

Ethnoracial Disparities in Posttraumatic Stress Disorder Symptoms during the COVID-19 Pandemic: A Brief Report

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Abstract

Despite the well-identified vulnerability of older adults during the COVID-19 pandemic, it is unclear about their experiences with COVID-related posttraumatic stress disorder symptomology (COVID-PTSD). This study examined ethnoracial disparities in the level of, and factors associated with, COVID-PTSD using a national data set, including 1926 Whites and 488 ethnoracial minorities. Results showed that ethnoracial minorities reported a greater COVID-PTSD than Whites. COVID-related distress was the common risk factor of COVID-PTSD for the both groups. Being a female and greater social support were associated with COVID-PTSD only for Whites, whereas higher education, greater IADL and fewer ADL limitations were associated with COVID-PTSD for ethnoracial minorities. The findings provided preliminary, but generalizable understanding of ethnoracial disparities in COVID-PTSD, among the Medicare beneficiaries aged ≥ 65 .

Keywords

COVID-19, pandemic, posttraumatic stress disorder, older adults, ethnoracial disparities

What this paper adds

- Generalizable understanding about ethnoracial disparities in COVID-PTSD among older adults

Applications of study findings

- Developing targeted approaches to address COVID-PTSD for older adults

Posttraumatic stress disorder (PTSD) refers to a mental health disorder caused by indirect or direct exposure to a traumatic event (American Psychiatric Association, 2013). Given its tremendous adverse physical and psychosocial impact worldwide, one in four adults reported COVID-19 related PTSD (COVID-PTSD; Cooke et al., 2020). In particular, older adults could be at a high risk for COVID-PTSD considering that they have the highest infection and mortality rates, and resource insecurities. Around 80% of COVID-19 related deaths in the U.S. occurred among those aged ≥ 65 (Nania, 2021). Nearly half of the older adults reported COVID-19 to be a major threat to their health (bib_Schaeffer_and_Raini_2020Schaeffer & Raini, 2020). Furthermore, containment measures including physical distancing, quarantine, and lockdown cause older adults to experience anxiety, depression, or sleeping troubles (Sepúlveda-Loyola et al., 2020), which lead to an increased risk for them developing PTSD (Boyras & Legros, 2020). However, there is little to no evidence regarding their experiences of COVID-PTSD (e.g., Cooke et al., 2020).

This study aimed to examine the COVID-PTSD among older adults using a nationally representative data set, focusing on ethnoracial disparities. Ethnoracial minorities are the most vulnerable to a disaster considering their high probability of disaster exposure and limited recourse to mitigate its effects (Raker et al., 2020). COVID-19 also disproportionately has affected ethnoracial minorities with higher rates of prevalence, hospitalization, and mortality

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compared to the Whites (Mude et al., 2021). The specific objectives of this study were to identify ethnoracial variations in the level of COVID-PTSD and explore factors affecting it.

Methods

The data were extracted from the National Health and Aging Trends Study (NHATS), COVID-19 Supplement Survey. NHATS is an annual longitudinal cohort study conducted with a representative sample of the Medicare population aged ≥ 65 . In 2020, the NHATS conducted supplementary mail surveys with its participants about their experiences with COVID-19 ($N = 3188$). Post applying the two inclusion criteria (community-dwelling and completion of the survey by older adults themselves), a total of 2414 participants were included in this study: 1926 Non-Hispanic Whites and 488 ethnoracial minorities (356 Blacks, 83 Hispanics, and 49 others including Asians, Native Hawaiians, Pacific Islanders, and others).

The dependent variable, COVID-PTSD, was measured using six items asking about the extent to which respondents experienced PTSD symptoms during the pandemic. The scale asked about the outbreak and its effect in the following areas on a four-point Likert scale (1 = *not at all* to 4 = *most of the time*): intrusiveness (i.e., recurring thoughts and nightmares), avoidance (i.e., avoiding activities and feeling/thoughts), and hypervigilance (i.e., feeling jumpy/easily startled, and on guard). This six-item scale was developed from the eight-items of a short PTSD inventory (PTSD-8; Hansen et al., 2010) after dropping two items regarding reactions to recurring traumatic events, since they were not applicable to the ongoing COVID-19 pandemic. The internal consistency reliability was .82 in this sample.

The COVID-19 pandemic is a new type of traumatic event due to its prolonged duration and complexity in dealing with the virus. Thus, existing conceptual models of trauma research that usually focus on past traumatic events fail to explain COVID-PTSD (Kira et al., 2021). Therefore, based on COVID-19 research with older adults (e.g., Lee et al., 2021; Polenick et al., 2021) and about PTSD (Tortella-Feliu et al., 2019), the following four groups of independent variables, to explore risk factors for COVID-PTSD, were included: physical health, social support network, financial status, and COVID-related distress.

