

Covid-19 Anxiety, Neuroticism, and Social Support Masanbou Abonmai*

Abstract

The aim of the study was to explore the relationship between covid -19 anxiety, neuroticism and social support among the northeast population living in Delhi during the lockdown of the second wave of the pandemic. Data was collected from 124 participants (males =62, females=62). The tools used were Multidimensional scale of perceived social support, Big five inventory 2 short form and Covid-19 anxiety scale. Pearson's correlation, independent samples t-test and regression analysis were carried out. There was a significant positive relationship between neuroticism and anxiety related to covid -19. Significant differences were also found between the level of neuroticism and covid -19 anxiety. Neuroticism and gender were found to be significant predictors of covid -19 anxiety. However, there was no significant relationship between social support and covid -19 anxiety.

Keywords: Covid -19Anxiety; Neuroticism, Social support, North-East

The second wave of Covid-19 hit Delhi in the month of April and lockdown in the national capital started on April 19, which was extended a number of times. This came as a rather surprising turn of events for those who thought that the pandemic was almost over, that there will be vaccines for everyone or that many will have developed immunity and will be safe against the onslaught of the virus. The alarming rise in the case and fatality in the state itself and other states signalled the fact that it was not over yet.

An online survey conducted under the aegis of the Indian Psychiatry Society by Grover et al., (2020) during the pandemic found that about two-fifth (38.2%) had anxiety and 10.5% of the participants had depression and about three-fourth (74.1%) of the participants reported moderate level of stress. Verma & Mishra (2020) in a cross-sectional study found that 25%, 28% and 11.6% of the participants were moderate to extremely severely depressed, anxious and stressed. Among the armed forces doctors, anxiety was seen in 35.2% and depressive symptoms in 28.2% (Gupta et al., 2020). It was also observed that students were generally stressed during lockdown and the pandemic (Chhetri et al., 2021). Ahmad, Rahman & Agarwal, (2020) found that the predictors of anxiety during the lockdown in the Indian citizens were gender, religion, occupation as business/self-employed, marital status, family size, health status, and sleep deprivation. Wilson et al., (2020) found that women had increased odds of developing anxiety and depression and women staying in a hostel or temporary accommodation were twice as likely to develop depression or anxiety symptoms.

The predictors of COVID-19 anxiety among Finnish health care workers were perceived loneliness, psychological distress, technostress, neuroticism, recent changes in their field of work, and decreased social related support from the work environment (Savolainen et al., 2020). Mertens et al., (2020) found that the predictor of fear of coronavirus were health related anxiety, attention to media, social media use and feeling of risk for loved ones. The current research aims to study the relationship between neuroticism, social support and anxiety related to

COVID 19 among the north east population living in Delhi during the lockdown. The impact of gender on the variables will also be investigated. The pattern of relationship between these variables needs to be explored to understand them in the light of the current situation.

COVID-19 Anxiety and Neuroticism

Anxiety in general terms may refer to any generalised and subjective feelings of unpleasantness and dread over something that is unlikely to occur (Öhman, 1993). According to Seligman, Walter & Rosenham (2001), it is usually an overreaction to a something that is only subjectively seen to be menacing and is often accompanied by behaviour characterised by nervousness, somatic complaints and rumination. COVID 19 anxiety is associated with fear, worry and concerns about contracting the disease, close interaction, sleep quality and disease related news. Neuroticism is the tendency to experience negative affect which include anger, anxiety, self-consciousness, irritability, emotional instability, and depression (Leary & Hoyle, 2009). People with higher scores tend to respond poorly to environmental stress. They often interpret ordinary situations as a threatening one, and can perceive minor frustrations as overwhelming and drastic (Widiger & Oltmanns, 2017). Kroencke et al., (2020)

found that neuroticism and negative affect have positive relations and neurotic people paid more attention to COVID-19-related information and are more worried about the consequences of it. Neuroticism is also positively associated with the fear of COVID-19 (Caci et al., 2020; Belen, 2020), worries related to the pandemic, death anxiety (Pradhan, Chettri & Maheshwari, 2020), depression during the lockdown and state anxiety (Tanwar, Sharma & Sharma, 2020).

COVID-19 Anxiety and Social Support

Sarason et. al., (1983) defined social support as when there are people on whom we can rely on, who cares about us, values, and loves us. According to Burleson, Albrecht & Sarason (1994), social support refers to behaviour that shows an individual that she or he is valued and cared for by those around them. It can be

in an indirect or a direct manner. Social support can be measured by the amount of assurance in times of difficulties, encouraging words and positive feedback that we get from our loved ones, friends and family members.

