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PSYCHO-SOCIAL CONSEQUENCES OF COVID-19 POSITIVE STATUS IN AN URBAN COMMUNITY

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ABSTRACT

This descriptive study was conducted on 699 COVID-19 positive adults (females: 271; 38.77% and males: 428; 61.23%) who had tested positive for COVID-19 virus between April 2020 and August 2020 in a metropolitan locality in Maharashtra state, Western India. After explaining the purpose of the study, the prospective participants were assured that confidentiality and anonymity would be maintained and their informed consent was obtained. A pre-tested and pre-validated questionnaire was used for interviewing the participants, at their convenience. The mean age of respondents was 49.44 +/- 16.30 years and males were significantly more educated. Most responses indicated significantly greater psycho-social impact of COVID-19 pandemic on female respondents, as compared to that on their male counterparts. Outbreak-related stress can be mitigated by developing linkages between outreach and hospital services, including mental health services in the standard epidemic control protocols and informing the public about the various coping strategies for psychological effects. Effective communication by health personnel will eliminate impact of fake news in social media. Telemedicine can help in reducing visits to healthcare facilities.

KEYWORDS: Coronavirus, COVID-19, Pandemic, Psycho-social, Social media.

INTRODUCTION

Nationwide lockdowns, imposed to control further spread of the COVID-19 pandemic,[1, 2] were accompanied by a "coronavirus infodemic" characterized by persistent overload of misinformation, unrestrained incredible rumours and sensationalism across diverse social media platforms.[3] Fake news was disseminated more on social networks than scientifically-valid information.[4]

This pandemic of "social media panic"[5] spread faster than COVID-19 itself and caused mass hysteria and alarm,[6] along with an upsurge of racism and stigmatization.[3] Irresponsible behaviour of netizens and media-houses,[7] who continued a sustained campaign by publishing disparaging remarks and prejudiced comments about Chinese food habits and socio-cultural norms on social media and news outlets, created an anti-Chinese sentiment[5,8] that ultimately culminated in discrimination and outburst of racism.[9] Selectively-targeted prejudice against particular group of people, derived from apparently confusing viewpoints might lead to shame, stress, and stigma that prevent the infected persons from reporting their condition to health authorities and receiving timely health-care.[8]

Reckless sensationalism by social media users can also generate panic attacks, depression, anxiety, obsessive behaviours, distrust and delusions of having symptoms similar to that of COVID-19.[10, 11] Many individuals harboured pseudoscientific beliefs, which may have been developed in response to the uncertainty and ambiguity that enveloped the COVID-19 pandemic.[4]

In the absence of a specific cure, massive disinformation on social media also led to people trying out and propagating various "treatments" to protect against the virus.[12,13] In Iran, the propagation of fake messages on social media on the benefits of drinking or gargling of the alcoholic beverages for prophylaxis of COVID-19, caused a methanol mass poisoning outbreak, with an average mortality rate of 12.1%, which exceeded Iran's COVID-19 fatality rate.[12] Another Iranian study[14] has also drawn attention to the role of misinformation and social isolation in contributing to stress and mental morbidity.

Mass panic leads to a "herd behaviour"[15, 16] that results in stockpiling of essential commodities or protective items (hand sanitizer, medications, face masks), which in

turn, may encourage black marketing, leading to stock outs and social disruption.[15,17]

Misinterpretation of self-perceived bodily sensations and changes causes "health anxiety", which can be a safeguard in everyday life. But, during an outbreak of infectious disease, misinformation may lead to unrestrained health anxiety. Individuals who are hypochondriacs (usually those with generalized anxiety and obsessive compulsive disorders) are more likely to misconstrue innocuous symptoms as indications of infection with COVID-19. This results in maladaptive behaviours (repeated visits to health care facilities, not seeking health care even if actually ill, stockpiling particular items) that eventually impose avoidable burden on the health care system.[18] At community level, "health anxiety" can result in distrust of public authorities and targeting of particular populations or groups.[10,18]

The COVID Reaction Scale (COVID-RS) is a new tool that can quantify the psychopathological reactions of the population to the COVID-19 crisis. Five parameters have been used for developing this tool – (a) disorganized behaviours, (b) avoidant behaviours, (c) maladaptive information consumption, (d) herd behaviours and (e) loneliness. The COVID-RS scores can be used to foretell how a population will react to government and health measures against the spread of COVID-19.[19]

The objective of this study was to determine the psycho-social effects of COVID-positive status among previously COVID-positive individuals in an urban community.

