Original Research Article

PATHOLOGICAL GRIEF IN GERIATRIC AGE GROUP AFFECTED BY COVID-19 DEATHS: A COMMUNITY-BASED STUDY

ABSTRACT:

Background: Deaths by COVID-19 have left behind nearly 12 million recent bereaved individuals worldwide and researchers have raised concerns that the circumstances of COVID-19 related deaths will lead to a rise prevalence of prolonged grief disorder (PGD) cases. However, to date, no studies have examined the prevalence of PGD among elderly people bereaved due to COVID-19 in India. This study aimed to estimate the prevalence of PGD and investigated demographic associated with prolonged grief symptoms among geriatric individuals bereaved due to COVID-19.

Methods: This is a cross-sectional house to house study conducted between August 2022 and August 2023. 40 geriatric adults above 60 years, who consented for the study, were assessed for prolonged grief disorder. Demographic and loss-related information was collected**,** and self-reported prolonged grief symptoms were measured by Prolonged Grief Disorder Scale, Traumatic Grief Inventory Self Report (TGI-SR), Hamilton Rating Scale for Anxiety (HAM-A), and Hamilton Rating Scale for Depression (HAM-D), multiple linear regression analysis was used to determine the associated factors of levels of grief symptoms.

Results: Our study indicates that individuals who experienced loss due to COVID-19 exhibited higher levels of grief. Majority of the study participants were females, (65%). Prevalence of PGD was 10% by TGI-SR. HAM-A scores (14.28 +/- 1.42) were higher than HAM-D scores (12.02 +/- 1.58).

Conclusion: Our study indicates that individuals who experienced loss due to COVID-19 exhibited higher levels of grief. It is essential to counsel families early, and offer supportive counseling services to prevent the pathological grief associated with COVID-19 deaths.

INTRODUCTION:

On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a pandemic, following the occurrence of 118,000 diagnosed cases and 4291 deaths in 114 countries. [(1)] As of 30 November 2023, there have been 772,052,752 confirmed cases of COVID-19 in the world, including 6,985,278 deaths, as reported to WHO. [(2)] In India, as of 30 November 2023, there have been 45,001,764 confirmed cases of COVID-19 with 533,298 deaths, reported to WHO. [(3)]

Recently, PGD was incorporated as a novel diagnosis in the World Health Organization's International Classification of Diseases, 11th edition (ICD-11). This syndrome is defined by enduring and pervasive feelings of yearning, longing, or persistent preoccupation with memories of the deceased, accompanied by other indications of grief-related emotional distress, resulting in notable impairment or distress in daily functioning, and persisting for a minimum of six months, surpassing societal, cultural, or religious expectations. Furthermore, this syndrome encompasses various forms of emotional distress. Factors such as the circumstances, context, and aftermath of deaths during the COVID-19 pandemic are likely contributors to increased rates of PGD.

A recent study in USA, has observed that for each COVID-19 death, about 9 family members would be affected by grief. When the process of adaptation is obstructed or interrupted, it often leads to the development of prolonged grief disorder (PGD), as observed in various studies. Following the loss of a loved one, approximately 9.8% of individuals experience symptoms indicative of PGD. One study report that individuals bereaved by COVID-19 exhibit heightened levels of shock, disbelief, and hallucinations regarding the deceased, along with feelings of estrangement from others. Furthermore, COVID-19-related deaths are associated with an increased likelihood of developing probable PGD, particularly among older adults, as evidenced by a study showing elevated risk in the geriatric population at the 12-month mark post-loss. [(4,5,6)]

Consequently, older adults who have lost a spouse to COVID-19 and display specific distress symptoms may require clinical intervention for PGD. [(7)] Notably, there is a scarcity of research focusing on the geriatric population within the Indian subcontinent. Therefore, the present study aims to investigate pathological grief among the elderly who have experienced the loss of a partner, child or family member due to COVID-19.

METHODS AND MATERIALS

Data is compiled after interviewing 100 families in the community out of which 40 adults falling under geriatric age group were selected. Geriatric age is defined as adults over 60 years of age as per WHO. [8] We have included adult males and females above 60 years, who consented for the study, who have lost their spouse, ward or family member, whose deaths have been notified in the COVID-19 death register maintained by Attibele PHC, Jigani PHC and Haragadde PHC in Bangalore and assessing them for prolonged grief disorder. Persons with previously diagnosed psychiatric disorders, mental retardation and who did not consent were not included in the study. Institutional ethical clearance was received for the study. After fulfilling the selection criteria, all the family members were counselled about the study and written informed consent was taken. A semi structured proforma was made and the following scales will be applied while interviewing.

