Original research article

A Novel Questionnaire-Based Study to Assess the Psychosocial Impact of the COVID-19 Pandemic on the Population of India

Dr. Neha Jain[1], Dr. Mona Bedi[2], Dr. Nishtha Passey[3], Dr. Vishakha[4], Dr. VP Varshney[5]

[1,3]Senior Resident, Department of Physiology, MAMC, New Delhi, India

[2]Director Professor, Department of Physiology, MAMC, New Delhi, India

[4]Assistant Professor, Department of Physiology, UCMS, Delhi, India

[5]HOD & Director Professor, Department of Physiology MAMC, New Delhi, India

Corresponding Author: Dr. Vishakha

Abstract

Background: Amidst the greatest global challenge of COVID-19 to the mankind in recent times, this study was aimed to use a *novel COVID-19 Pandemic Mental Health Questionnaire (CoPaQ)* to investigate the psychosocial impact of COVID-19 pandemic on general Indian population after the disease has made an impact in the Indian subcontinent.

Aim: This study compared the psychosocial impact of the COVID-19 pandemic on the frontline healthcare workers and the general population using CoPaQ.

Materials and Methods: A questionnaire-based survey (novel CoPaQ questionnaire) was given as an online "Google form" (in English) to all the participants (N=235). The subjects of both genders, aged > 18yrs, following the inclusion and exclusion criteria, were recruited into Group 1 (n=120; the frontline healthcare workers) and Group 2 (n=115; from the general population), and the responses were compared.

Results: The baseline demographic parameters were comparable in both the groups, except that the proportion of younger patients (18-24 years) (40% vs 27.83%, p=0.04) and males (59% vs 41% p=0.005) was significantly higher in Group 1. With respect to the functional parameters related to psychosocial impact, a greater level of anxiety related to risk perception was observed in Group 1 (healthcare workers) (p=0.005). There was no significant difference in terms of obsessive-compulsive behaviour, depression, sleep disorders, general levels of media awareness, and the general sensitivity to surroundings in both the groups.

Conclusions: This study helps to identify that the mental health domain most frequently affected by COVID – 19 in healthcare workers is that of anxiety and worriedness related to risk perception, as compared to the general population. The study also helps to contradict the usual belief of anticipating greater psychosocial stress in healthcare workers than the general population. Overall, using the novel CoPaQ, the psychosocial impact of COVID 19 pandemic seems to be comparable in both the groups.

Key words: Novel COVID-19 Pandemic Mental Health Questionnaire (CoPaQ), Psychosocial impact, health care workers, general Indian population.

1.1 Introduction:

India helmed a robust response to the novel coronavirus disease incredibly early, following the news of an outbreak in China in January 2020. As India registered its first COVID-19 case on 30 January 2020, the Government declared a health emergency. The response to an outbreak of this severity and seriousness required a collaborative and participative approach.

During the initial stages of COVID-19 in India, almost one-third respondents had a significant psychological impact (1). This indicates a need for more systematic and longitudinal assessment of psychological needs of the population, which can help the government in formulating holistic interventions for affected individuals. However, psychological ramifications of the pandemic in the otherwise physically healthy healthcare workers have not yet been well studied. This study measures the psychosocial burden on the HCW in comparison to the general population.

1.2 Aim & objective: This study aimed to compare the psychosocial impact of the COVID-19 pandemic on the study population that included healthcare workers (frontline workers-Doctors & Nurses) and the general population.

1.3 Materials and methods:
The present study was a descriptive cross-sectional study conducted in the tertiary care hospital, for a period of 5 months, from April 2020 - September 2020. Subjects were divided into 2 groups based on the inclusion and exclusion criteria. Only the trained health workers (Doctors and Nurses) from a tertiary care hospital who were posted in COVID wards/clinics at the time of the study were recruited in Group 1, while the participants in Group 2 were recruited from the general population.

Inclusion criteria
- Age group: > 18 years - 55 years, both genders.
- For Group 2 – Minimum educational qualification required was to be a graduate from any profession to comprehend the google form in English and closely match the psychological interpretations with Group 1.

