

## Original Research Article

# Conspiracy beliefs and pandemic related behaviours: a study from India

Chahat Dubey<sup>1\*</sup>, Noufal T. Hameed<sup>2</sup>, Sisira C. Satheesan<sup>3</sup>

<sup>1</sup>Indian Institute of Psychology and Research, Bangalore, Karnataka, India

<sup>2</sup>Thanal Academy of Rehabilitation Studies, Kozhikode, Kerala, India

<sup>3</sup>Government Mental Health Centre, Kozhikode, Kerala, India

**Received:** 03 May 2021

**Accepted:** 02 June 2021

### \*Correspondence:

Chahat Dubey,

E-mail: [chahatdubey2015@gmail.com](mailto:chahatdubey2015@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** COVID-19 pandemic is still affecting large sections of populations all over the world. Thousands of deaths and damages to life that are indescribable, the pandemic has not yet come under control. Several studies show a significant impact of the same on mental health. The present study aimed at understanding conspiracy beliefs and pandemic related behaviors. It also aimed at documenting the level of distress reported.

**Methods:** The cross-sectional quantitative study was conducted among the public from India. The study assessed conspiracy beliefs, pandemic related behaviors, and psychological distress using standardized questionnaires. Basic demographic details were also collected. The questionnaires were converted to Google form, and the link was sent to the public along with a description of the study. Quantitative analysis was used, including frequency, mean, standard deviation, and student t-test.

**Results:** Hundred and thirty individuals (49 males and 81 females) participated in the study (mean age=29 years). About half of the participants reported higher levels of distress. No significant gender difference was found on the endorsement of conspiracy beliefs or in engagement in pandemic related behaviors. Engagement in pandemic related behaviors was significantly higher among participants who reported high levels of distress. However, on the endorsement level of conspiracy beliefs, there was no significant difference between those who reported high or low levels of distress.

**Conclusions:** Endorsement of conspiracy beliefs, engagement in pandemic related behaviors, and psychological distress are important variables that require attention at the present scenario.

**Keywords:** Conspiracy beliefs, Pandemic related behaviors, COVID-19

## INTRODUCTION

The coronavirus disease (COVID-19) is one of the greatest challenge human kind has confronted since World War II. Confirmed in more than 200 countries, it caused hundreds of thousands of deaths. Although the cure has finally arrived, the numbers are still increasing in many places. As of now, the death toll stands as high as 2.1 million, along with a hundred million plus infected cases.<sup>1</sup> Along with the vaccination, governments have been forming and implementing strategies for the public to curb the virus. A considerable part of such attempts involved educating the public about the COVID-19 illness and related issues.<sup>2</sup> The vast popularity of the internet and various social media has

encouraged the various governmental and non-governmental agencies to spread awareness about the same.<sup>3</sup>

While a crucial means of communicating with masses, social media also leads to the spread of unscientific claims spreading regarding the cause and nature of the COVID-19 illness (Anneliese Depoux, Sam Martin, Emilie Karafillakis, Raman Preet, Annelies Wilder-Smith, Heidi Larson, 2020), creating a favorable environment for the spread of conspiracy theories.<sup>4,5</sup>

Conspiracy theories influence the public psyche during societal crises, such as natural disasters, wars, terrorist

attacks, when people seek to make sense of a chaotic world. While the beliefs in conspiracy theories can provide some guide for pandemic attitudes and behavior, it can also lead people to not follow the standard governmental or scientific protocols and behaviors in favor of their policies of protection against the pandemic.<sup>6,7</sup>

Considering the COVID-19 pandemic management relies primarily upon social and behavioral changes, we must understand the various factors that influence such efforts.<sup>8</sup> The current understanding is that the COVID-19 pandemic is here to stay for long, requiring long-term public behavior changes suggesting a need for gaining a better understanding about the same.<sup>9</sup>

The present study aimed to understand the conspiracy beliefs and pandemic-related behavior among India's general population. Specifically, the study looked into gender differences in the variables. Besides, the study looked into the psychological distress experienced by the people.

## METHODS

The present study adopted a cross-sectional quantitative design. All the study samples were required to have the ability to read and write English and above the age of 18 years. The assessment tools included: COVID-19 conspiracy beliefs scale; the Kessler's distress scale; and self-reported pandemic related behavior questionnaire.<sup>7,10</sup>

The survey draft was entered into a Google form, and the link was generated. The survey link and a brief introduction to the study were shared on various social media platforms.