1. PANDEMIC GRIEF SCALE (PGS)

PGS is a 5-item Likert rating scale using 4-point time-anchored scale that spans a 2-week period (0 =not at all to 3 = nearly every day), participants rated how frequently they experienced each grief symptom. The PGS measures COVID-19 grief equally across demographic groups, and discriminates well between persons with and without dysfunctional grief using an optimized cut score of ≥ 7 (87% sensitivity and 71% specificity).

2. TRAUMATIC GRIEF INVENTORY (TGI)

It is a self-reported inventory of 18 items used for the assessment of symptoms of Prolonged Grief Disorder (PGD). Scoring is done using 5-point Likert rating scale. A total score of 61 can be considered as a cutoff for provisional diagnoses of PGD.

3. HAMILTON RATING SCALE FOR ANXIETY (HAM-A)

HAM-A is the most frequently used instrument to evaluate anxiety. It contains 14 items; each item is rated on 0 to 4 scales. Score below 7 is normal, 8 to 14 is mild anxiety, 15 to 23 is moderate anxiety, and > 24 is severe anxiety.

4. HAMILTON DEPRESSION RATING SCALE (HAM-D)

HAM–D is an observer-rated scale on the basis of clinical interview to evaluate depression. Score norm: 7 and below is considered as normal, 8 to 13 is mild depression, 14 to 18 is moderate depression, 19 to 22 is severe depression, and 23 and above is very severe depression.

The data was collected, and assessed with SPSS v21, where continuous variables were represented as mean and standard deviation, and the categorical variables were represented as frequencies and proportions. Student's t-test, Mann Whitney U test and Pearson's correlation test was used where deemed necessary.

RESULTS:

This study included 300 participants out of which 40 study participants of geriatric age group fit the inclusion and exclusion criteria.

Table 1: Demographic details of geriatric caregiver

Variable		Frequency (N=40)	
Age		64.57 ± 5.93	64.57 ± 5.93
Sex	Male Female	13 (32.5%) 27 (67.5%)	66.46 ±7.31 62.96 ± 4.13
Religion Hindu	Hindu Muslim	39 (97.5%) 1 (2.5%)	
Education	Up to 10th Uneducated	10 (25%) 30 (75%)	
Socio – economic status	Upper Middle Lower	0 (0%) 5 (12.5%) 35 (87.5%)	
Staying with family		40 (100%)	
Rural		40(100%)	
Closeness with deceased		40 (100%)	
Conflict with deceased		0 (0%)	

Figures in parenthesis are in percentage

Table 2 : Demographic and clinical details of deceased

Variable		Frequency (N=40)
Age of deceased		64.4 +/- 12.12
	Male	63.96 ± 13.02
	Female	59.85 ± 12.29
Role of deceased	Spouse	34 (90%)
	Child	6 (10%)
Occupation of deceased	Employed	14 (35%)
	Unemployed	26 (65%)
Expectedness of death	Expected	32 (80%)
	Unexpected	8 (20%)
Type of setup	ICU	30 (75%)
	Non-ICU	5 (12.5%)
	Home care	5 (12.5%)
COVID wave	1st	26 (65%)
	2nd	12 (30%)
	3rd	2 (5%)

Figures in parenthesis are in percentage

Table 3: Statistical analysis of scales used

Clinical variable	Mean ± SD
PGS score	5.17 +/- 1.52
TGI score	40.71 +/- 14.33
HAM – A score	14.28 +/- 1.42
HAM – D score	12.02 +/- 1.58

We observed that the majority of the study participants were females i.e. 65%. Of these the mean age of the males was found to be significantly higher than the females. (P = .042)

Similarly, we assessed the age of deceased, and the age of the females was significantly lower than that of the males. (p value 0.09)

In this study, we noted that most were staying with family in the rural area with a low socio-economic status. While most patients were managed in the hospital, a patients required hospital care. Of these, a small percentage required ICU care with non-invasive ventilation or mechanical ventilation. These patients were at a high risk of succumbing to COVID-19. In the present study, 35/40 patients needed hospital admission, with intensive care. Of these, majority were in the 1st wave of COVID-19. All 40 participants were close with the deceased and they did not have any conflict between them.

There was a weak positive correlation of age of participant with PGS which was non-significant (r= 0.16, *P* = .32) also positive correlation of age of deceased with PGS which was statistically significant (r= 0.32, *P* = .004)

There was a weak positive correlation of age of participant with TGI-SR which was non-significant (r= 0.28, *P* = .08) also a positive correlation of age of deceased with TGI-SR which was statistically significant (r= 0.44, *P* = .004)

4 out of the 40 participants meet the cutoff of PGD (TGI-SR ≥ 61) with a prevalence of 10%.