Exclusion criteria
- H/o any psychiatric illness or chronic disease like diabetes, hypertension or COPD, diagnosed prior to the onset of COVID-19 pandemic.
- H/o substance abuse (smoking, alcohol etc.)
- H/o antidepressants or any long-term medications.
- Pregnant and lactating females.

Sample size: Considering the existing data and based on our objective, a minimum sample size of 100 was proposed in each group. Prevalence of anxiety and depression during the COVID-19 pandemic have been reported as 46.04% and 44.67% respectively in health care workers[(2)], and 71.80% and 24.70% respectively in general population.[(3)] Taking the lowest of these values and using the following formula:
$N = Z_\alpha^2 \times p^2 \times q^2 / l^2$, where $Z_\alpha = 1.96$, $p = 0.2$, $q = 0.8$, l (allowable absolute error) $= 0.05$,
120 healthcare workers and 115 subjects from the general population were considered for the study.

Sampling technique: No sampling frame was available for the population universe. Also, in view of the current pandemic situation, meeting the study population in person and recruiting them for inclusion in the study was not feasible. Hence convenience sampling was done for selecting the sample. All available direct contacts of the investigators of this study, meeting the eligibility criteria, were included in the study.

Study tools: Partly pre-designed, semi-structured, pre-tested, online, self-administered questionnaire, which will include the following parts:

- Socio-demographic information
- Health related information
- COVID-19 related information
- COVID-19 related mental health questions, based on the COVID-19 Pandemic Mental Health Questionnaire (CoPaQ)

Method of data collection: Due to the present pandemic, conducting face-to-face interviews was not possible. Hence, the present study was a questionnaire-based study given as an online "Google form" in English to all the participants. The questionnaire, including informed consent, was incorporated into Google forms and circulated through online platforms i.e. E-mail, WhatsApp, etc. Two reminders were given at one-week intervals, to those who did not revert within a week, failing which no further reminders were given.

Initially at study entry, a patient information sheet, an online informed consent, and data - including a thorough history taking (demographic & clinical) were obtained; followed by an online self-administered questionnaire at the same time. The response options "yes' or "no" or responses rated from 0-4, were considered as a reliable response of the subject.

The COVID-19 Pandemic Mental Health Questionnaire (CoPaQ) is a novel self-administered questionnaire specific to COVID-19. We used a modified questionnaire based on the English long version of CoPaQ questionnaire. It took about 10 minutes to complete it.

Considering the ongoing pandemic at the time of study, a fast-track ethical clearance was obtained from the departmental scientific review committee.

Statistical analysis:

The data was compiled and analysed using MS Excel (R) office 365, GraphPad prism 8.4.2 and SPSS version 25. Analysis of the questionnaire was based on moderate-to-high correlations between the scores in each domain of our instrument and the corresponding questionnaire. Descriptive statistics were presented in the form of proportions/percentages for categorical variables and median/Interquartile range (along with mean & standard deviation wherever necessary) for continuous data. Fisher Exact test/Chi square test was used for the comparison of proportions (Categorical variables). Continuous variables were analysed using the Mann Whitney test (Independent group/Unpaired data) assuming non-normal distribution/ordinal data. p-value of <0.05 was considered significant.

1.4 Results:

1. Baseline demographic parameters (Table 1)

A comparison of the baseline demographic factors has been shown in Table 1 (Domains 1-8). The proportion of younger patients (18-24 years) (40% vs 27.83%, P=0.04) and males (59% vs 41% P=0.005) was significantly higher in Group 1. The two groups were similar in terms of distribution based on marital status and type of family. There was no significant difference between the two groups in terms of alcohol intake, status of COVID 19, history of COVID and those under quarantine. Both the groups did not report significant mortality in their locality/close contacts at the time of the study.