Özmete & Pak (2020) found that anxiety levels decreased significantly when perceived social support increased. Social support was also found to be negatively correlated with state anxiety and trait anxiety and it affects state anxiety both directly and indirectly through trait anxiety (Ao et al., 2020). Among the nurses, having higher organisational and social support were associated with lower anxiety related to the pandemic (Labrague & De los Santos, 2020). But a study conducted by Li, Peng & Tao (2021) found no relationship between family support and anxiety during the pandemic while subjective support and counsellors support had negative association with anxiety.

COVID-19 Anxiety and Gender

Women had higher odds of developing anxiety during the pandemic (Wilson et al., 2020). This was found among health care workers (Gupta et al., 2020). Similar results were found in China (Hou et al., 2020), Spain (García-Fernández et al., 2021), Turkey (Özdin & Bayrak Özdin, 2020) and Iranian health care workers (Kaveh et al., 2020).

Neuroticism and Gender

Lynn & Martin (1997) in a study of 37 nations found that women on average had higher neuroticism as compared to men. This difference was replicated by Costa, Terracciano & McCrae (2001) across 26 cultures for both college-age and adult samples and was also confirmed by Schmitt et al., (2008) in the cross-cultural study of 55 nations. This was found to be true among older adults ranging from 65 to 98 years of age (Chapman et al., 2007).

The pandemic presents a unique condition to the present generation. The current study looked into the relationship between covid 19 anxiety, neuroticism and social support in this new situation to see if the pattern of relationship between the variables are different from what is seen in the short review of literature.

Hypothesis 1: There will be a significant positive relationship between covid 19 anxiety and neuroticism.

Hypothesis 2: Neuroticism will be a significant predictor of covid 19 anxiety.

Hypothesis 3: There will be a significant negative relationship between covid 19 anxiety and social support.

Hypothesis 4: Social support will be a significant predictor of covid 19 anxiety.

Hypothesis 5: There will be a significant difference in the levels of covid 19 anxiety between males and females.

Hypothesis 6: There will be a significant difference in the level of neuroticism between males and females.

Method

Sample

The data was collected from adults (18-35 years of age) from the states of North East India living in Delhi during the lockdown (62 Males, 62 females). 28 participants were employed while the remaining 96 were unemployed. Those who were not present in Delhi during the lockdown were excluded from the data.

Tools

Multidimensional scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988):

Zimet et al., (1998) developed the MSPSS to assess the perception of availability of social support as perceived subjectively by an individual. It was designed to be a brief measure which can be self-administered. It has 12 items and assesses perceptions of social support from 3 different sources: family, friends, and significant others. The items are rated on a 7-point likert scale. Higher scores represent higher social support. The inter item correlation for the scale ranged from 0.13 to 0.70. The internal consistency reliability was found to be 0.89.

Covid-19 Anxiety scale (Chandu, Pachava, Vadapalli & Marella, 2020):

The scale measures covid 19 related anxieties. The scale with seven items has a two-component structure: "fear of social interaction;" "illness anxiety." The items assess the anxiety on a four-point (1-4) semantic differential scale with higher scores reflecting increased anxiety. The evaluative dimension was explicitly mentioned in the choices. The inter item correlation ranged from 0.20 to 0.68. The internal consistency reliability as measured by Chronbach's alpha was found to be 0.82.

The Big Five Inventory-2 Short Form (Soto & John, 2017):

The scale measures personality in terms of the big five factors defined as Open-Mindedness, Conscientiousness, Extraversion, Agreeableness, and Negative Emotionality or neuroticism. It is a shortened version of the BFI-2 (Soto & John, 2017a) with 30 items. For the purpose of the current study only the neuroticism factor was taken. The items are rated on a 5-point likert scale. Higher scores represent higher scores in particular factors of personality. The inter item correlation ranged from 0.21 to 0.73. The internal consistency reliability as measured by Chronbach's alpha was found to be 0.85 for the items.

Procedure

The data was collected using google form. The first page of the form consisted of brief information about the study and the consent form. The subsequent pages consist of the items from the tools mentioned above. All of the participants gave their consent for the data collection and for the data to be used for research purposes. The sampling was a snowball sampling. The form was forwarded to those who met the criteria and could be reached by the researcher. The participants further forwarded the form to those they

could reach. The data was collected between 4th May 2021 and 17th May 2021.