MATERIAL AND METHODS

This descriptive study was conducted on COVID-19 positive adults of either gender, who had tested positive for COVID-19 virus between April 2020 and August 2020 in a metropolitan locality in Maharashtra state, Western India. After explaining the purpose of the study, the prospective participants were assured that confidentiality and anonymity would be maintained and their informed consent was obtained. A pre-tested and pre-validated questionnaire was used for interviewing the participants, at their convenience. The data were entered in Microsoft Excel spreadsheet (Microsoft Corporation, Redmond, WA, USA) and analyzed using SPSS statistical software Windows Version 25.0 (IBM Corporation, Armonk, NY, USA). Mean and standard deviation were calculated for continuous data and percentage distribution was computed for discrete data. 95% Confidence interval (CI) was stated as: [Mean-(1.96)*Standard Error)] – [Mean+(1.96)* Standard Error)]. Standard error of difference between the sample means and sample proportions were calculated to determine the statistical significance at $p<0.05$.

RESULTS AND DISCUSSION

Demographics: There were 699 respondents (females: 271; 38.77% and males: 428; 61.23%). The mean age of all respondents was 49.44 +/- 16.30 years (95% CI: 48.23–50.65 years). Gender-wise, the mean age of female and male respondents was 51.07 +/- 16.74 years (95% CI: 49.07–53.06 years) and 48.41 +/- 15.95 years (95% CI: 46.90–49.92 years), respectively. The maximum age, third quartile, median age and first quartile were marginally higher for female respondents. But, the minimum age was slightly lower for females (Figure 1). Males were significantly more educated than their female counterparts (Table 1).

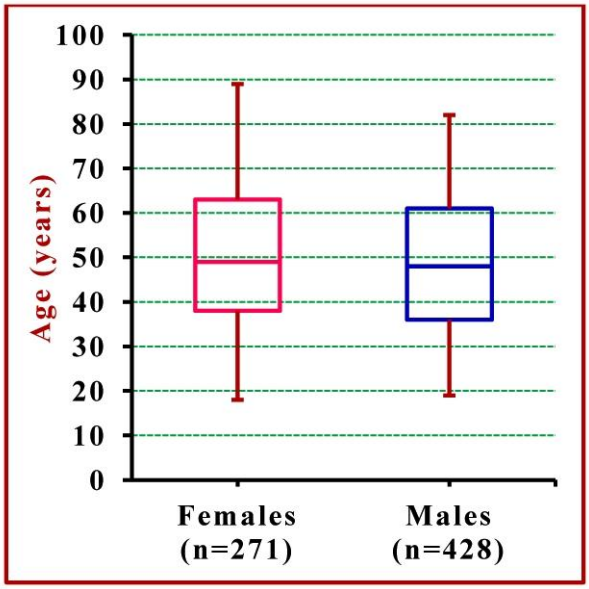

Figure 1: Box plot of age distribution.

Table 1: Educational status of respondents.

Education (years)	Females (n=271)	Males (n=428)	Z value	'p' value
<10	120 (44.28%)	127 (29.67%)	3.936	0.00008*
10 – 12	93 (34.32%)	166 (38.79%)	1.191	0.234
13 – 16	52 (19.19%)	119 (27.80%)	2.581	0.0098 *
16+	06 (02.21%)	16 (03.74%)	1.124	0.262

Z = Relative deviate; *Significant

Perceptions about COVID-19 pandemic: While 63.10% females felt that COVID positive status had become a social stigma, only 33.88% males felt likewise, exhibiting highly significant gender difference ($Z=7.563$; $p<0.0001$). The percentage of females and males who opined that the COVID-19 pandemic will have long-term

psycho-social effects was 40.59% and 65.42%, respectively, revealing highly significant gender difference (Z=6.440; p<0.0001). However, the gender difference was not significant (Z=0.810; p=0.418) among respondents who thought that COVID-19 pandemic was being portrayed as more dangerous than it actually was.