Table 1: Comparison of baseline demographic parameters

Parameters	Group 2		Group 1		P value
	Number	%	Number	%	
Age					
18-24	32	27.83%	48	40.00%	**0.04**
25-44	69	60.00%	41	34.17%	**0.0001**
45-64	14	12.17%	30	25.00%	**0.01**
Above 65	0	0.00%	1	0.83%	0.33
Grand Total	115	100.00%	120	100.00%	
Gender					
Female	67	58.26%	49	40.83%	**0.008**
Male	47	40.87%	71	59.17%	**0.005**
Other	1	0.87%	0	0.00%	0.31
Grand Total	115	100.00%	120	100.00%	
Marital status					
Live in	0	0.00%	1	0.83%	0.33
Married & living together	56	48.70%	59	49.17%	0.94
Married but living separately	5	4.35%	1	0.83%	0.08
Unmarried	54	46.96%	59	49.17%	0.73
Grand Total	115	100.00%	120	100.00%	
Type of family					
Joint family	46	40.00%	47	39.17%	0.89
Nuclear family	64	55.65%	69	57.50%	0.77
Single- Parent Family	5	4.35%	4	3.33%	0.68
Grand Total	115	100.00%	120	100.00%	
Alcohol intake					
No	103	89.57%	107	89.17%	0.92
Yes	12	10.43%	13	10.83%	
Grand Total	115	100.00%	120	100.00%	
Status of COVID 19 like symptoms					
Do not know	3	2.61%	3	2.50%	0.96
No	107	93.04%	108	90.00%	0.40
Yes	5	4.35%	9	7.50%	0.31
Grand Total	115	100.00%	120	100.00%	
7a. History of COVID					
Do not know	4	3.48%	4	3.33%	0.95
No	106	92.17%	107	89.17%	0.43
Yes	5	4.35%	9	7.50%	0.30
Grand Total	115	100.00%	120	100.00%	
7b. Currently under Quarantine					
No	110	95.65%	112	93.33%	0.44
Yes	5	4.35%	8	6.67%	
Grand Total	115	100.00%	120	100.00%	
7c. Mortality in close contacts					

Do not know	1	0.87%	9	7.50%	**0.01**
No	100	86.96%	88	73.33%	**0.01**
Yes	14	12.17%	23	19.17%	0.14
Grand Total	115	100.00%	120	100.00%	
8a. History of psychiatric illness					
No	105	91.30%	113	94.17%	0.39
Yes	10	8.70%	7	5.83%	
Grand Total	115	100.00%	120	100.00%	
8b. Ongoing therapy/medication treatment for the psychiatric illness or otherwise					
No	114	99.13%	120	100.00%	0.31
Yes	1	0.87%	0	0.00%	
Grand Total	115	100.00%	120	100.00%	

2. Comparison of psychosocial parameters (Table 2)

Table 2: Functional/Mental component comparison

	Group 1			Group 2			
Functional parameter	**Med**	**Q1**	**Q3**	**Med**	**Q1**	**Q3**	**P value**
9. "I am worried that…"							
I will infect myself with COVID-19.	1	0.75	2	1	0	2	0.07
People close to me are infected with COVID-19	1	0.75	2	1	0	2	**0.001**
I will infect other people with COVID-19	1	0	2	0	0	1.5	**0.0005**
The consequences of the COVID-19 pandemic will greatly affect me personally	1	0.75	2	1	0	2	0.08
In case of infection with COVID-19 the consequences for my health will be severe	1	0	2	1	0	1.5	**0.005**
I will die of COVID-19	0	0	1	0	0	0	**0.007**
People close to me will die of COVID-19	1	0	2	0	0	1	**0.002**
10. How necessary and useful do you consider the following behaviour since the COVID 19 pandemic?							
Hygienic measures like a) keeping at least 1.5 metres distance from other people	3	3	4	3	2	4	0.57
Coughing or sneezing into the crook of your arm or into a handkerchief	3	3	4	3	2	4	0.39
Not touching mouth, eyes, or nose with hands	3	2	4	3	2	4	0.11
Regular and extensive washing of hands (for at least 30 seconds)	3	3	4	3	2	4	0.25

