Research Paper

Death Anxiety as a Mediating Factor Between Future Anxiety and Psychological Distress among General Adult Population During Second Wave of Covid

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ABSTRACT

The second wave of Covid 19 pandemic took many by surprise. The number of infected people and mortality rate has increased drastically. Due to huge shortage of vaccines and equipments created psychological distress among population and mortality rate increased. The pandemic also created apprehension about the future. Thus, the current research aims to study the mediating role of death anxiety between future anxiety and psychological distress among general adult population during second wave of Covid 19 pandemic. The study also aims at finding the association between demographic variables and study variables. The study was conducted on 154 samples inclusive of different age groups and gender. The data were collected through online mode using Google Form. Psychological distress scale by Kessler R, Dark Future scale by Zbigniew Zalski et.al, and Death anxiety scale by H R Weiner M B & Plutchik R were used as a tools for the study. The statistical analysis Moderation analysis and Chi square were used to analyze the data. The result revealed that death anxiety mediates between future anxiety and psychological distress. The result also revealed that demographic variables like age and gender has significant association between death anxiety, future anxiety and gender respectively.

Keywords: Covid 19 Pandemic, Psychological distress, Death anxiety, Future anxiety

India being a densely populated country had to confront many obstacles in dealing with the sudden outburst of Covid 19 especially during its second wave. The second wave of Covid took many by surprise. The variant that fueled the second wave is B.1.617, first found in India in the month of December became the most widespread across the country. During the second week of May 23 million reported cases of Covid and more than 2, 54,000 deaths having an average of 3, 80,000 cases per day reported in the Deccan Herald on the 14th of May. The second wave has hit India so hard that beds in hospitals are hard to get, beds with oxygen are next to impossible and there is a huge shortage of vaccines and equipment created apprehension (Chatterjee et al., 2021). The imposed lockdown and social restriction are emotionally burdened and vulnerable.

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During the second wave of the Covid 19 pandemic the number of infected people and mortality rate has increased drastically. Though death is inevitable, the cruel reality of impending death hits hard in the recent month due to the new variant of Covid 19 disease. Even the post-Covid complication like Mucormycosis and forthcoming third wave of Covid has alarmed the people (Menzies et al., 2020).

In the opinion of Newton-John et al., (2020) daily updates of Covid 19 transmissions, present images of death presented a unique challenge to our society. Limited access to family members due to social distancing and restriction on mobility moderated our reaction to a death. As people are no sure about their safety and well–being during this crisis have a constant fear of death. The increase in death anxiety is directly proportionate to mental health issues resulted due to global financial strain, massive unemployment, and financial hardship (Pradhan et al., 2020).

The isolation and uncertainty created following lockdown aggravated mental health problems. The pandemic played havoc with orderly world making the human psyche more burdened (Jagadeesan, 2020). The symptoms of anxiety, depression, and insomnia have a high prevalence during the pandemic (Kaur & Sonali, 2020). The factors like infection fears, boredom, forced restriction, a plethora of faulty information and rumors regarding the disease, dearth of health-related facilities, financial loss, and loss of loved one are the major contributors to the cost of psychological distress (Sathe, n.d.). APA dictionary of Psychology defines psychological distress as a set of painful and physical symptoms that are associated with a normal fluctuation of mood in most people. In some cases, psychological distress may indicate the beginning of major depressive disorder, anxiety disorder, schizophrenia, somatization disorder, or a variety of other clinical conditions. Psychological distress is a condition that creates discomfort and interferes with daily life functioning manifesting mental health problems. When an individual fails to cope up with the external demand imposed by the environment, we experience distress. The study conducted by Age – well Foundation was reported in Times of India dated 18th of May 2021. The study reveals around 70.2% of respondents were found suffering from sleeplessness or insomnia and nightmare due to poor quality of sleep. Loneliness and a deepening sense of uncertainty have hit the senior citizen where 82% of them complained of anxiety-related issues, 63% of respondents reported depression due to loneliness, social isolation, and stress, 52% of people lost their appetite. Help Age India reported that 50% calls being increased seeking counseling during the pandemic situation.