Further, each participant was required to declare their consent to be part of the study and their age (as above 18) before accessing the rest of the survey assessments. Data was collected from 2nd October 2020 to 8th October 2020. The data was analyzed using quantitative measures such as frequency, percentage, student t-test, and correlation.

## RESULTS

A total of 130 participants (49 males and 81 females) with a mean age of 29 years (SD=10.92) took part in the survey. A vast majority of them had education equal to or above graduation (85%). Further, about half of the participants (48.5%) scored 20 or above on the scale for distress, indicating the presence of significant distress. Female participants had slightly higher distress levels (mean=21.69, SD=8.98) than the male participants (mean=19.69, SD=7.80), which was not statistically significant (t=-1.29, df=127). Further analysis revealed a significant age difference between the high distress and low distress group. The average age of the high distress (M=26.63, SD=9.45) group was significantly lower than the low distress (M=32.12, SD=11.60) group (t=-2.93, df=127).

As shown (Table 1), no significant difference was found between male and female participants on the scores of conspiracy beliefs and pandemic related behaviors.

As shown (Table 2), a significant difference was found in pandemic related behavior. The high distress group reported engaging in pandemic related behaviors significantly higher than the low distress group. No significant difference was found on the level of conspiracy beliefs help by both categories.

**Table 1: Gender differences in conspiracy beliefs and pandemic related behavior.**

Outcome	Group						95% CI for mean difference	t	df
	Male			Female					
	M	SD	N	M	SD	N			
Conspiracy beliefs	20.54	6.40	48	20.27	6.76	81	-2.12, 2.66	0.224	127
Pandemic related behavior	63.60	12.12	48	66.86	9.63	81	-7.09, .57	-1.69	127

**Table 2: Differences in conspiracy belief and pandemic related behaviors based on the distress scores.**

Outcome	Group						95% CI for mean difference	t	df
	Low distress			High distress					
	M	SD	N	M	SD	N			
Conspiracy beliefs	20.79	6.11	67	19.89	7.07	63	-1.39, 3.19	0.78	128
Pandemic related behavior	63.78	10.34	67	67.94	10.89	63	-7.85, -.48	-2.23*	128

\*significant at the 0.05 level (2-tailed)

## DISCUSSION

The present study aimed at understanding conspiracy beliefs, pandemic-related behaviors, and psychological distress among India's general population.

The study had a preponderance of female participants. Also, the participants belonged mostly to the young adult age. Regarding the gender disparity, findings remain inconclusive. Studies show gender differences in survey participation but provide a mixed result, depending on the

survey mode.<sup>1</sup> This is despite the findings that men are more comfortable using the internet than women.

Further, the assessment showed that about half of the participants had significant distress, which is in line with the existing findings.<sup>2</sup> Understandably, the death, loss, and on-going uncertainties of the pandemic can be severely distressing. Similarly, when the average age of those in the high distress group was higher than those in the low distress group. Studies suggest that young adults are at a higher risk of experiencing psychological distress during pandemics.<sup>13</sup>

The finding that distress is higher among young adults becomes more important when considering that this is the age where most mental illnesses have an onset.<sup>10</sup> Higher levels of distress among young adults have important implications for public health.

The present study did not find any gender differences in either conspiracy beliefs or pandemic related behaviors. However, the current findings suggest that there are gender differences in endorsing conspiracy beliefs. For example, one study has shown that men tend to believe in conspiracy theories than women.<sup>14</sup> Similarly, there are findings from the gender differences in pandemic related behaviors such as wearing a mask and practicing social distancing.<sup>15</sup> Further, culture also has been found to influence these variables.<sup>16</sup>

Based on the level of distress, there was no significant difference between the levels of conspiracy beliefs endorsements. However, high distress group participants reported as engaging in pandemic related behaviors significantly higher than the low distress group. Psychological distress is found to influence engagement in pandemic related behaviors.<sup>17</sup> Distress and pandemic related behaviors are also significant in light of recent findings that COVID-19 and the following life-changes can increase the risk of mental illnesses, including OCD.<sup>18</sup> Further, anxiety disorders such as panic and generalized anxiety disorders are also increasing.<sup>19</sup>