Wearing a facemask whenever go outside	3	3	4	3	2	4	0.37
Reduction of social contacts such as: a) cancelling private meetings, family visits or trips	3	2	4	3	2	4	0.61
Avoiding visits to canteens, restaurants, cinema halls or religious places	3	3	4	3	2	4	0.27
Avoiding touching (e.g., shaking hands or hugging) when greeting or saying goodbye to other people	3	3	4	3	2	4	0.25
Moving your work to home office	2	1	4	3	1.5	4	0.31
11. To what extent have you adhered to the following COVID-19 pandemic measures over the past two weeks?							
Hygiene measures	3	3	4	4	3	4	0.92
Reduction of social contacts	3	3	4	3	3	4	0.70
Curfews	3	2	4	3	2	4	**0.04**
12. "Because of the COVID-19 pandemic, over the past 14 days I..."							
Have had fearful dreams/nightmares directly/indirectly related to the COVID-19 pandemic .	0	0	1	0	0	1	0.58
Have avoided reminders of the experience of COVID-19 (e.g., thoughts, feelings, or physical sensations).	1	0	2	0	0	2	0.79
Have been “super-alert”, watchful, or on guard.	2	1	3	2	0.5	3	0.48
Have suffered from severe anxiety attacks (panic) with physical symptoms (e.g., palpitations, chest pain, dizziness).	0	0	1	0	0	1	0.60
Have suffered from sleep problems, such as: difficulty falling asleep (< 30 minutes), irregular sleep or early morning awakening	0	0	1	0	0	1	0.34
Felt or behaved in a more irritable, rageful, angry manner.	0	0	2	1	0	1	0.56
13. “Over the past 14 days I..."							
Have consumed substantially more alcohol than usual.	0	0	0	0	0	0	0.40
Have smoked considerably more cigarettes than usual.	0	0	0	0	0	0	-
Have consumed considerably more drugs (e.g., tranquilizers, sleeping pills or stimulants) than usual.	0	0	0	0	0	0	-

Have felt a strong urge to consume alcohol, cigarettes, drugs	0	0	0	0	0	0	-
Have had the excessive urge to wash and/or disinfect my hands again and again so that I do not become ill from germs or contamination.	1	0	2	0	0	2	0.84
Have consulted my doctor more often	0	0	0	0	0	0	0.60
14. Because of the COVID-19 pandemic, over the past 14 days I have felt stressed or burdened a lot by…							
The current pandemic.	1	0	2	1	0	2	0.22
Living in a small accommodation.	0	0	1	0	0	0.75	**0.005**
Being in quarantine.	0	0	1	0	0	1	0.41
Childcare	0	0	1	0	0	1	0.32
The curfew.	0	0	1	0	0	1	0.08
Worries of not being able to get medical care.	0	0	1	0	0	1	0.74
Worries about being sick with COVID-19 when I noticed first signs of symptoms such as fever, dry cough, breathing problems, sore throat, loss of smell/taste, headache, or diarrhoea.	1	0	2	1	0	2	0.22
Increased conflicts with people close to me.	0	0	1	0	0	1	0.25
Financial worries.	0	0	2	1	0	2	0.26
Uncertainties regarding my job, training place, studies, or school.	1	0	2	1	0	2	0.34
Fears of what the future will bring, or that I will not be able to cope with everything.	1	0	2	1	0	2	0.71
Thoughts that it would be better to be dead.	0	0	0	0	0	0	0.74
15. "Since the COVID-19 pandemic, I..."							
Have maintained a regular daily routine.	2	1	3	2	1	3	0.54
Have integrated sports and exercise into my daily life.	2	1	3	2	1	3	0.71
Have maintained my social contacts (telephone, visits, or video chats)	3	2	3	2	1	3	0.52
Have had more conflicts with people close to me.	0	0	1	0	0	2	0.29
Have experienced becoming a victim of domestic violence.	0	0	0	0	0	0	-

