Coronavirus Anxiety, Psychological Distress and the Role of Personality Traits

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ABSTRACT

Since the COVID-19 pandemic has struck people globally in an unprecedented manner, everyone is uncertain about what the future holds. As research has not taken place within this area for the Indian population, this study will help us in gaining insight into the level of anxiety and psychological distress due to the pandemic and how it is impacting one's normal functioning. This study will allow us to compare levels of COVID-19 anxiety and psychological distress across two age groups and understand how each of the big five personality traits correlates with COVID-19 anxiety and psychological distress. The correlation between Covid Anxiety, Psychological Distress and Personality traits among the young adults and middle adults established a moderate positive correlation between Neuroticism - KPDS and low positive correlation between Neuroticism- CAS, which were statistically significant.

Key Words: Anxiety, Coronavirus Anxiety, Psychological Distress and the Role of Personality Traits

INTRODUCTION

The Coronavirus outbreak was revealed to the world on December 31, 2019, when China informed the World Health Organisation of a cluster of cases of pneumonia of an unknown cause in Wuhan City in Hubei Province. Subsequently, the disease spread to the rest of the world. The WHO has now declared it a pandemic and the virus has been named SARS-CoV-2 and the disease is now called COVID-19. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illnesses.

People all over the world have suffered several pandemic-related consequences that may contribute to poor physical as well as mental health. During the pandemic, more than half the population of young adults (ages 18-24) reported symptoms of anxiety and/or depressive disorder (56%). Young adults are more likely to report substance use (25%) and suicidal thoughts (26%) as compared to other adults. During the pandemic, adults in households with job loss or lower incomes report higher rates (53%) of symptoms of mental illness than those without job or income loss (32%). Women with children are more likely to report symptoms of anxiety and/or depressive disorder than men with children (49% vs. 40%). In general, both before, and during, the pandemic, women have reported higher rates of anxiety and depression compared to men.

Anxiety disorders are characterized by unrealistic, irrational fears or anxiety that cause significant distress and/ impairments in functioning. Anxiety disorders include disorders that share features of excessive fear and anxiety and related behavioural disturbances. Anxiety is a complex blend of unpleasant emotion and cognition that is both more oriented to the future and much more diffuse than fear (Barlow, 2002).

Psychological distress is a set of painful mental and physical symptoms that are associated with normal fluctuations of mood in most people. It refers to non-specific symptoms of stress, anxiety, and depression. High levels of psychological distress are indicative of impaired mental health and may reflect common mental disorders, like depressive and anxiety disorders. Psychological distress is a common mental health problem in the community and is often referred to as emotional suffering. It can come out as fatigue, sadness, anxiety, avoidance of social situations, fear, anger, or moodiness. It happens when one is faced with stressors that one is unable to cope with. These stressors could be traumatic experiences, major life events, everyday stressors such as workplace stress, family stress, and relationships, health issues.

Personality is one's characteristic way of responding to individuals or situations. There is consistency in behaviour, thoughts, and environment of an individual. According to Nelson and Miller (1999 ocean), personality is an individual's unique and relatively stable patterns of behaviour, thoughts, and emotions.

Big Five-Factor Theory. In the late 20th century, Robert McCrae and Paul Costa developed the Five-Factor Model which describes personality in terms of five broad factors. Louis Goldberg referred to these as the big five factors of personality and developed the international personality item Pool (IPIP), an inventory of descriptive statements relating to each trait. A set of individual traits (facets) relate to more specific aspects of personality within each factor. The five factors may be assessed using several measures, including self-report questionnaires.

These five factors are acronymed as OCEAN i.e Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism.

Open to experience dimension is characterized by a willingness to try new activities. People with higher levels of openness are amenable to unconventional ideas and beliefs, including the ones which challenge their existing assumptions. They enjoy artistic and cultural experiences. They are also more open to unfamiliar cultures and customs. People with a low degree of openness are closed to experience, also are very wary of uncertainty and the unknown, they are more suspicious of beliefs and ideas which challenge their existing ideology.

People who are conscientious are more aware of their actions and the consequences of their behaviour. They feel a sense of responsibility towards others and are generally careful to carry out the duties assigned to these conscientious individuals like to keep the environment tidy and are well-organized. They also exhibit goal-oriented behaviour. Low levels of conscientiousness are reflected in less motivated behaviour. They are less concerned about tidiness and punctuality. They are more relaxed about setting goals and tend to engage in more impulsive behaviour. This domain is affected by both nature and nurture.

