as categorical variables, that is, as age and income ranges. Both variables were divided into three categories that is for age, respondents were classified in three groups that is 18-30 years (n = 46, 10.1%), 31-45 years (n = 240, 52.6%) , and 46-60 years (n = 170, 37.3%); while for income groups, respondents were categorized in three groups including PKR < 30,000 (n = 243, 53.3%), PKR 30,000-90,000 (n = 168, 36.8%) and PKR > 90,000 (n = 45, 9.9%). In terms of education, respondents could indicate three categories, that is no formal education or primary education; high school to undergraduate education; and postgraduate education. Most participants had a medium level of education (n = 264, 57.9%); while the sample (n = 116, 25.4%) had a high level of education and (n = 76, 16.7%) had a low level of education.

Fear of COVID-19 Scale

The level of fear of Covid-19 among respondents was measured using the validated Fear of Covid-19 Scale (Ahorsu et al., 2020). It comprises seven items and demonstrates a stable unidimensional structure with robust psychometric properties. The scale exhibited satisfactory internal consistency (α = .78). The Fear of COVID-19 Scale prompts participants to express their agreement level with statements through a 5-point Likert-type scale, encompassing responses ranged from *strongly disagree* = 1 to *strongly agree* = 5; and contributing to a total score from 7 to 35 with higher score signifies a greater fear of COVID-19.

Procedure

Beginning with personal contacts of local authors, we employed a snowball sampling approach to extend the reach of our survey. The online cross-sectional survey was carried out among participants from three provinces of Pakistan, namely Punjab, Sindh, and KPK. This survey was conducted during the summer months, specifically from May 2021 to June 2021. Our intention was to capture a diverse representation of the general, non-clinical, population during this time frame and across these geographically distinct regions. The study was conducted in accordance with the Declaration of Helsinki and a formal ethical approval was obtained from the ethics committee of Sialkot University, Pakistan, before the start of the study. The questionnaire was disseminated by using Google forms and distributed to the target groups. Before completing the survey, participants were instructed to read the informed consent form and if they agreed with the written statement, they were allowed to complete the questionnaire. To qualify for inclusion in the study, participants had to meet the following eligibility criteria that is Pakistani citizens aged 18 years or older, and willingly participate in the online survey. The survey was anonymous, and confidentiality of information was ensured.

Results

Data analysis was performed using the SPSS 27 statistical software package. The sample mean score for fear of Covid was 21.04 (SD = 5.79).

Table 1 shows the means and standard deviations of the scores for fear of covid differentiated by gender, age group, monthly income, and education level, respectively.

Table 1

Fear of Covid scores by Gender, Age, Income, and Education Level (N = 456)

Sociodemographic Factors		*n*	*M*	*SD*	*F* (*df1*,*df2*)	η^2
Gender	Men	174	20.01	5.91	9.16* (1, 454)	.02
	Women	282	21.68	5.63		
Age	18-30 Years	46	21.13	5.67	0.05 (2, 453)	< .001
	31-45 Years	240	20.96	5.74		
	46-60 Years	170	21.14	5.93		
Monthly Income	<30,000	243	21.57	5.73	9.34* (2, 453)	.04
	30,000-90,000	168	21.20	5.88		
	> 90,000	45	17.60	4.60		
Education	Low	76	21.85	6.01	7.73* (2, 453)	.03
	Medium	264	21.59	5.71		
	High	116	19.25	5.49		

*$p < .01$.

Comparisons between groups were made using the one-way method ANOVA, with the covid anxiety score as the dependent variable and the sociodemographic categorical variables as predictors. As shown in the Table, females reported higher fear scores compared to males, with the difference being statistically significant. In terms of age groups, the differences were not statistically significant, as reflected by the low F-value and negligible effect size, indicating a relatively uniform distribution of fear scores across ages 18–60 year old. The analysis of monthly income revealed that individuals with the highest income exhibited the lowest fear scores, a trend significantly different from lower income groups. The effect sizes associated with these differences are mostly small indicating that the differences that were found were not of substantial magnitude.