Have experienced single or multiple abortions.	0	0	0	0	0	0	-
Have felt more hopeful that the corona-crisis will soon be over.	1.5	1	2	2	1	3	**0.008**
Have sought stability in faith and/or religion.	1	0	2	1	0	3	0.76
Have focused on my inner strengths, resources, abilities, and talents.	2	1	3	2	1	3	0.76
Have changed my attitudes about what is important to me in life.	2	1	3	2	1	3	0.99
Have acknowledged and accepted the COVID-19 pandemic as reality.	3	2	4	3	2	4	0.07
16. "Since COVID 19 pandemic, I..."							
Have carried out an increased amount of research about the COVID-19 pandemic via the Internet.	2	1	2	2	1	3	0.63
Have tried to restrict my COVID-19 related media consumption (news & notifications).	1	1	3	1	0.5	3	0.51
Have felt burdened by media images of or news reports about COVID-19.	2	1	3	2	0	3	0.25
17. "Since COVID 19 pandemic, I..."							
Have had the feeling that the rules we now need to follow are there to make my life miserable	1	0	2	1	0	2	0.67
Have had the feeling that public institutions (e.g., police, judiciary) can be relied upon	2	1	2	1	1	2	0.16
Have worried about our economic development.]	2	1	3	2	1	3	0.91
Have had the feeling that false reports or untruths about the COVID-19 pandemic are being deliberately disseminated on public broadcasting (e.g., radio and television stations).]	2	1	3	2	1	3	0.90
Have had the feeling that people looked at me as if I have got coronavirus and kept a greater distance from me deliberately	1	0	1.25	0	0	2	0.49
Have had the belief that what is happening here is the effect of a struggle or competition between	1	0	2.25	1	0	2.5	0.55

different superpowers as a biological weapon.]							
Have had the belief that this infection serves to deliberately reduce the world population, since there are no longer enough resources for everyone.	0.5	0	2	1	0	2	0.14

A. Levels of worriedness (Domain 9, Figure 1)

A comparison of the functional parameters showed that the level of concern amongst Group 1 (healthcare workers) in terms of levels of worriedness related to various COVID 19 aspects was significantly higher compared to Group 2. There was significantly higher concern amongst Group 1 with respect to infecting themselves and their closed ones. The levels of worriedness in Group 1, especially in case of infection with COVID-19 and likely severe consequences on their health were significant (P=0.005). In the same group, the fear of death secondary to COVID 19 for self (P=0.007) and for people close to them (P=0.002) was significantly higher.

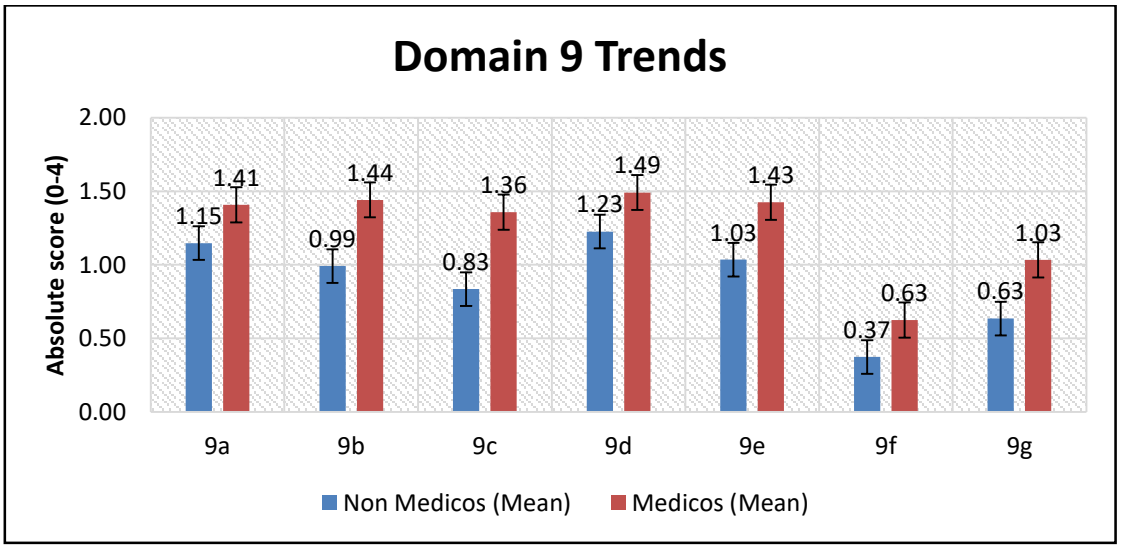

Figure 1. Comparison of mean scores to highlight the intergroup differences (Group 1 *(red)* frontline healthcare workers Vs Group 2 *(blue)* for the level of worriedness/anxiety due to risk perception (as in Q9/Domain 9 in table 2) ($p < 0.05$)

B. Behavioural aspect (Domain 10)

There was no difference in terms of perception related to need and usefulness of COVID appropriate behaviours since the onset of the pandemic, amongst the two groups.