Extraversion domain is characterized by outgoing, socially confident behaviour. Extraverts are sociable, talkative, and often forward in social situations. They enjoy being the center of a group and will often speak to seek the attention of others. Introverts are people with low levels of extraversion. They display contrasting behaviour and are quieter, often feeling shy around other people. They may feel intimidated being in large groups such as parties and will often try to avoid demanding social gatherings. Individuals who score high on this domain are friendly and cooperative, considered more likeable by their peers, colleagues, etc. They are altruistic and so more trusting of others. Their ability to work with others means that they often work well as members of teams they seek to pacify and appease others, acting as mediating 'peacemakers' of their group. Whereas people who score low here are less concerned with pleasing people and making friends. They are more suspicious of other people's intentions and are less charitable. Instead, they are motivated to act per their self-interest, showing less regard for the needs of others.

Neuroticism dimension is measured on a continuum ranging from emotional stability to emotional instability. People with high neuroticism scores are often persistent worriers. They are more fearful and

often feel anxious, overthinking their problems and exaggerating their significance. Rather than the goof aspects, they focus on the negative or unpleasant ones. People with low scores on this dimension are less preoccupied with negative concerns. They can remain calmer in response to stressful situations and view problems in proportion to their importance.

A study was conducted on United States residents to understand and assess the "vulnerability and protective factors (the Big Five personality traits, health anxiety, and COVID-19 psychological distress) in predicting generalized anxiety and depressive symptoms during the COVID-19 pandemic .The results showed that health anxiety, COVID-19 anxiety, and COVID-19 anxiety syndrome acted as the three mediators which arbitrated the relationship between the big five personality traits, generalized anxiety, and that of depressive symptoms. Particularly, it was found that extraversion, agreeableness, and conscientiousness were negatively associated with the three mediators whereas they themselves were positively associated with generalized anxiety and depressive symptoms. They had the strongest relationship with COVID-19 anxiety. On the other hand, neuroticism and openness were positively associated with COVID-19 anxiety and COVID-19 anxiety syndrome.

A research study conducted on 200 adolescents in Nigeria showed that 66% of adolescents reported believing in the existence of COVID-19 while 34% did not. Additionally, more than half of the participants (54%) reported being worried and anxious. The males were also observed to be more likely to use problem-focused coping strategies during the pandemic. Middle adolescents were more likely to use more behavioral strategies of coping during the pandemic as compared to the early adolescents. Furthermore, 36% perceived it as a deadly disease; 17%, a pandemic; 18% said it is a deadly virus that kills people fast, 5% said it is a disease that ruined the whole world and 3% said it is a strong illness/normal disease. (Ogubuike, 2021).

A cross-sectional study conducted by Besser et al. (2020) examined personality and individual difference factors associated with the perceived ability to adapt to the significant challenges accompanying the ongoing public health crisis concerning the COVID-19 pandemic. 462 college students (349 women and 113 men) filled an online questionnaire after 10 weeks of social distancing. The results found that individual difference factors reflecting self-esteem, feelings of mattering, and fear of not mattering are associated in meaningful ways with adaptability to the pandemic, loneliness, distress, negative mood states, and positive mood states. It was also found that resilience accompanies a positive sense of self and the risk and vulnerability accompanies a negative sense of self that can further fuel self-criticism, dependency, low self-esteem, and feelings of not mattering to other people.

Gori et al. (2021) conducted a study in Spain that aimed at exploring the psychological impact of the COVID-19 pandemic by identifying patterns related to post-traumatic symptoms by considering personality and defensive styles. The hypothesis was made that neuroticism was negatively associated with the impact of an event, as opposed to extraversion, agreeableness, conscientiousness, and openness traits. 557 Italians completed an online survey including the Impact of Event Scale-Revised, Forty Item Defense Style Questionnaire (DSQ-40), and Ten Item Personality Inventory. The results showed that the COVID-19 pandemic had a non-significant effect on extraversion and openness. It had a negative impact on neuroticism due to significant effects from immature and neurotic defenses in the indirect path. Conscientiousness and agreeableness were both negative with immature defensive styles, but conscientiousness was also related to mature defenses. These findings gave us an insight into post-traumatic symptom patterns during the COVID-19 pandemic, involving the Big Five personality traits and defense mechanisms.