The unforeseen occurrences brought sudden changes making it difficult to adjust to the lifestyle among people. Because of this situation, psychological well-being is severely impaired. Several factors like the presence of infection in the immediate surroundings, unauthentic piece of information, an upsurge of social media rumors, age, gender, the status of employment, level of education, marital status, living arrangements, and many other psychosocial factors are contributing to the state of psychological distress(Lahiri et al., 2021). An individual understands the severity of the pandemic and its effect also has its influence on psychological distress.

It is no wonder if the young population is severely prone to the psychosocial effect of the Covid 19 pandemics in India. The schools and colleges are shut down and many lost their job and have to live with uncertainty about the future. According to Deloitte Global Reports, 51% of women are less optimistic about their career prospects. The Self-concept theory of

career development by Super explains adulthood as a stage that comprises the stages of establishment and maintenance where an individual develops his/her career from trial and stabilization to maintenance of his /her career to fulfill the responsibility of life. University graduates who are forming their career expectations and commitments had the greatest threat regarding their future career and decision in this uncertain situation(Mahmud et al., 2020). Acknowledging the present condition, the current study aims to find the mediating role of death anxiety between future anxiety and psychological distress among the general adult population.

METHODOLOGY

Aim
- To study the mediating role of Death Anxiety between future anxiety and psychological distress among the general adult population during the second wave of covid19.
- To study the association level of demographic variables with Psychological distress, Death anxiety and Future anxiety among the general adult population during the second wave of Covid19.

Hypothesis
- Death anxiety mediates future anxiety and psychological distress among the general adult population during the second wave of the Covid 19 pandemic.
- There is an association between a socio-demographics variable and psychological distress
- There is an association between a socio-demographics variable and future anxiety
- There is an association between the socio-demographics variable and death anxiety.

Sample
The study consists of 154 samples, from different places in Karnataka. The sample comprises both the gender ranging from early adulthood to late adulthood. The samples are selected using a convenient sampling method.

Inclusion criteria
- Both males and females are included
- Samples from different domicile are included
- Working and non-working classes including student samples are selected.

Exclusion criteria
Samples having no access to use the Google form are excluded.

Independent variable: Future anxiety
Dependent variable: Psychological distress
Mediating variable: Death Anxiety

Tools
- **Psychological distress Scale:** Kessler's Psychological Distress scale (K10) is developed by Kessler. R. This is a self-report measure consists of 10 items. Each item consists of 5 options ranging from 'None of the time' to 'All of the time'.

Scoring: the score of 1 is given for the option 'None of the time', 2 for 'A little of the time', 3 for 'Some of the time', 4 for 'Most of the time', and 5 for 'All of the time'.

- **Dark Future Scale:** The scale is developed by Zbigniew Zalski et.al. The reliability of the scale is 0.90 and used for measuring future anxiety. The scale consists of 5 items and each item consists of 7 options ranging from 'Decidedly false' to 'Decidedly true'.
  Scoring; The score of 0 is given for the option Decidedly False, 1 for False, 2 for Somewhat false, 3 for Hard to say, 4 for Somewhat True, 5 for True, and 6 for Decidedly True.

- **Death Anxiety Scale:** The source of the scale is H. R., Weiner, M. B., and Plutchik, R. (1982). Measuring death anxiety: Conceptual, psychometric, and factor-analytic aspects. Journal of Personality and Social Psychology, 43, 775-785. The scale includes 15 items having 3 options namely, Not at all, Somewhat, and Very much.
  Scoring: The score of 0, 1, and 2 are given for the option Not at all, Somewhat and Very much respectively. A higher score indicates a greater level of death anxiety.

Procedure

Due to the mobility restriction, the data are collected via online mode. Google Form was created consisting of 4 sections. In the first section, instructions and sociodemographic data were included. In the second, third, and fourth sections the Psychological distress scale, Death Anxiety Scale, and Future Anxiety scale were included respectively. The purpose of the study and confidentiality was ensured in the form. After taking consent participants were asked to answer the questionnaire with the help of the instructions given. The data collected was further processed with editing and coding procedure using scoring instructions given in the manual.