Using Mann Whitney U test, we found that there was no correlation with sex and PGS. (r=0.17, *P* = .301). When we correlated the two scores, i.e. PGS and TGI-SR, we found a significant positive correlation between the both. (r=0.82, *P*= .001)

When we correlated age of the interviewed geriatric adults with the scores used in the study, we found a positive correlation between age and the two scores independently.

Table 4. Data statistics

		Mean diff.	Std. Error	t	p	95% CI lower limit	95% CI upper limit
Age	Pandemic Grief Scale (PGS)	58.73	0.973	60.373	<.001	56.76	60.69
Age	Traumatic Grief Inventory (TGI-SR)	20.9	2.792	7.487	<.001	15.25	26.55
Pandemic Grief	Traumatic Grief	-37.83	2.198	-	<.001	-42.27	-33.38

Scale (PGS)	Inventory (TGI-SR)			17.205			

Similar correlation was performed between PGS and unexpectedness of the death, and we found a significant association.

We found a weak positive correlation between age of participant and anxiety measured using HAM-A value but it was not statistically significant. (r=0.20, *P*= .21)

We found a weak positive correlation between age of participant and depression measured using HAM-D value but it was not statistically significant (r=0.23, *P*= .15)

DISCUSSION:

In the wake of the COVID-19 outbreak, there is an urgent requirement to put into action interventions that have the potential to mitigate the negative effects of mourning. It is possible that we may do this by teaching the general population about the stages of grieving and healing, as well as the ways in which the pandemic may impact loss and grief. A dominant focus on imagining alternative scenarios and/or rewriting our role in the story of the death, an excessive avoidance of reminders of the loss, social isolation, survivor guilt, or a persistent strong aversion to experiencing positive emotions are some of the characteristics that are associated with post-traumatic stress disorder (PTSD). In addition, disruptions in regular activities such as eating, sleeping, or exercising might make it challenging to regain a sense of well-being. In the same way as the risk of COVID-19 is higher for older persons and especially those who have a persistent physical illness, the risk of PGD is likely to be higher for those who are older and who have a history of psychiatric conditions. It is possible that family members should be urged to keep a careful eye on these extremely susceptible populations. [(9)]

In a recent study in United States, eighty adults participating in a randomized controlled trial for depression prevention who lost a spouse. The study highlights the unique challenges faced by older adults who lost a spouse to COVID-19, such as sudden and unexpected deaths, limited mourning rituals due to pandemic restrictions, and social isolation. These factors contribute to

specific symptoms of distress, including shock, hallucinations, and estrangement from others. This was similar to the findings of our study. Most of the deaths were expected (80%). But each participant was close to the deceased which increased the grief. The findings underscore the importance of screening and providing clinical care for COVID-bereaved older adults, as they are at increased risk of developing PGD. Given the potential comorbidity of PGD with depression, anxiety, and post-traumatic stress, tailored interventions addressing these conditions are essential. [10]

In a recent study in India, majority of the participants who lost a relative due to COVID-19 who were males in the age-group of 60 years and above. Grief was found more in males and in relatives whose loved ones died of COVID-19. There was a statistically significant difference between groups (COVID deaths vs non-COVID deaths) for pathological grief. [11] However, in our study there was no relation between sex of the individual and grief.

The findings of our study aligned with a similar study in Brazil, which highlighted those individuals of lower socioeconomic status face heightened vulnerability to morbidity and mortality due to residing in crowded housing conditions. Social connectedness serves as a crucial support system for those in lower and middle classes, aiding in navigating life's challenges. However, the restrictions imposed during COVID-19 deprived them of this support, negatively impacting their typical coping mechanisms. Our study had all participants from rural, lower socio-economic status who were dependent on the deceased. [12] The caregivers were more anxious than depressed due to the financial instability ahead of them. (*P* value .001)

The findings of this study were in line with a study in Netherlands which observed that acute grief reactions following COVID-19 deaths were more pronounced in affected families compared to deaths resulting from other natural causes (non-COVID). The higher prevalence of pandemic grief among males might be attributed to their greater representation among the relatives of COVID-related fatalities. In our study, as the age of the deceased reduced, the grief as per TGI-SR was noted to be higher as younger males were the sole breadwinners for the family (r= -0.44, *P*= .004). [13]