Table 2: Affirmative responses to statements in questionnaire.

Statements in questionnaire	Females (n=271)	Males (n=428)	Z value	'p' value
I felt guilty when I tested COVID positive	129 (47.60%)	196 (45.79%)	0.466	0.638
I felt worse due to people's attitudes	124 (45.75%)	146 (34.11%)	3.080	0.002 *
It is better keep one's COVID positive status a secret	134 (49.44%)	176 (41.12%)	2.158	0.030 *
I have a feeling of isolation ever since I became COVID positive	105 (38.74%)	101 (23.59%)	3.398	0.0006 *
I felt dejected when others came to know my COVID positive status	191 (70.48%)	245 (57.24%)	3.519	0.0004 *
I had worried about facing discrimination	156 (57.56%)	189 (44.15%)	3.454	0.0005 *
I felt that COVID negative persons were uncomfortable in my presence	202 (74.54%)	291 (67.99%)	1.850	0.064
I am hurt by people's reactions to my COVID positive status	227 (83.76%)	314 (73.36%)	3.202	0.001 *
I worry about people telling others about my COVID positive status	115 (42.43%)	171 (39.95%)	0.650	0.515
People stopped phoning me after I tested COVID positive	102 (37.64%)	136 (31.77%)	1.593	0.111
When I was COVID negative, I had badly behaved with COVID positive persons	109 (40.22%)	132 (30.84%)	2.542	0.011 *

Z = Relative deviate; *Significant

Responses to questionnaire: The gender differences were not statistically significant for responses regarding – (a) feeling of guilt when the respondent tested COVID positive; (b) self-perception that the respondent's presence made COVID negative persons uncomfortable; (c) worrying about people telling others about COVID positive status of the respondent; and (d) not receiving phone calls after the respondent tested COVID positive. (Table 2)

The gender difference was significant for all other responses, indicating greater psycho-social impact of COVID-19 pandemic on female respondents, as compared to that on their male counterparts (Table 2). Other Indian studies[20, 21] have also reported that females suffered a greater psychological impact due to the COVID-19 outbreak. This may be attributed to the closure of educational institutions and workplaces during the lockdown, which caused all family members to stay indoors, resulting in an increase in household work for women because of the traditionally gender-prejudiced division of household work in India.[22, 23] Another probable reason could be that the perceived or actual risk of domestic violence would also amplify mental stress among female respondents.[21]

Published studies indicate that female gender,[24,25] student status,[25] youngsters,[26] having symptoms suggestive of COVID-19,[25] self-perceived frail health[25] and those with self-reported poor sleep quality[24,26] were at an increased risk for developing mental health problems. Conversely, the availability of accurate information and specific preventive measures (hand-washing, wearing face mask) ostensibly diminished these psychological effects.[25] While Western countries have incorporated psychological interventions into their protocols for control of disease outbreaks, this has not yet taken place in other countries.[27]

CONCLUSION

The general framework for minimizing outbreak-related stress ought to include: developing linkages between outreach and hospital services; providing accurate information and assessing the accuracy of information available to the general public in order to curtail panic and fear regarding the disease and its transmission; augmenting social support to diminish the stigma associated with the disease and enhancing screening for mental disorders. Public health authorities can help by issuing health messages without medical jargon. Effective communication by health personnel will contribute to stamping out fake news. Telemedicine, which has evolved into a crucial component of healthcare in the post-COVID-19 era, can help in reducing visits to healthcare facilities. Specific mental health interventions would include: incorporating mental

health services in the standard operating procedure for epidemic control; provision of mental health care to healthcare personnel; informing the public about the psychological effects of a pandemic and explaining various coping strategies.

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