Statistical analysis:

The statistical software 26th version was used for the analysis of the data. Mediation analysis has been conducted along with the Descriptive statistics. The Chi-square test is used to find the association between demographic variables and study variables.

RESULT AND DISCUSSION

Table 1: *Descriptive statistics of the study variables Psychological distress, Death Anxiety, and future Anxiety among the general adult population.*

Variables	N	Minimum	Maximum	Mean	Std. Deviation
PDS	153	10	42	19.50	7.257
DA	153	0	23	6.35	6.058
FA	153	0	25	9.96	6.522

Concerning psychological distress, the mean and standard deviation is 19.50 and 7.257 respectively. The mean value of death anxiety is 6.35 and the value 6.058 represents the standard deviation. The values 9.96 and 6.522 indicate the mean and standard deviation of the Future anxiety respectively.

Table 2 *Association of the level of psychological distress among the general adult population with the demographic variables.*

Demographic variables	Percentage of psychological distress		χ^2,	df,	p
Age	**High**	**Low**			
Early adulthood	39.9%	32.7%	3.466,	2,	0.171
Middle adulthood	8.5%	13.7%			
Late adulthood	2.0%	3.3%			
Gender	**High**	**Low**			
Male	10.5%	22.2%	9.979,	1,	0.002
Female	39.9%	27.5%			
Locality	**High**	**Low**			
Rural	13.7%	11.8%	0.259,	1,	0.611
Urban	36.6%	37.9%			
History of physical illness	**High**	**Low**			
Yes	12.4%	5.9%	5.497,	2,	0.064
No	37.9%	43.8%			
History of mental illness	**High**	**Low**			
Yes	7.2%	2.6%	3.540,	2,	0.170
No	43.1%	47.1%			

Result reveals that 39.9% of early adulthood has high psychological distress and 32.7% has low psychological distress. In middle adulthood 8.5% of them have high and 13.7% have a low level of psychological distress. In late adulthood 2% of them have high and 3.3% have a low level of psychological distress. The Pearson Chi-square value is 3.466 with 0.171 as a significant value.

Out of 153 samples, 31.4% belong to a male and 68.6% belong to a female, out of which 10.5% of males and 39.9% of females has a high level of psychological distress. The remaining 22.2% of males and 27.5% of females reported a low level of psychological distress. The Pearson Chi-square value is 9.979 with a significant value of 0.002.

Considering the locality of the samples, 25% of them belong to rural and 75% belong to an urban population. Out of them, 13.7% of rural and 36.6% of urban population has a high level of psychological distress whereas 11.8% and 37.5% of rural and urban population has a low level of psychological distress respectively. The Pearson Chi-square value is 0.259 and the significant value is 0.611.

For the history of physical illness, 17.3% reported "yes" out of which 12.4% has high psychological distress and 5.9% has a low level of psychological distress. The remaining 82.7% of samples reported absence of physical illness among them 37.9% has high and 43.8% has low psychological distress. The values 5.497 and 0.064 indicate Pearson chi-square value and significant value of the variable respectively.

Regarding the history of mental illness, 7.2% of samples having mental illness reported high psychological distress and 2.6 % reported low psychological distress. Samples without any history of mental illness reported 43.1% of high psychological distress and 47.1% of low psychological distress. The Pearson chi-square value is 3.540 and the p-value is 0.170.

Table 3 Association of the level of Future anxiety among the general adult population with the demographic variables.