According to research, for every COVID-19 death, approximately nine Americans will experience the loss of a close relative. The data from various studies suggest that if we consider different epidemiological scenarios, the number of bereaved individuals could be significantly higher than the number of deaths. For instance, if 190,000 Americans were to die from COVID-19, this could result in approximately 1.7 million Americans losing a grandparent, parent, sibling, spouse, or child. Similarly, if 1 million deaths were to occur over a longer period, around 8.9 million individuals could be bereaved. In our study, we found a prevalence of 10% for Prolonged Grief Disorder with 4 out of the 40 participants meeting the cutoff for PGD. [14]

A study suggests that advancing age raises the likelihood of both contracting COVID-19 and experiencing mortality due to it. Nonetheless, findings from various researches indicate that amid the pandemic, individuals aged 21–40 are notably experiencing heightened levels of anxiety, depression, and stress. [15] In our study we noted that HAM-A scores (14.28 +/- 1.42) were higher than HAM-D scores (12.02 +/- 1.58).

CONCLUSION:

COVID-19 has brought about a significant mental trauma to people all over the world. Especially in families that have to deal with the death of their relatives from afar, it worsens the mental morbidity associated with COVID-19.

It is essential to counsel families early, and offer supportive counseling services to prevent the pathological grief associated with COVID-19 deaths.

The current study indicates that individuals who experienced loss due to COVID-19 exhibited higher levels of grief. This underscores the importance of conducting further research to follow up with surviving family members of COVID-19 victims, with extra care towards geriatric adults, specifically to examine potential psychological consequences such as complicated grief.

REFERENCES

1. WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020 [Internet]. Who.int. [cited 2022 Jun 24]. Available from: https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

2. WHO Coronavirus (COVID-19) dashboard [Internet]. Who.int. [cited 2022 Jun 24]. Available from: https://covid19.who.int/
3. India: WHO Coronavirus disease (COVID-19) dashboard with vaccination data [Internet]. Who.int. [cited 2022 Jun 24]. Available from: https://covid19.who.int/region/searo/country/in
4. Tang S, Xiang Z. Who suffered most after deaths due to COVID-19? Prevalence and correlates of prolonged grief disorder in COVID-19 related bereaved adults. Global Health [Internet]. 2021;17(1):19.
5. Eisma MC, Lenferink LI, Chow AY, Chan CL, Li J. Complicated grief and post-traumatic stress symptom profiles in bereaved earthquake survivors: a latent class analysis. European Journal of Psychotraumatology. 2019 Dec 31;10(1):1558707.
6. Boelen PA, Lenferink LI. Comparison of six proposed diagnostic criteria sets for disturbed grief. Psychiatry Research. 2020 Mar 1;285:112786.
7. Castle J, Phillips WL. Grief rituals: Aspects that facilitate adjustment to bereavement. Journal of Loss & Trauma. 2003 Jan 1;8(1).
8. World Health Organization. Ageing and Health [Internet]. World Health Organization. 2022. Available from: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health
9. Johannsen M, Damholdt MF, Zachariae R, Lundorff M, Farver-Vestergaard I, O'Connor M. Psychological interventions for grief in adults: A systematic review and meta-analysis of randomized controlled trials. Journal of Affective Disorders. 2019 Jun 15;253:69-86
10. Stahl ST, Kazan J, Lazzari T, Krafty RT, Reynolds CF, Rollman BL, et al. Risk for Complicated Grief After the COVID-19 Death of a Marital Partner in Late Life. The American Journal of Geriatric Psychiatry [Internet]. 2023 Oct 28 [cited 2024 Jan 15];
11. Majid, Abdul; Suhaff, Ajaz A.; Teli, Bilal A.; Rafiq, Farhana; Bhat, Aijaz. Impact of COVID-19 pandemic on grief, death, mourning, and coping. Indian Journal of Psychiatry 64(6):p 555-559, Nov–Dec 2022. | DOI: 10.4103/indianjpsychiatry.indianjpsychiatry_124_22
12. Mattos Dos Santos R. Isolation, social stress, low socioeconomic status and its relationship to immune response in Covid-19 pandemic context.

Brain Behav Immun Health 2020;7;100103

13. Eisma MC, Tamminga A, Smid GE, Boelen PA. Acute grief after deaths due to COVID-19, natural causes and unnatural causes: An empirical comparison. J Affect Disord 2021;278:54-6.
14. Verdery AM, Smith-Greenaway E, Margolis R, Daw J. Tracking the reach of COVID-19 kin loss with a bereavement multiplier applied to the United States. Proceedings of the National Academy of Sciences. 2020 Jul 28;117(30):17695-701.
15. Salari N, Hosseinian-Far A, Jalali R, Vaisi-Raygani A, Rasoulpoor S, Mohammadi M, Rasoulpoor S, Khaledi-Paveh B. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. Globalization and health. 2020 Dec;16:1-1.