Data analysis

The data was analysed using IBM SPSS Statistics version 25 software. Pearson’s product moment correlation was carried out between the variables and their domains. Independent sample’s t-test was carried out to see the difference between males and females on the level of neuroticism and covid 19 anxiety. Linear regression analysis was carried out to see if gender and neuroticism were significant predictors of covid 19 anxiety. Social support variable and its domains were excluded in the independent sample t-test analysis because the distribution of the sample did not fulfil the assumption of normality. Male was coded as 0 and female was 1 in the correlation and regression analysis of the sample.

Results

Table 1 Demographics:

	Frequency (N=124)	Percentage
Male	62	50%
Females	62	50%
Employed	28	22.58%
Unemployed	96	77.42%

Table 2 Correlation matrix of the variables:

Var	Mean	SD	Neur	CAnx	SocS	FaSocS	FrSocS	SSocS	Gender
Neur	17.93	5.61	1						
CAnx	18.23	3.68	0.41**	1					
SocS	5.68	1.01	-0.21*	0.01	1				
FaSocS	6.08	0.90	-0.23**	-0.01	0.78**	1			
FrSocS	5.64	1.32	-0.05	0.01	0.82**	0.57**	1		
SSocS	5.32	1.51	-0.24**	0.01	0.83**	0.47**	0.45**	1	
Gender	0.50	0.50	0.31**	0.39**	0.14	0.11	0.23**	0.01	1

** . Correlation significant at the 0.01 level (1-tailed).

*. Correlation significant at the 0.05 level (1-tailed).

Neur: Neuroticism

CAnx: Covid 19 anxiety

SocS: Social support

FaSocS: Family social support

FrSocS: Friends social support

SSocS: Significant one’s social support

The table above shows the demographics of the participants. There were an equal number of male and females in the sample. The number of participants who were unemployed were much more than the

participants who were employed. Those who were unemployed were also students.

Table 2 shows the values of the Pearson’s correlation coefficient along with the means and the standard deviation of the variables. There was a significant positive relationship between covid 19 anxiety and neuroticism, $r=0.41$ at $p<0.01$. Significant negative relationship was found between neuroticism and the two domains of social support, social support from family and significant ones, $r= -0.23$ & -0.24 , $p<0.01$. Significant positive relationship was found between neuroticism and gender, $r= 0.31$, $p<0.01$. Significant positive relationship was found between covid-19 anxiety and gender, $r=0.39$, $p<0.01$. No significant relationship was found between covid 19 anxiety and any of the three sources of social support and also between covid 19 anxiety and employment.

Table 3 shows the results of the independent samples t-test conducted between males and females among the participants along with the means and the standard deviation. There was significant difference in the level of neuroticism and covid 19 anxiety between males and females, $t=-3.59$ & -4.60 , $p<0.01$. On average, females scored higher in both the variables.

Table 4 shows the results of regression analysis with covid 19 anxiety as the dependent variable and

neuroticism and gender as the predictors. The model was significant at $F_{(2,121)} = 19.43$, $p<0.01$. All the coefficients were found to be significant at $p<0.01$. $R^2 = 0.243$ means that 24.3 percent of variation in the dependent variable was explained by the model.

Covid-19 anxiety =13.37+2.09(Gender)+0.21(Neuroticism). The coefficient of gender 2.09 indicates the average difference in the level of covid 19 anxiety between

during the pandemic. One reason for this unusual result could be related to the information regarding the pandemic. A higher social support with high frequency of communication might mean more

Table 3 Independent samples t values

Variables	Male(n=62)		Female(n=62)		t (124)	p-values
	M	SD	M	SD		
Neur	16.21	±5.37	19.66	±	-3.59	0.00
CAnx	16.82	±3.66	19.65	±3.15	-4.60	0.00

Table 4 Regression coefficients of gender and neuroticism on covid 19 anxiety

Variables	B	SE	β	R ²	F
Constant	13.37**	0.98		0.243	19.43**
Gender	2.09**	0.61	0.29		
Neur	0.21**	0.06	0.32		

Dependent Variable: CAnx

Predictors: (Constant), Neur, Gender

male and female after controlling for neuroticism. A unit increase in neuroticism leads to 0.21 unit increase in the level of covid 19 anxiety.

Discussion

The result showed that as neuroticism increased, on average the anxiety related to covid 19 tends to increase too. Neuroticism was also a significant predictor of covid 19 anxiety. The current results are corroborated by findings of the previous research. Kumar & Tankha (2022) found that neuroticism was related to the COVID-19 anxiety factors of fear and somatic concern. They also showed that neuroticism showed partial mediation on the factor of somatic concern through sleep quality specifically. Further the factor of fear was predicted by neuroticism. People high in neuroticism tend to feel bored and there was a positive effect between boredom and fear of COVID-19. Thus, having a higher perceived control over time helps in regulating boredom’s effect on fear of COVID-19. This means that psychological treatment programs could improve the individuals’ perceived control over time to regulate anxiety (Caci et al., 2020). Approach to mental health problems in which personality traits are taken into account may help to prevent increases in problems due to similar situations in the future (Galea, Merchant & Lurie, 2020).