The objectives of the study are as follows:

1. To assess the level of COVID-19 anxiety and psychological distress across two age groups.

2. To find out the correlation of personality traits and their dimensions with COVID-19 anxiety and psychological distress.

METHOD

Design

The present study was of cross-sectional and quantitative design. A cross-sectional study is conducted on a sample at one specific point in time. Quantitative research is a strategy that emphasizes quantification in data collection and analysis.

Sample

The total number of participants in the present study was 192. 130 from the age group 18-35 years and 62 from 35-55 years. These age groups were chosen because the first objective of our study was to assess the level of COVID-19 anxiety and psychological distress in the participants, and these age groups could be accessed online through Google Forms. Non-probability sampling technique was used. Under non-probability, purposive and convenience sampling were employed. In purposive sampling, the researcher selects the sample based on the objectives of the study. Convenience sampling is a method where those participants are chosen who are "convenient" to contact. In this study, participants chosen were those whom we knew from before.

Tools Used

Three scales were employed in the present study, COVID-19 Anxiety Scale, Kessler Psychological Distress Scale, and NEO-FFI. The coronavirus anxiety scale (CAS) is a self-report mental health screener of dysfunctional anxiety associated with the coronavirus crisis. It was developed in 2020 by Silva et al. Because a significant number of people experience clinically significant fear and anxiety during an infectious disease outbreak, the CAS was developed to help clinicians and researchers efficiently identify cases of individuals functionally impaired by coronavirus-related anxiety. Each item of the CAS is rated on a 5-point scale, from 0 (not at all) to 4 (nearly every day), based on experiences over the past two weeks. The content validity of the scale is 0.97.

Kessler Psychological Distress Scale-10 was used, it is a simple measure of psychological distress The K-10 version was used, which had ten items about emotional states each with a five-level response scale. The test-retest reliability was found to be 0.80 and NEO-FFI (Five-Factor Inventory) was used. It was constructed by Costa & McCrae in 1992. It is a 60-item version and consists of five 12-item scales that measure each domain; Neuroticism, Extraversion, Openness to experience. Conscientiousness and Agreeableness.

Procedure

The objectives of the present study were to assess the level of COVID-19 anxiety and psychological distress across two age groups and to find out the correlation between psychological distress and COVID-19 anxiety with personality traits. Each student researcher collected data from participants of two age groups, 18-35 and 35-55 years. Data collection was done online using the services of Google forms. It consisted of a consent form. The participants were informed about their basic rights, such as anonymity, the confidentiality of data, and the right to withdraw participation at any time in the course of filling the form. The form also contained demographic details such as age, gender, whether they've tested positive for COVID-19 or not, and whether they've been vaccinated or not. The form contained three scales namely- the COVID-19 Anxiety Scale, Kessler's Psychological Distress Scale, and NEO FFI. Participants were requested to answer as honestly as possible. The data collected were pooled by the entire class. After 192 responses, data collection was stooped and the results were scored. Descriptive statistics was employed for data analysis. Percentage of COVID-19 anxiety (Probable dysfunctional COVID-19 anxiety and problematic symptoms were identified from the scale) across two age groups was calculated. Psychological distress was also calculated and the percentage of responses were segregated into four categories that were likely to be distressed, mild distress, Moderate distress, and severe distress. Lastly, the correlation of each personality trait (Neuroticism,

Extraversion, Openness, Agreeableness, and Conscientiousness) was done with COVID-19 anxiety and psychological distress.

RESULTS

Table 1 Socio-demographic details of the sample

Variable	Sub-category	N	Percentage
Gender	Male	63	32.8 %
	Female	129	67.2%
Age	Young adults	131	68.2%
	Middle-aged	61	31.8%
Whether tested COVID positive	Yes	67	34.9%
	No	125	65.1%
Vaccine taken	Fully vaccinated	68	35.4%
	Partially vaccinated	105	54.7%
	Not vaccinated	19	9.9%
Total		192	

Table 2 Correlation of Psychological Distress and COVID Anxiety with personality dimensions in 2 age groups