C. Adherence to COVID 19 pandemic measures (Domain 11)

There was a similar level of agreement between the two groups related to the COVID19 pandemic measures adherence.

D. Mental health Impact over the past 14 days preceding the filling of questionnaire (Domain 12 & 13, Figure 2)

The extent of impact on mental health was similar amongst the two groups. Both the groups did not show any significant difference in substance abuse (like alcohol and smoking) or obsessive-compulsive behaviour such as an urge for obsessive washing and/or disinfecting hands out of fear of contamination or becoming ill.

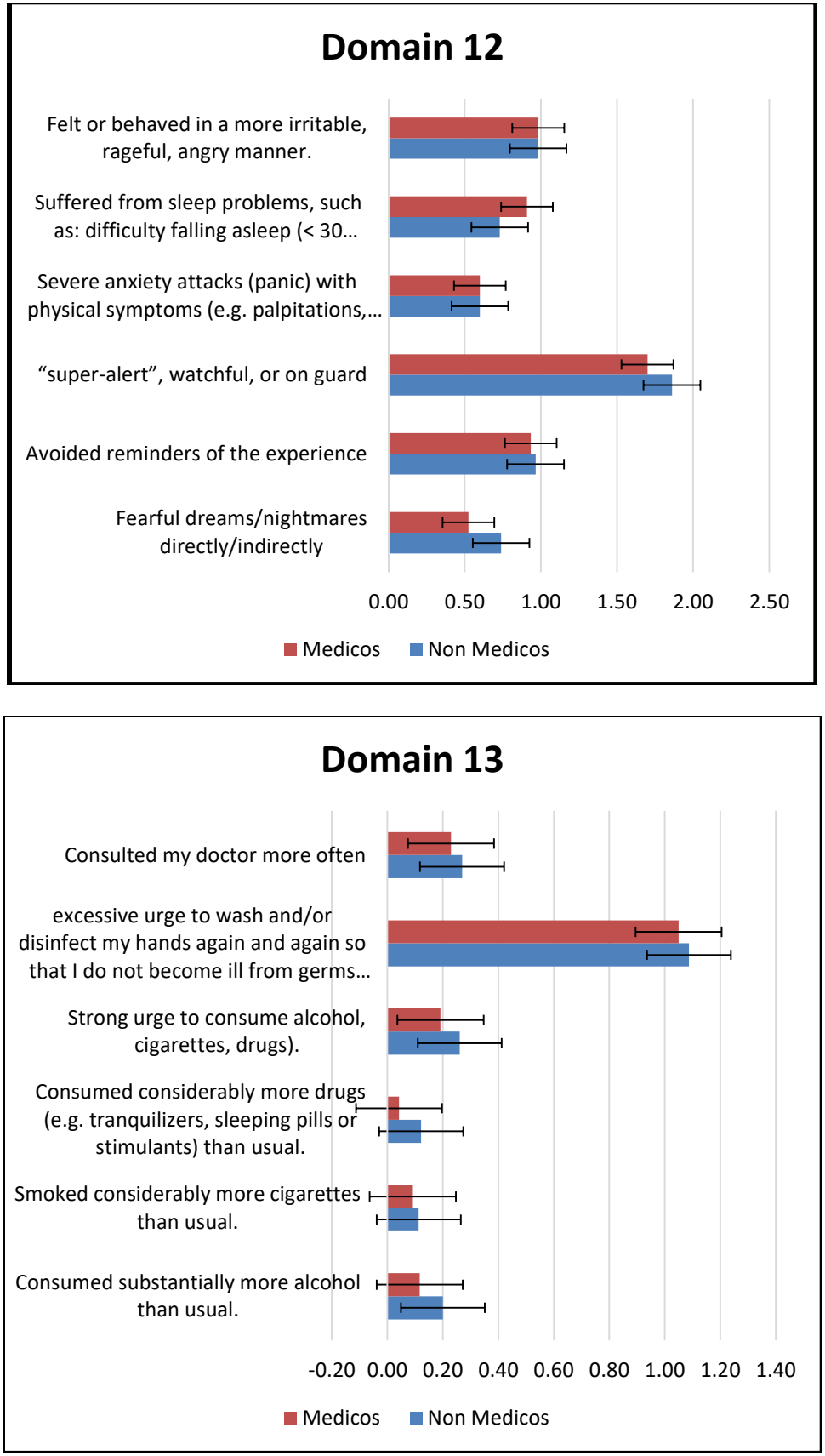

Figure 2. Comparison of mean scores to highlight the *general trends* in Group1 (*in red*) Vs Group2 (*in blue*) for the extent of impact on mental health (as in Q12 & 13/Domain 12 & 13 in table 2) (p >0.05)