Discussion

The primary objective of our study was to enhance our understanding of the prevalence of fear of Covid-19 in the general Pakistani population and to identify the associated sociodemographic factors. Our findings suggest that adults in Pakistan tend to express higher levels of fear of Covid-19 compared to populations in Saudi

Arabia (Alyami et al., 2021), Spain (Sánchez-Teruel et al., 2022), Latin America (Caycho-Rodríguez et al., 2021), Russia, and Belarus (Reznik et al., 2021). While direct comparisons are challenging due to variations in sample composition and data collection periods across studies, our results align with existing literature proposing that Asian countries, being among the first affected, are particularly susceptible to fear of Covid-19 (Luo et al., 2021).

Furthermore, our study reveals significant associations with certain sociodemographic factors. In line with prior research (Lou et al., 2021; Metin et al., 2022), our findings indicate that the female gender is linked to higher levels of fear of Covid-19 in the Pakistani population. This aligns with international literature suggesting that females are more prone to developing heightened fear of Covid-19 infection. Additionally, our research establishes a noteworthy association between fear of Covid-19, educational level, and socioeconomic status. Specifically, elevated levels of fear of Covid-19 are correlated with lower levels of education and economic status. These results are consistent with current literature indicating that individuals with lower economic status (Bitan et al., 2020; Cori et al., 2021; Sathe et al., 2020) and lower levels of education (Cori et al., 2021; Elsharkawy & Abdelaziz, 2021; Mahamid et al., 2020) tend to experience higher levels of Covid-19 anxiety.

It is plausible that higher levels of education and economic resources equip individuals with the tools to adapt better to the pandemic context, thereby aiding in coping with the challenges of Covid-19 infection and contributing to lower levels of fear compared to other groups. Finally, our study did not identify a significant association between fear of Covid-19 and age. This finding is intriguing, as one might expect older individuals to be more prone to reporting fear of Covid-19 due to their increased susceptibility to viral infections. However, our findings are in line with the emerging trend in the literature, which indicates a nonsignificant association between fear of Covid-19 and age (Lou et al., 2021; Metin et al., 2022).

Despite the novelty of our study, the results must be considered with some methodological limitations. The limited sample size and the different gender distribution make it difficult to generalize the data obtained. Therefore, future studies could include larger, more representative, and gender-balanced samples. Furthermore, we have only collected the data on the basis of self-reporting. As a result, the data may be biased by factors such as social desirability, memory or text comprehension. Future studies could use other data sources, such as outside observers and other types of instruments (e.g., semi-structured interviews) to confirm or refute our findings. Finally, our

study included few sociodemographic variables and no psychological or attitudinal variables that could contribute to the understanding of the phenomenon under study. Future studies could replicate the survey by considering additional sociodemographic factors, such as place of residence (e.g., small villages or urban areas), or including psychological and attitudinal variables, such as resilience, social support, or coping strategies, which could help shed light on the more nuanced mechanisms contributing to perceived fear of Covid-19.

Implications

The study findings have important ramifications for Pakistani public health and policymaking, as well as maybe other comparable situations. Given that women tend to suffer higher levels of emotional discomfort and terror, gender-sensitive mental health therapies and communication tactics are necessary. Furthermore, the correlation between reduced socioeconomic and educational standing and heightened fear connected to pandemics highlights the significance of providing specific assistance and educational initiatives for these populations. Enhancing access to resources, information, and coping mechanisms should be the main goal of these interventions to lessen the psychological effects of public health emergencies.

Conclusion

In conclusion, our study provided the first evidence of the level of fear covid-19 in the general population of Pakistan, which is high compared with other Western countries. Moreover, our study revealed that female gender, low education, and low socioeconomic status were sociodemographic factors significantly associated with higher levels of covid-19 phobia. Consistent with our data, we suggest that it is important to monitor fear of covid-19 and develop prevention and support strategies for individuals potentially at risk.

References

Abodunrin, O., Oloye, G., & Adesola, B. (2020). Coronavirus pandemic and its implication on global economy. *International Journal of Arts, Languages and Business Studies*, *4*(1), 13-23.

Abou Ghayda, R., Lee, K. H., Han, Y. J., Ryu, S., Hong, S. H., Yoon, S., ... & Shin, J. I. (2022). The global case fatality rate of coronavirus disease 2019 by continents and national income: A meta-analysis. *Journal of Medical Virology*, *94*(6), 2402-2413. doi.10.1002/jmv.27610

Abuhammad, S., Alzoubi, K. H., & Khabour, O. (2021). Fear of COVID-19 and stigmatization towards infected people among Jordanian people. *International Journal of Clinical Practice*, *75*(4), e13899.

Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The fear of COVID-19 scale: Development and initial validation. *International Journal of Mental Health and Addiction*, *20*, 1537-1545 (2022). doi.org/10.1007/s11469-020-00270-8.

Alimoradi, Z., Ohayon, M. M., Griffiths, M. D., Lin, C. Y., & Pakpour, A. H. (2022). Fear of COVID-19 and its association with mental health-related factors: Systematic review and meta-analysis. *British Journal of Psychology Open*, *8*(2), 73-80.

Alyami, M., Henning, M., Krägeloh, C. U., & Alyami, H. (2021). Psychometric evaluation of the Arabic version of the Fear of COVID-19 Scale. *International Journal of Mental Health and Addiction*, *19*, 2219-2232 (2021). doi.10.1007/s11469-020-00316-x

Balakrishnan, V., Ng, K. S., Kaur, W., Govaichelvan, K., & Lee, Z. L. (2022). COVID-19 depression and its risk factors in Asia Pacific: A systematic review and meta-analysis. *Journal of Affective Disorders*, *298*(1), 47-56. doi.10.1016/j.jad.2021.11.048

Banerjee, D. (2020). The other side of COVID-19: Impact on obsessive compulsive (OCD) and hoarding. *Psychiatry Research*, *288*, 112966. doi.10.1016/j.psychres.2020.112966

Bitan, D. T., Grossman-Giron, A., Bloch, Y., Mayer, Y., Shiffman, N., & Mendlovic, S. (2020). Fear of COVID-19 Scale: Psychometric characteristics, reliability and validity in the Israeli population. *Psychiatry Research*, *289*, 113100. doi.10.1016/j.psychres.2020.113100

Caycho-Rodríguez, T., Valencia, P. D., Vilca, L. W., Cervigni, M., Gallegos, M., Martino, P., & Burgos, V. C. (2021). Cross-cultural measurement invariance of the fear of COVID-19 scale in seven Latin American countries. *Death Studies*, *46*(8), 2003-2017, doi.10.1080/074 81187.2021.1879318

Cori, L., Curzio, O., Adorni, F., Prinelli, F., Noale, M., Trevisan, C., ... & Bianchi, F. (2021). Fear of COVID-19 for individuals and family members: Indications from the national cross-sectional study of the epicovid19 web-based survey. *International Journal of Environmental Research and Public Health*, *18*(6), 3248. doi.10.3390/ijerph18063248

Elsharkawy, N. B., & Abdelaziz, E. M. (2021). Levels of fear and uncertainty regarding the spread of coronavirus disease (COVID-19) among university students. *Perspectives in Psychiatric Care*, *57*(3), 1356-1364. doi.10.1111/ppc.12698

Gillani, A. H., Amirul Islam, F. M., Hayat, K., Atif, N., Yang, C., Chang, J., & Fang, Y. (2018). Knowledge, attitudes and practices regarding diabetes in the general population: A cross-sectional study from Pakistan. *International Journal of Environmental Research and Public Health*, *15*(9), 1906. doi.10.3390/ijerph15091906

Han, M. F., Mahendran, R., & Yu, J. (2021). Associations between fear of COVID-19, affective symptoms, and risk perception among community-dwelling older adults during a COVID-19 lockdown. *Frontiers in Psychology*, *12*, 638831.

Hassan, N., Muazzam, A., & Anjum, A. (2019). Development and Validation of Scale for Neuro-Psychological and Physiological Side Effects of Interferon Therapy (NPPSI) in HCV Patients. *Pakistan Journal of Social and Clinical Psychology*, *17*(2), 40-49.

Khattak, S. R., Saeed, I., Rehman, S. U., & Fayaz, M. (2021). Impact of fear of COVID-19 pandemic on the mental health of nurses in Pakistan. *Journal of Loss and Trauma*, *26*(5), 421-435. doi.10.1080/15325024.2020.1814580

Longobardi, C., Morese, R., & Fabris, M. A. (2020). COVID-19 emergency: social distancing and social exclusion as risks for suicide ideation and attempts in adolescents. *Frontiers in Psychology*, *11*, 551113. doi.10.3389/fpsyg.2020.551113