Demographic variables	Percentage of Future anxiety		χ^2,	df,	p
Age	High	Low			
Early adulthood	43.8%	28.8%	13.352,	2,	
Middle adulthood	7.2%	15.0%	0.001		
Late adulthood	0.7%	4.6%			
Gender	High	Low			
Male	13.7%	19.0%	2.760,	1,	
Female	37.9%	29.4%	0.097		
Locality	High	Low			
Rural	16.3%	9.2%	3.25,	1,	
Urban	35.3%	39.2%	0.071		
History of physical illness	High	Low			
Yes	11.7%	6.6%	2.714,	2,	
No	39.9%	41.8%	0.257		
History of mental illness	High	Low			
Yes	5.9%	4.0%	0.509,	2,	
No	45.8%	44.4%	0.775		

The result shows that 43.8% of early adulthood has high Future anxiety and 28.8% has low Future anxiety. In middle adulthood 7.2% of them have high and 15.0% have a low level of Future anxiety. In late adulthood0.7% of them have high and 4.6% have a low level of Future anxiety. The Pearson Chi-square value is 13.352 with 0.001 as a significant value.

Out of 153 samples, 31.4% belong to a male and 68.6% belong to a female, out of which 13.7% of males and 37.9% of females has a high level of Future anxiety. The remaining 19% of males and 29.4% of females reported a low level of Future anxiety. The Pearson Chi-square value is 2.760 with a significant value of 0.097.

Considering the locality of the samples, 25% of them belong to rural and 75% belong to an urban population. Out of them, 16.3% of rural and 35.3% of urban population has a high level of Future anxiety whereas 9.2% and 39.2% of rural and urban population has a low level of Future anxiety respectively. The Pearson Chi-square value is 3.25 and the significant value is 0.071.

Concerning the history of physical illness, 17.3% reported "yes" out of which 11.7% has high Future anxiety and 6.6% has a low level of Future anxiety. The remaining 82.7% of samples reported absence of physical illness among them 39.9% has high and 41.8% has low Future anxiety. The values 2.714 and 0.257 indicate Pearson Chi-square value and significant value of the variable respectively.

About history of mental illness, 5.9% of samples having mental illness reported high Future anxiety and 4% reported low Future anxiety. Samples without any history of mental illness reported 45.8% of high Future anxiety and 44.4% of low Future anxiety. The Pearson chi-square value is 0.509 and the p-value is 0.775.

Table 4 *Association of the level of Death anxiety among the general adult population with the demographic variables*

Demographic variables	Percentage of Death anxiety		χ^2,	df,	p
Age	High	Low			
Early adulthood	40.5%	32.0%			
Middle adulthood	7.8%	14.4%	6.457,		2,
Late adulthood	1.3%	3.9%	0.040		
Gender	High	Low			
Male	15.0%	17.6%	0.401,		1,
Female	34.6%	32.7%	0.527		
Locality	High	Low			
Rural	13.1%	12.4%	0.054,		1,
Urban	36.6%	37.9%	0.816		
History of physical illness	High	Low			
Yes	10.4%	7.9%	2.525,		2,
No	39.2%	42.5%	0.283		
History of mental illness	High	Low			
Yes	5.3%	4.6%	0.665,		2,
No	44.4%	45.8%	0.717		

The result shows that 40.5% of early adulthood has high Death anxiety and 32% has low Death anxiety. In middle adulthood 7.8% of them have high and 14.4% have a low level of Death anxiety. In late adulthood 1.3% of them have high and 3.9% have a low level of Death anxiety. The Pearson Chi-square value is 6.457 with 0.040 as a significant value.

Out of 153 samples, 31.4% belong to a male and 68.6% belong to a female, out of which 15% of males and 34.6% of females has a high level of Death anxiety. Remaining 17.6% of males and 32.7% of females reported a low level of Death anxiety. The Pearson Chi-square value is 0.401 with a significant value of 0.527.

 Considering the locality of the samples, 25% of them belong to rural and 75% belong to the urban population. Out of the, 13.1% of rural and 36.6% of urban population has a high level of Death anxiety whereas 12.4% and 37.9% of rural and urban population has a low level of Death anxiety respectively. The Pearson Chi-square value is 0.054 and the significant value is 0.816.