## CONCLUSION

The present study aimed at understanding conspiracy beliefs and pandemic related behaviors among the Indian public. The study shows a higher proportion of participants experiencing distress, which warrants immediate action to alleviate the same. This is especially true considering the relationship between high distress and higher levels of pandemic related behaviors. Considering that the pandemic is here to stay for long, with its continuing implications for life, we need more and more studies on its impact on mental health.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. Worldometer COVID-19 Coronavirus Pandemic. Available at: <https://www.worldometers.info/coronavirus/>. Accessed on 09 February 2020.
2. Ahmed H, Mohammed A, Hussein E. COVID-19 and medical education. *Lancet Infect Dis*. 2020;20(7):777-8.
3. Oberiri DA, Bahiyah O. Fake news and COVID-19: modelling the predictors of fake news sharing among social media users. *Telemat Informat*. 2020;101475.
4. Kristen MCM, Julie A, Nasia S. Crisis Communication and Public Perception of COVID-19 Risk in the Era of Social Media. *Clin Infect Dis*. 2020;758.
5. Anneliese D, Sam M, Emilie K, Raman P, Annelies W, Heidi L. The pandemic of social media panic travels faster than the COVID-19 outbreak. *J Travel Med*. 2020;27(3).
6. Freeman D. Coronavirus conspiracy beliefs, mistrust, and compliance with government guidelines in England. *Psychol Med*. 2020;1-13.
7. Imhoff R, Lamberty P. "A Bioweapon or a Hoax? The Link Between Distinct Conspiracy Beliefs about the Coronavirus Disease (COVID-19) Outbreak and Pandemic Behavior." *Social Psychol Personal Sci*. 2020.
8. Eaton LA, Kalichman SC. Social and behavioral health responses to COVID-19: lessons learned from four decades of an HIV pandemic. *J Behav Med*. 2020;43(3):341-5.
9. Elliot B, Asrani SK. The COVID-19 pandemic will have a long-lasting impact on the quality of cirrhosis care. *J Hepatol*. 2020;73(2):441-5.
10. Kessler RC, Amminger GP, Aguilar-Gaxiola S, Alonso J, Lee S, Ustün TB. Age of onset of mental disorders: a review of recent literature. *Curr Opin Psychiatr*. 2007;20(4):359-64.
11. Joris M, de Bruijne M. "Willingness of Online Respondents to Participate in Alternative Modes of Data Collection." *Survey Pract*. 2019;12(1).
12. Shanahan L, Steinhoff A, Bechtiger L, Murray AL, Nivette A, Hepp U, et al. Emotional distress in young adults during the COVID-19 pandemic: evidence of risk and resilience from a longitudinal cohort study. *Psychol Med*. 2020;1-10.
13. Glowacz F, Schmits E. Psychological distress during the COVID-19 lockdown: The young adults most at risk. *Psychiatr Res*. 2020;293:113486.
14. Cassese E, Farhart C, Miller J. Gender Differences in COVID-19 Conspiracy Theory Beliefs. *Pol Gender*. 2000;16(4):1009-18.
15. Galasso V, Pons V, Profeta P, Becher M, Brouard S, Foucault M. Gender differences in COVID-19 attitudes and behavior: Panel evidence from eight countries. *Proceed Natl Acad Sci United States Am*. 2000;117(44):27285-91.
16. Biddlestone M, Green R, Douglas KM. Cultural orientation, power, belief in conspiracy theories, and

- intentions to reduce the spread of COVID-19. *Br J Social Psychol*. 2001;59(3):663-73.
17. Usher K, Jackson D, Durkin J, Gyamfi N, Bhullar N. Pandemic-related behaviors and psychological outcomes; A rapid literature review to explain COVID-19 behaviors. *Int J Mental Health Nurse*. 2020;29:1018-34.
  18. David P, Andrea P, Martina O, Andrea E, Davide D, Mario A. The impact of the COVID-19 pandemic on patients with OCD: Effects of contamination symptoms and remission state before the quarantine in a preliminary naturalistic study. *Psychiatr Res*. 2020;291:113213.
  19. Islam MS, Ferdous MZ, Potenza MN. Panic and generalized anxiety during the COVID-19 pandemic among Bangladeshi people: An online pilot survey early in the outbreak. *J Affect Disord*. 2020;276:30-7.

**Cite this article as:** Dubey C, Hameed NT, Satheesan SC. Conspiracy beliefs and pandemic related behaviours: a study from India. *Int J Community Med Public Health* 2021;8:3502-5.