Physical health was measured using the number of limitations in activities of daily living (ADL: getting in/out of bed, eating, bathing, getting dressed, toileting, and getting around inside) and instrumental activities of daily living (IADL, laundry, shopping, meal preparation, and managing banking and medication). Social support network was measured using two composite scores: social contact and social support. Social contact was measured using four questions about the frequency of communications with family/friends on the phone, email, text, or social media messages, video calls, and in-person visits (1 = *never* to 4 = *at least daily*) and this measure has been used in recent

studies (e.g., Choi et al., 2022; Freedman et al., 2021). Social support was measured using two questions about the exchange of encouragement and emotional support with family/friends (1 = *never* to 4 = *at least daily*). Financial status was measured using a question about the change in monthly income since the pandemic (1 = *decrease*, 2 = *same*, 3 = *increase*). COVID-related distress was conceptualized into feeling of worry and stress due to COVID-19, and was measured using two questions about levels of anxiety and depression (1 = *not at all* to 4 = *Severe*). Furthermore, demographic variables were included as covariates.

Statistical analysis included descriptive statistics to elucidate the characteristics of the sample and independent samples t-test to examine the differences in COVID-PTSD between Whites and ethnoracial minorities using SPSS 27. Then, two separate regression analyses were performed to identify risk factors for COVID-PTSD for Whites and ethnoracial minorities, respectively, with weights using robust standard error to enhance the accuracy of the estimation using Stata BE-17.

Results

As shown in Table 1, the majority of the participants were females [Whites (57.1%); ethnoracial minorities (64.4%)]. Most participants had completed a high school education or higher [Whites (92.8%); ethnoracial minorities (79.3%)]. Furthermore, around 40% of the older adults experienced at least one symptom of COVID-PTSD sometime or more frequently, and the average score for COVID-PTSD was 11.09 (Range: 6–24, $SD = 3.82$). However, ethnoracial minorities reported greater COVID-PTSD ($M = 12.02$, $SD = 4.28$) as compared to the Whites ($M = 10.87$, $SD = 3.67$), with significant differences [$t(2251) = 5.81$, $p < .000$].

Regression analyses with Whites revealed that being a female ($B = .443$, $\beta = .60$, $p = .026$), having social support ($B = .120$, $\beta = .078$, $p = .002$) and COVID-related distress ($B = 1.720$, $\beta = .650$, $p < .000$) were associated with COVID-PTSD. Females were more likely to experience greater COVID-PTSD than males. Whites with greater social support and higher COVID-related distress were more likely to have greater COVID-PTSD. The regression model was significant, accounting for around 47% of the variation in the dependent variable.

In contrast, among ethnoracial older adults, education ($B = .121$, $\beta = .139$, $p = .018$), limitations of IADL ($B = .582$, $\beta = .168$, $p = .015$) and ADL ($B = -1.230$, $\beta = .158$, $p < .000$), and COVID-related distress ($B = 1.915$, $\beta = .661$, $p < .000$) were associated with COVID-PTSD. Ethnoracial minorities with higher education, higher IADL limitations, fewer ADL limitations, and greater social support were likely to report greater COVID-PTSD. The regression model was significant, accounting for around 53% of the variation in the dependent variable. Table 2 presents the results of regression analyses of risk factors affecting COVID-PTSD for Whites and ethnoracial minorities.

Table 1. Participants' Characteristics.

	Whites (n = 1926)		Ethnoracial minorities (n = 488)	
	n (%)	Mean (SD)	n (%)	Mean (range, SD)
Age				
65–69	26 (1.3)		11 (2.1)	
70–74	475 (24.7)		145 (28.2)	
75–79	611 (31.7)		156 (30.4)	
80–84	426 (22.1)		112 (21.8)	
85–89	266 (13.8)		69 (13.4)	
90 or above	122 (6.3)		21 (4.1)	
Gender				
Female	1099 (57.1)		331 (64.4)	
Marital status				
Married/living with partner	1091 (56.6)		188 (36.6)	
Education				
No school	—		2 (.6)	
1st–8th grade	25 (1.8)		36 (7.3)	
9th–12th grade	104 (5.4)		63 (12.8)	
High school graduate or equivalent	491 (25.5)		120 (24.3)	
Vocational/technical school certificate	144 (6.5)		30 (6.1)	
Some college, but no degree	314 (16.3)		89 (18.1)	
Associate's degree	109 (5.7)		28 (5.7)	
Bachelor's degree	358 (18.6)		66 (13.4)	
More than college education	371 (19.3)		58 (11.8)	
Financial change				
Decrease	38 (2.0)		32 (7.4)	
No change	131 (6.8)		451 (87.7)	
Increase	1722 (91.9)		15 (2.9)	
IADL limitations (range: 0–6)		1.89 (.15)		1.94 (1.23)
ADL limitations (Range:0–5)		.15 (.5)		.21 (.63)
Social contact (range: 4–16)		11.71 (3.05)		11.31 (3.16)
Social support (range: 4–8)		6.21 (2.42)		6.9 (2.40)
COVID-related distress (range: 2–8)		4.11 (1.39)		4.25 (1.6)

Table 2. Results of Regression Analyses of Factors Associated With COVID-PTSD.