Group	Personality Dimension	KPDS	CAS
Young Adults 18-35 Years	Extraversion	-0.4081742429*	-0.1566402641
	Neuroticism	0.6277524691*	0.2262071657*
	Conscientiousness	-0.2651043428*	-0.1262401545
	Agreeableness	-0.08239724232	-0.01414343389
	Openness	0.1572937539	0.005993388874
Middle-Aged Adults 36-55Years	Extraversion	-0.1984027106	-0.01174832587
	Neuroticism	0.5287870349*	0.2112342984
	Conscientiousness	-0.1888958085	-0.09552424296
	Agreeableness	0.3530350566*	0.2170150322
	Openness	0.1908465319	0.1433858751

Note. This table shows the correlation between Kessler's Psychological Distress Scale and Personality Traits as well as the correlation between Coronavirus Anxiety Scale and Personality Traits for young adults and middle-aged adults.

* depicts statistically significant correlation at 0.05 level of significance.

Table 3 Bivariate correlation of personality traits with COVID-19 anxiety and psychological distress

Personality Dimension	COVID-19 anxiety	Psychological distress
Extraversion	-0.108781946	-0.3804691976*
Neuroticism	0.2124963626*	0.6256516047*
Conscientiousness	-0.1151876507	-0.3021736877*
Agreeableness	0.05765451359	0.03336500601
Openness	0.04479029368	0.1782953846*

Note. This table shows the bivariate correlation between COVID-19 and Personality Traits as well as between Psychological Distress and Personality Traits for both age groups combined.

* depicts statistically significant correlation at 0.05 level of significance.

Table 4 Relationship of Psychological Distress and COVID Anxiety

Group	Correlation (KPDS and CAS)
Young Adults	0.562919096*
Middle-Aged Adults	0.5156682241*
All participants	0.1329534116

Note. This table shows the relationship between Psychological Distress and COVID-19 Anxiety in terms of correlation for both age groups separately and combined.

* depicts statistically significant correlation at 0.05 level of significance.

DISCUSSION

The objective of this study was to assess the level of COVID-19 anxiety and psychological distress across two age groups and to find out the correlation of personality traits and their dimensions with COVID-19 anxiety and psychological distress. The null hypothesis stated that there will be no significant age differences in levels of COVID-19 anxiety and psychological distress.

A questionnaire was administered through Google forms which consisted of 80 items, including demographics. Three different scales were used to assess the levels of COVID-19 anxiety [Coronavirus Anxiety Scale (CAS)], psychological distress [Kessler Psychological Distress Scale (2003)], and personality traits [NEO Five-Factor Inventory]. A total of 192 responses were received out of which 131 (68.2%) belonged to the 18-35 age group and 61 (31.8%) belonged to the 36-55 age group. The majority of the respondents were females (129/ 67.2%) and the rest 63 (32.8%) were males.

 84.2% of the participants did not have dysfunctional COVID-19 anxiety and only 15.8% of them have dysfunctional COVID-19 anxiety. This could be attributed to the fact that the study was conducted a few

months after the second wave of COVID-19, making them more accustomed and adjusted to the current times, thus reducing their anxiety caused due to the unpredictability of the times.

On Kessler's Psychological Distress Scale, 41.7% of the participants were likely to be well, 20% were likely to have a mild disorder, 7.8% were likely to have a moderate disorder and 30.6% were likely to have a severe disorder. The reasons for the distress could be that people are more concerned about preventive measures such as wearing masks, washing hands frequently, maintaining social and physical distance, staying indoors, etc.

Another major factor that led to the obtained results can be the influence of social media. In today's time, the younger generation is extremely well versed in all domains of social media which includes networking, news, and knowledge, etc. The emphasis on COVID-19 by social media especially on the front of the preventive measure has contributed to decreasing the anxiety and distress levels. News channel and social media content include information about the increase in recovery rates, limited sharing of scenes that showed cremation grounds, and many more negative impacts that COVID-19 brought along with it. The spreading of positive information about the pandemic through social media has provided people a sense of relief.

Since the pandemic resulted in impairments in work and social functioning, that was strongly associated with elevated depression and anxiety symptom).

The correlation between Covid Anxiety, Psychological Distress and Personality traits among the young adults and middle adults established a moderate positive correlation between Neuroticism - KPDS and low positive correlation between Neuroticism- CAS, which were statistically significant. The positive correlation demonstrates high levels of anxiety and distress among people who aren't emotionally stable. Neuroticism itself refers to the tendency to be in a negative or an anxious emotional state. Since highly neurotic people are more sensitive to environmental stress they see even the everyday situations as menacing and major. These trivial frustrations may become problematic leading to distress.