E. Stress over the past 14 days (Domain 14)

The overall stress of staying in a small accommodation was perceived to be significantly higher amongst the healthcare workers compared to the general population (P=0.005).

F. Expected impact outcomes since COVID 19 started (Domain 15)

It was seen that general perception that everything will be over soon, was significantly lower amongst the healthcare workers as compared to the general population (P=0.008).

G. General levels of media awareness (Domain 16)

The general levels of media awareness were high and comparable amongst the two groups.

H. General sensitivity to surroundings (Domain 17)

There was a comparable sensitivity to matters of concern regarding the government, public institutions and international diplomacy, amongst the two groups with no statistically significant difference.

1.5 Discussion:

To the best of our knowledge, this is the first Indian study using the novel CoPaQ questionnaire to understand the psychosocial impact of the COVID-19 outbreak in the health care workers as compared to the general Indian population.

Our results indicate that with respect to the functional parameters related to psychosocial impact, *a significant level of anxiety related to risk perception* was observed in healthcare workers, while there was no significant difference in terms of obsessive-compulsive behaviour, depression, sleep disorders, general levels of media awareness and consumption along with self-research, and the general sensitivity to surroundings in healthcare workers as compared to the general population. The findings of the study are in contradiction to the anticipated belief of higher mental stress in healthcare workers, but in congruence with the study conducted by Zhang et al. who also reported a mild stressful impact on the general population owing to the ongoing pandemic (4). However, a review aimed at summarizing the evidence of the physical and mental health impacts of COVID-19 pandemic on health-care workers (HCWs) identified that HCWs experienced high levels of depression, anxiety, insomnia, and distress. They concluded that the frontline healthcare workers are at risk of physical and mental consequences directly, because of providing care to patients with COVID-19 (5).

Various studies have been conducted to understand the mental burden in the population due to the ongoing pandemic utilizing multiple depression anxiety and stress scales (6–8). The COVID-19 Pandemic Mental Health Questionnaire (CoPaQ) is a newly developed and highly comprehensive self-report measure of personal and social consequences of the COVID-19-pandemic with an application scope world-wide (9).

In the current study, a comparison of the functional parameters in terms of anxiety and worriedness related to various aspects of COVID-19 showed that although there was a significantly higher perception of risk in the HCWs, with the fear of transmitting infection to their close contacts and the awareness about health consequences being severe both for themselves and their close contacts, it was interesting to note that both the study groups considered it equally important to follow the COVID appropriate behaviour (hygienic measures and social distancing). Considering the highly infectious nature of the disease, this was a positive finding giving an impression that the importance of public health awareness measures was percolating down to the general population and was not just limited to the HCWs as anticipated.

On analysing the trends regarding the mental impact of the pandemic, we found that a greater number of subjects in the healthcare group suffered from sleep disorders, such as: difficulty falling asleep (< 30 minutes), irregular sleep or early morning awakening. However, the subjects in the general population were more "super-alert", watchful, or on guard and reported greater frequency of fearful dreams/nightmares (Figure 2, Domain 12). Also, in contradiction to our anticipation, the statistical trends revealed that the obsessive-compulsive behaviour such as an urge for substance abuse (like alcohol and smoking) or obsessive washing and/or disinfecting hands out of fear of contamination or becoming ill was observed higher in the subjects from general population (Figure 2, Domain 13). Our findings corroborate with other studies which conclude that the health care personnel are at highest risk for psychological distress during the COVID-19 outbreak, with worry and sleep as the most common problem (2-3). However, the aforementioned findings of our study were found to be statistically non-significant, hence these need further analysis.