There was no significant relationship between social support and covid 19 anxiety. This result was not what was expected from the review of literature and it contradicted the findings of other researchers. For instance, Guo et al., (2021) found that low social support was associated with higher level of not just anxiety related to pandemic but of depression and stress symptoms as well. Alnazly et al., (2021) also found significant correlations between social support and fear along with depression, anxiety, and stress

informational intake regarding the pandemic, resulting in more anxiety. Longest & Kang (2022) found that when young adults have a higher level of offline emotional support while having a lower level of online informational support, the scores on the indicators of depressive symptoms tend to be lower. They suggested that in the earlier part of the pandemic, reports on outbreaks of positive cases or symptoms were at its height while cures and vaccines were still in the process of development. Therefore, the failure to process the bulk of information related to the pandemic and the feeling of helplessness associated with it can cause the fear and anxiety to rise in spite of the emotional support they have.

The social support scale used in this study did not take into account the material support or resources that were available during the pandemic. Hence, higher social support didn’t mean being secured or supported in those terms. Stressors such as economic and food insecurity, and loss of employment were risk factors for anxiety and depression during the pandemic (Porter et al., 2021) and security in this area will lead to reduction in the anxiety and depressive symptoms. In such a case, not taking into account the material security will result in the strength of relationship between social support and covid-19 anxiety being undermined.

Gender was associated with neuroticism and the level of neuroticism was higher among the female participants. This was in line with what was seen in the review of literature and what was found in another research. Weisberg, DeYoung & Hirsh (2011) found that females score higher in both the aspects of neuroticism- withdrawal and volatility. When the effect of volatility was partialled out from withdrawal and vice versa, the difference remained for withdrawal but was eliminated for volatility. This

and anxiety are more common in women (Weissman et al., 1996) and men tend to score higher in traits such as anger and hostility which is associated with volatility (Scherwitz et al., 1991). But, Matsumoto & Fontaine (2008) found that the patterns of gender differences among White and Asian participants were different where men scored higher in volatility as compared to women among White participants, while women scored higher as compared to men among Asian participants. Cultural differences in social norms and appropriateness in the expression of anger might lead to these differences between the Whites and the Asians.

Gender was also associated with covid 19 anxiety and the level of anxiety was higher among the female participants. This was corroborated by the findings of other researchers (Hou et al., 2021; Rosenblum & Elimelech, 2021; Opanković et al., 2021). Women also have increased chances of developing moderate or high-level stress in addition to having depressive symptoms and anxiety which need attention and treatment (Wilson et al., 2020). However, Tsukamoto et al., (2021) found that even though women showed more anxiety as compared to men during the primary wave of COVID-19, the differences disappeared during the secondary wave. They attributed these changes to their emotion-focused skills among women, such as better interpersonal communication abilities which seems to work in such situations. The problem-focused coping strategy which was predominant among men doesn't seem to be helpful. From the results, it can be said that emotional and verbal support might not be the only important aspects that people need in times of Covid 19. Support in terms of material needs might be important for mental well-being. Being higher in neuroticism and being a female seemed to be a risk factor for elevated anxiety related to the pandemic. Personality and gender specific care can be important and helpful in such situations. Parents can help children with these risk factors to cope better by giving support and getting access to mental health professionals if there is a need. Emotion-focused coping skills such as meditation, journaling, interpersonal communication, etc can also be taught in order to cope in situations where problem focused coping might not work.

Conclusion and Future Directions

The aim of the study was to explore the relationship between covid 19 anxiety, neuroticism and social support in the context of the pandemic among the northeast people living in Delhi during the lockdown of the second wave of the pandemic. The study found significant positive association between neuroticism and covid 19 anxiety. Social support was not associated with covid 19 anxiety. The level of anxiety and neuroticism were significantly higher among the female participants. Neuroticism and gender significantly predicted anxiety related to covid 19.

between a sample of north-east adults and permanent residents of the state. The relationship between anxiety and social support can be further examined in different populations by taking the material support into account and further details between their relationship can be examined using qualitative methods.

Limitations

The data was collected using online forms leading to the authenticity of the response being compromised. The sample was small and not representative of the north-east population living in Delhi since the state of origin of the participants was not taken into account. The marital status of the participants and the economic background which will influence the anxiety and fear of the participants were not taken into account.

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