	Whites				Ethnic/racial minorities			
	<i>B</i>	<i>b</i>	95% CI	<i>p</i> -value	<i>B</i>	<i>b</i>	95% CI	<i>p</i> -value
Sociodemographic factors								
Gender	.443	.060	.053–.832	.026	.065	.072	–.427–1.741	.234
Age	–.047	–.014	–.180–.084	.477	.111	.026	–.244–.467	.539
Education	–.002	–.001	–.083–.079	.957	.121	.139	.020–.222	.018
Marital status	–.126	–.016	–.485–.232	.491	–.405	–.044	–1.430–.620	.438
Physical limitations								
IADL limitations	.070	.023	–.077–.218	.348	.582	.168	.114–1.050	.015
ADL limitations	.113	.017	–.263–.490	.555	–1.230	–.158	–1.865–.596	.000
Social support network								
Social contact	–.017	–.014	–.076–.041	.557	–.013	–.010	–.145–.118	.838
Social support	.120	.078	.045–.196	.002	.195	.111	–.017–.407	.071
Financial change in income	–.029	–.002	–.560–.501	.913	.334	.024	–1.007–1.676	.624
COVID-related distress	1.720	.650	1.586–1.854	.000	1.915	.661	1.655–2.175	.000

Notes: *p*-value = .05 or less in bold.

Conclusions and Implications

This study examined ethnoracial disparities in the level of, and risk factors associated with, COVID-PTSD among older adults. The pandemic has been a traumatic stressor for a considerable number of older adults; however, its impact was highly severe for ethnoracial minorities. It was found that covid-related distress is the most prominent and common risk factor associated with COVID-PTSD across racial groups, consistent with prior findings (Lee et al., 2021; Polenick et al., 2021). Given the highest mortality and infection rates among older adults (Heras et al., 2021), the strong effect of COVID-related distress on COVID-PTSD has been anticipated.

Further, different risk factors associated with COVID-PTSD between Whites and ethnoracial minorities were found. Being female was associated with greater COVID-PTSD among Whites, corroborating existing PTSD research widely conducted in Western countries (Kessler et al., 2012). Furthermore, greater social support was associated with a higher level of COVID-PTSD among Whites, possibly indicating that those with greater COVID-PTSD seek social support rather than vice versa.

In contrast, education, and the limitations of IADL and ADL were associated with COVID-PTSD among ethnoracial minorities. Given that education is considered an indicator for health literacy, these findings correspond with previous findings on a positive relationship between health literacy and perceived PTSD (Alatawi et al., 2020). However, education is significant only for ethnoracial minorities, which might indicate the different effect of education on PTSD across racial backgrounds.

Ethnoracial minorities with higher IADL limitations reported greater COVID-PTSD, supporting the well-documented finding about the relationships between greater IADL limitations and worse mental health conditions (Cunningham et al., 2020).

However, interestingly fewer ADL limitations were associated with greater COVID-PTSD, revealing the unique situation related to this pandemic. Given that the majority of ethnoracial minorities in this sample (70%) reported no ADL limitations, individuals with any ADL limitations might have received well-arranged support before the pandemic, and be likely to continue receiving such help during the pandemic. Meanwhile, those without ADL limitations who were likely to handle their needs independently before the pandemic might encounter greater challenge and distress in navigating resources and receiving support with containment measures imposed. Considering the existing ethnoracial disparities in assessing health services, ethnoracial minorities who attempted to seek assistance during the pandemic might experience greater barriers.

This study contains a few limitations. Due to the cross-sectional design used in the original survey, causality between identified risk factors and COVID-PTSD cannot be drawn. Also, despite its heterogeneity, all ethnoracial minority groups were combined due to their small sample sizes. Lastly, some measures such as social support and social contact used had limited information on psychometric properties, which might have influenced our findings.

However, the findings of this study provide much-needed evidence that presents a generalizable understanding of ethnoracial variations in COVID-PTSD among the Medicare beneficiaries aged ≥ 65 . In addition, factors associated with COVID-PTSD could help identify older adults at its higher risk, and develop culturally tailored approaches to reach out to vulnerable older adults. For example, given the findings about the different risk factors across racial groups, community outreach programs could be developed targeting ethnoracial minorities with IADL limitations, to address potentially high mental health risks related to the pandemic. Further research that examines the effects of mental health conditions, including previous exposures to trauma and existing mental health issues

on COVID-PTSD, could offer crucial evidence regarding high-risk groups of individuals related to the COVID-19 pandemic.

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