Extraversion is a trait that has shown a moderate negative correlation with KPDS which was statistically significant and a negative but not significant correlation with CAS for young adults and a low negative correlation with KPDS and CAS for middle adults. Individuals who score higher in extraversion traits are energized and flourish by being around other people, and enjoy activities involving social interactions which is helpful in increasing their level of positive emotions.

The trait of conscientiousness established a low negative significant correlation with KPDS and a low negative non significant correlation with CAS for young adults. Whereas, for middle adults the degree of correlation was the same with not a significant correlation. which makes them more aware and lesser declines can be seen in their mental health.

People who tend to be high in the trait of openness are more willing to embrace new things, fresh ideas, and novel experiences. They are open-minded and approach new things with curiosity and tend to seek out novelty. The results depicted a very low positive correlation between openness to experiences and KPDS-CAS for both the age groups. Whereas, this correlation for middle adults with KPDS was statistically significant. Agreeableness manifests itself in an individual's behavioral characteristics that are perceived as kind, sympathetic, cooperative, warm, and considerate. The current data depicted a very low negative correlation between Agreeableness-KPDS and CAS for the young adults. Whereas, it was opposite for people belonging to the middle age as they had a low positive correlation for the same which could be because people who are too kind tend to get more affected by seeing other people in trouble and may end up getting affected themselves. In the case of young adults the effect on oneself might not be as much as in the older adults due to which they tend to get less affected. Overall, Extraversion and Conscientiousness showed a negative correlation with both KPDS and CAS scores. The correlation between Extraversion and Psychological Distress and Conscientiousness and Psychological Distress is statistically significant. As suggested above this could be because of the social

support systems that extroverts are able to construct around themselves and conscientious people tend to be well organised, diligent and mindful, making it easy for them to deal with everyday issues and even face difficult times with greater comfort as compared to people who score low on this trait. On the other hand, Neuroticism, Agreeableness and Openness scores were slightly positively correlated with KPDS and CAS. The correlation between Neuroticism and Psychological Distress and COVID-19 anxiety are both statistically significant, whereas the correlation between Agreeableness, COVID-19 anxiety and Psychological Distress was not statistically significant and the correlation between Openness and Psychological Distress was also found to be statistically significant.

CONCLUSION

The varied distribution of psychological distress and COVID related anxiety shows that the negative mental health consequences of the pandemic have reduced and most people are healthy or under mild stress. The correlations between KPDS and CAS indicate that psychological distress and COVID anxiety go hand in hand as can be seen in Table 4. The relationship between KDPS and CAS for the Young adult group as well as the Middle aged group was found to be statistically significant. These results are consistent with the pre existing literature on personality dimensions and their relationship with anxiety. However the correlation for combined age groups was not significant which may be attributed to the fact that only moderate correlations were found and the number of responses in each age group was not comparable. Furthermore, the null hypothesis that stated that there will be no significant age differences in levels of COVID-19 anxiety and psychological distress was disproved for some traits.

LIMITATIONS OF THE STUDY & SUGGESTIONS FOR FUTHER STUDIES

The study was conducted a few months after the second wave, the results of the study could be of different intensity if the study was conducted during the second wave. The study was limited to individuals living in Delhi NCR. This location is fairly urbanised hence the study of rural areas and other states was beyond the scope of this study. Additionally in online surveys people may give socially desirable responses and various confounding variables unknown to the researcher could contribute to the responses.

This study can be used to identify and manage the populations that experience anxiety and distress during the pandemic. The studies can also be used to provide age wise catered assistance to those who need it. Personality dimensions can be studied further and causal relationships can help predict mental health of those experiencing poor mental health. Mixed results on the relationship of agreeableness and its relationship to distress can also be studied. Moreover, alpha and beta traits of personality dimensions can be studied in depth for the same. Longitudinal studies can be conducted to measure the variables across ages but also across the different stages of the pandemic. Further research can aid in the understanding of the lockdown experience. Parallel studies can also be conducted to observe how people with pre-diagnosed anxiety and related disorders such as Generalised Anxiety Disorder, Panic Disorder or Obsessive Compulsive disorder, fare through the pandemic and whether they experience distress and anxiety related to COVID similarly or differently.

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