The main strength of our study was the novelty of the CoPaQ questionnaire that acts as a comprehensive tool to assess the psychosocial health, and covers a wide range of areas of interest affected by the COVID-19 pandemic; that is, COVID-19 infection status, socio-demographic background, and the impact on risk perception, affect, thoughts, behaviour, mental health, media usage, institutional trust, and social cohesion (9). This eases out the burden of multiple questionnaires usually given to the subjects to assess the psychosocial health during the corona crisis. However, the same accounts for the major limitation of the study since a validated scoring system is yet to be formulated by the designers of the CoPaQ questionnaire. The analysis of the questionnaire in the present study was hence based on moderate-to-high correlations between the scores in each domain of our instrument and the corresponding questionnaire.

1.6 Conclusion:

We conclude that according to the present study, the domain of mental health most frequently affected by COVID – 19 in healthcare workers is that of anxiety and worry related to risk perception as compared to the general population. The authors also support the studies with similar results and contradict the usual belief of anticipating greater psychosocial stress in healthcare workers than the general population with respect to affect, thoughts, behaviour, mental health, media usage, institutional trust, and social cohesion. Overall, the psychosocial impact of COVID 19 pandemic seems to be comparable in both the healthcare workers and the general population using the novel CoPaQ.

Future studies should investigate the utility of the novel CoPaQ questionnaire as a comprehensive and quicker tool to assess the psychological impact of COVID-19 pandemic in a larger population.

Authors contributions

Conceived and designed the study[1], manuscript writing[1], data collection[1-5], results interpretation[1-3], reviewing the manuscript[2-5].

Acknowledgement

The authors would sincerely like to thank *Fastat- clinical data based superspeciality research and analytics* by Dr. Vikramjit Singh (MD, MBA,MHA), for providing detailed statistical analysis for our study. We would also like to thank all the participants of the study.

Conflict of interest
The authors declare no conflict of interest.

References:
1. Varshney M, Parel JT, Raizada N, Sarin SK. Initial psychological impact of COVID-19 and its correlates in Indian Community: An online (FEEL-COVID) survey. Samy AM, editor. PLoS One. 2020 May 29;15(5):e0233874.
2. Tan BYQ, Chew NWS, Lee GKH, Jing M, Goh Y, Yeo LLL, et al. Psychological Impact of the COVID-19 Pandemic on Health Care Workers in Singapore. Vol. 173, Annals of internal medicine. NLM 2020. p. 317–20.
3. Chakraborty K, Chatterjee M. Psychological impact of COVID-19 pandemic on general population in West Bengal: A cross-sectional study. Indian J Psychiatry. 2020 May 1;62(3):266–72.
4. Yingfei Zhang, Zheng Feei Ma. Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. Int. J. Environ. Res. Public Health 2020 March 31, 17, 2381.
5. Shaukat N, Ali DM, Razzak J. Physical and mental health impacts of COVID-19 on healthcare workers: A scoping review. Int J Emerg Med. 2020;13(1):1–8.
6. Sharma R, Saxena A, Magoon R, Jain M. A cross-sectional analysis of prevalence and factors related to depression, anxiety, and stress in health care workers amidst the COVID-19 pandemic. Indian J Anaesth. 2020 Sep 1;64(16):242.
7. Wilson W, Raj JP, Rao S, Ghiya M, Nedunjalai Parambil NM, Mundra H, et al. Prevalence and Predictors of Stress, anxiety, and Depression among Healthcare Workers Managing COVID-19 Pandemic in India: A Nationwide Observational Study. Indian J Psychol Med. 2020 Jul;42(4):353–8.
8. Suryavanshi N, Kadam A, Dhumal G, Nimkar S, Mave V, Gupta A, et al. Mental health and quality of life among healthcare professionals during the COVID-19 pandemic in India. Brain Behav. 2020 Nov 11;10(11).
9. Rek S, Freeman D, Reinhard M, Bühner M, Keeser D, Padberg F. The COVID-19 Pandemic Mental Health Questionnaire (CoPaQ): Introducing a comprehensive measure of the psychosocial impact of the current coronavirus crisis. 2020. [Internet] DOI 10.17605/ OSF.IO/3EVN9