Concerning the history of physical illness, 17.3% reported "yes" out of which 10.4% has high Death anxiety and 7.9% has a low level of Death anxiety. The remaining 82.7% of samples reported absence of physical illness among them 39.2% has high and 42.5% has low Death anxiety. The values 2.525 and 0.283 indicate Pearson Chi-square value and significant value of the variable respectively.

Concerning the history of mental 5.3% of samples having mental illness reported high Death anxiety and 4.6% reported low Death anxiety. Samples without any history of mental illness reported 44.4% of high Death anxiety and 45.8% of low Death anxiety. The Pearson chi-square value is 0.665 and the p-value is 0.717.

Figure 1 Model summary of death anxiety as a mediator between future anxiety and psychological distress among the general adult population.
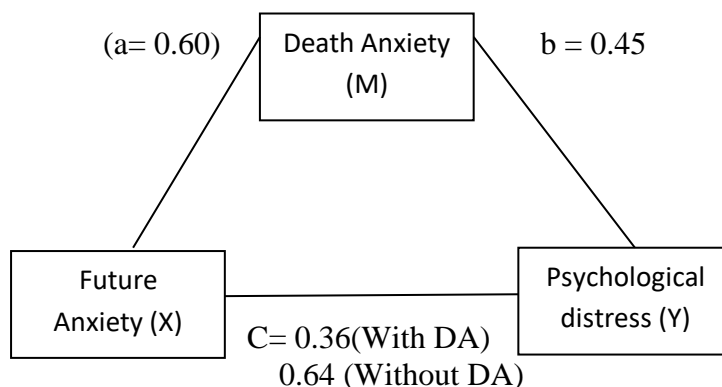

Table 5 Direct effect and the total effect of future anxiety on Psychological distress

	Effect	SE	T	p	LLCI	ULCI
Direct	0.364	0.0916	3.977	0.0001	0.1834	0.5454
Total	0.6422	0.0739	8.6846	0.000	0.4961	0.7862

Table 6 An indirect effect of death anxiety on psychological distress

Effect	Boot SE	Boot LLCI	Boot ULCI
0.2778	0.0640	0.1631	0.4126

SE – standard error, LLCI- The lower limit of Class interval, ULCI- Upper limit of the Class interval

The hypothesis Death anxiety mediates between Future anxiety and psychological distress was tested using a basic mediation analysis model. The result shows the Direct, Total, and Indirect effects of Future anxiety on psychological distress. The direct effect value and total effect values are 0.364 and 0.642 having significant values as 0.0001 and 0.000 respectively. As the '0' does not fall between the lower and upper limit of the class interval there is a significant relationship between future anxiety and psychological distress among the general adult population. The indirect effect value is 0.2778 with 0.1631 and 0.4126 as Boot LLCI and Boot ULCI respectively. The result indicates that death anxiety mediates between future anxiety and psychological distress.

DISCUSSION

The study reveals the association of the level of psychological distress, death anxiety, and future anxiety among the general adult population with the demographic variables. The demographic variables such as age, gender, locality, history of physical and mental illness were considered for the study. It is found that there is a significant association between gender and psychological distress among the general adult population during the second wave of the Covid 19 pandemic and there was no association with the level of psychological distress and other demographic variables like age, locality, and history of physical illness and history of mental illness. Results also indicated a significant association in the level of death anxiety and future anxiety with the demographic variable age factor. The remaining variables like gender, locality, history of physical and mental illness do not associate with death anxiety and future anxiety. The study concluded with the presence of mediating effect

of death anxiety between future anxiety and psychological distress. Thus, the study accepts the alternative hypothesis.

CONCLUSION

This study result shows that only demographic variable gender and age has its association with psychological issues like death anxiety, future anxiety, and psychological distress. Further, it indicates that future anxiety operates, fully or in part on psychological distress through an intervening variable called death anxiety. The study can be further targeted by considering confounding variables.

Limitation

As data is collected through online mode, researchers could not control extraneous variables, and as the data based on self-report measure, can be subject to response bias. The unequal sample size was also one of the limitations of the study.

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