Luo, F., Ghanei Gheshlagh, R., Dalvand, S., Saedmoucheshi, S., & Li, Q. (2021). Systematic review and meta-analysis of fear of COVID-19. *Frontiers in Psychology*, *12*, 661078. doi.10.3389/fpsyg.2021.661078

Mahamid, F., Bdier, D., & Berte, D. (2022). Psychometric properties of the Fear of COVID-19 Scale (FCV-19S) in a Palestinian context. *Journal of Muslim Mental Health*, *16*(1), 24-30. doi.10.3998/jmmh.400

Malik, B. Z., ur Rehman, Z., Khan, A. H., & Akram, W. (2020). Women's mobility via bus rapid transit: Experiential patterns and challenges in Lahore. *Journal of Transport & Health*, *17*, 100834. doi.10.1016/j.jth.2020.100834

Marengo, D., Fabris, M. A., Longobardi, C., & Settanni, M. (2022). Smartphone and social media use contributed to individual tendencies towards social media addiction in Italian adolescents during the COVID-19 pandemic. *Addictive Behaviors*, *126*, 107204. doi.10.1016/j.addbeh.2021.107204

Metin, A., Erbiçer, E. S., Şen, S., & Çetinkaya, A. (2022). Gender and COVID-19 related fear and anxiety: A meta-analysis. *Journal of Affective Disorders*, *310*, 384-395. doi.10.1016/j.jad.2022.05.036

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., ... & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, *78*, 185-193. doi.10.1016/j.ijsu.2020.04.018

Niu, G., Jin, S., Xu, F., Lin, S., Zhou, Z., & Longobardi, C. (2022). Relational victimization and video game addiction among female college students during COVID-19 pandemic: The roles of social anxiety and parasocial relationship. *International Journal of Environmental Research and Public Health*, *19*(24), 16909. doi.10.3390/ijerph192416909

Plümper, T., & Neumayer, E. (2022). Lockdown policies and the dynamics of the first wave of the Sars-CoV-2 pandemic in Europe. *Journal of European Public Policy*, *29*(3), 321-341. doi.10.1080/13501763.2020.1847170

Rafiq, N., Rafique, S., Griffiths, M. D., & Pakpour, A. H. (2021). Fear of COVID-19 Among Undergraduate and Postgraduate Students in Pakistan. *Trends in Psychology*, *66*(1), 1-16. doi.10.1007/s43076-021-00115-w

Reznik, A., Gritsenko, V., Konstantinov, V., Khamenka, N., & Isralowitz, R. (2021). COVID-19 fear in Eastern Europe: validation of the fear of COVID-19 scale. *International Journal of Mental Health and Addiction*, *19*(5), 1903-1908. doi.10.1007/s11469-020-00283-3

Richards, F., Kodjamanova, P., Chen, X., Li, N., Atanasov, P., Bennetts, L., & El Khoury, A. C. (2022). Economic Burden of COVID-19: A Systematic Review. *Clinic Economics and Outcomes Research: CEOR*, *14*(1), 293-307. doi.10.2147/CEOR.S338225

Sánchez-Teruel, D., Robles-Bello, M. A., Lara-Cabrera, M., & Valencia-Naranjo, N. (2022). Gender implications of the Fear of COVID-19 Scale in the Spanish population: A validation study. *Psychological Trauma: Theory, Research, Practice, and Policy*, *14*(2), 258-265. doi.10.1037/tra0001062

Sathe, H. S., Mishra, K. K., Saraf, A. S., & John, S. (2020). A cross-sectional study of psychological distress and fear of COVID-19 in the general population of India during lockdown. *Annals of Indian Psychiatry*, *4*(2), 181-189.

Şimşir, Z., Koç, H., Seki, T., & Griffiths, M. D. (2022). The relationship between fear of COVID-19 and mental health problems: A meta-analysis. *Death Studies*, *46*(3), 515-523. doi.10.1080/07481187.2021.1 889097

Skoda, E. M., Bäuerle, A., Schweda, A., Dörrie, N., Musche, V., Hetkamp, M., & Weismüller, B. (2021). Severely increased generalized anxiety, but not COVID-19-related fear in individuals with mental illnesses: A population based cross-sectional study in Germany. *International Journal of Social Psychiatry*, *67*(5), 550-558. doi.10.1177/0020764020960773

World Health Organization (2021). *World Report*. Retrieved From https://www.who.int/news-room/detail/08-04-2020who-timeline-covid-19

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