

ORIGINAL ARTICLE

Association between financial hardships and emotional well-being during the COVID-19 pandemic

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Received: September 25, 2025

Accepted: February 23, 2026

Online Published: March 26, 2026

DOI: 10.5430/ijh.v12n1p1

URL: <https://doi.org/10.5430/ijh.v12n1p1>

ABSTRACT

Objective: The current study examined the association between financial hardship experienced during the COVID-19 pandemic and emotional well-being (EWB) among middle-aged and older adults, and assessed whether these associations differed by gender and race/ethnicity.

Methods: The analytic sample included 7,172 adults aged 50 years or older who participated in the 2020/2021 COVID-19 modules of the Health and Retirement Study (HRS). Financial hardship was assessed using binary indicators of difficulty paying bills and food insecurity, including food affordability and access. EWB was measured using the ratio of positive to negative experiences. Linear regression models were used to evaluate associations.

Results: Difficulty paying bills ($\beta = -0.27$; 95% CI [-0.33, -0.21]), food affordability ($\beta = -0.13$; 95% CI [-0.22, -0.05]), and food access ($\beta = -0.33$; 95% CI [-0.39, -0.24]) were each associated with lower EWB, as indicated by a reduced positivity ratio. Improvement in food affordability between 2020 and 2021 was associated with an increase in the positivity ratio ($\beta = 0.43$; 95% CI [0.003, 0.87]). Associations between financial hardship and lower EWB were observed across gender and race/ethnicity strata. However, difficulty paying bills and food insecurity showed differential associations with the positivity ratio across racial/ethnic groups.

Conclusions: The findings of this study have implications for interventions aimed at improving the EWB of middle-aged and older adults by focusing on financial hardship during a public health crisis.

Key Words: Financial hardship, Emotional well-being, COVID-19, Older adults, Food insecurity

1. INTRODUCTION

The COVID-19 pandemic has posed significant economic and financial hardship for individuals in the United States and around the globe, in addition to its physical, mental, and emotional impacts.^[1-3] The pandemic strained household finances, resulting in difficulties with mortgage payments, food access, and affordability.^[4,5] Financial hardship refers to a situation in which an individual lacks sufficient economic resources to meet daily needs, including paying credit card bills, mortgage payments, and covering food and trans-

portation costs.^[6] Financial hardship is a chronic stressor and is adversely associated with poor mental health outcomes, including depression^[6-12] and loneliness.^[13] However, financial hardship affects health differentially.^[14,15] For example, difficulty paying credit card bills or mortgage payments can increase household debt and feelings of loss of control, leading to greater stress, anxiety, and poorer psychosocial well-being.^[16] Other studies found that food insecurity, characterized by limited access to and affordability of food, can restrict an individual's ability to consume healthy, nutritious

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food, leading to malnutrition, physical inactivity, and poor health outcomes.^[16,17] However, studies linking financial hardship during the pandemic to health outcomes primarily used socioeconomic indicators, such as income. For example, using the nationally representative sample, Samuel et al.^[18] examined whether the decline in income during the pandemic was associated with poor sleep quality or loneliness among Medicare beneficiaries aged 65 years or older. Research suggests financial hardship is a stronger predictor of poor mental health than income level.^[19] While the pandemic's impact on mental health outcomes is well documented,^[20-24] the link between financial hardship and psychosocial well-being remains unclear.

Previous studies suggest that financial hardship is associated with subjective well-being.^[25,26] However, the literature linking pandemic-related financial hardship and emotional well-being (EWB) is limited. EWB is characterized by positive experiences (affect), such as self-esteem, joy, and happiness, and negative experiences, including stress, anger, and sadness.^[27-29] EWB is a key component of life satisfaction that balances positive and negative affect, such as happiness, sadness, stress, and accomplishment.^[30] Recognizing its significant public health relevance, the National Public Health Initiative and the National Institutes of Health (NIH) have prioritized research on EWB for its role in reducing mortality and morbidity.^[31,32] Accordingly, EWB as a health outcome has gained prominence in public health research. Using early pandemic data, Choi et al.^[30] examined the association between a composite measure of pandemic-related financial hardship and EWB among individuals aged 50 years or older. However, health outcomes may not have fully manifested during the early phase of the pandemic (June 2020). Additionally, composite measures of financial hardship that span multiple domains—such as difficulty paying bills and food insecurity (affordability and access)—often assume equal weighting across domains, despite evidence that specific hardship domains exert differential effects on health outcomes.^[14,15] In light of the growing recognition of EWB in public health research, the current study aimed to assess the associations between individual domains of financial hardship, changes in these domains during the pandemic, and EWB in a nationally representative sample of adults aged 50 years or older.

Financial hardship can disproportionately impact African Americans and Latinos because of longstanding socioeconomic inequality.^[33] The extent to which race/ethnicity moderates the association between financial hardship and EWB, however, remains unclear. During the pandemic, African American and Hispanic groups experienced greater financial hardship and adverse health outcomes than their White coun-

terparts.^[34-36] The relationship between financial hardship and EWB can also vary by gender.^[37,38] To date, no study has examined the associations between individual domains of financial hardship and EWB, nor the moderating roles of gender and race/ethnicity in these relationships.

The current study aimed to investigate the associations between individual domains of financial hardship and EWB, with a particular focus on whether these associations vary by gender and race/ethnicity. The hypothesis was that the individual domains of financial hardship are associated with EWB, and these associations differ by gender and race/ethnicity. The specific research questions guiding this study were: 1) Are individual domains of financial hardship differentially associated with EWB? 2) Is the change in financial hardship experienced during the pandemic associated with EWB? 3) Does this association vary by gender and race/ethnicity?

2. METHOD

2.1 Data source

Data were from the COVID-19 modules of the Health and Retirement Study (HRS). The HRS is a nationally representative biennial longitudinal survey of individuals aged 50 or older. The core HRS survey includes comprehensive information about demographics, socioeconomic characteristics, health, and financial circumstances of survey respondents.^[39] The survey began in 1992, and new cohorts are added every 6 years to create a nationally representative longitudinal sample of U.S. adults 50 years or older. The purpose of the HRS survey is to study the health and economic well-being of older adults as they age. The HRS offers an excellent opportunity to control a host of individual-level factors while assessing the relationship between financial hardship and EWB. Additional description of this survey can be found elsewhere.^[38] The COVID-19 modules of the HRS facilitate investigation of the pandemic's health and economic consequences within a nationally representative sample, enabling generalizability of the research findings. These modules were fielded in June 2020 ($n = 3,266$) and Spring 2021 ($n = 7,986$). The HRS COVID-19 modules collected data on health and well-being, healthcare utilization, and the financial/economic effects of the pandemic from a nationally representative sample of HRS participants. The 2021 data are critical for this study for two reasons: first, the longer duration of hardship exposure during the pandemic, which is likely to impact the outcome; and second, to evaluate changes in hardship domains on the outcome for those who participated in the 2020 and 2021 surveys. The data are publicly available on the HRS website for researchers and have been approved by the University of Michigan Institutional Review Board (IRB).

The primary sample (cross-sectional) included 7,986 HRS respondents who participated in and completed the Spring 2021 COVID-19 mail-in survey. After linking to the HRS 2020 survey to extract health and other demographic data, the study sample included $n = 7,846$ respondents. Individuals under 50 ($n = 480$) and observations missing information on EWB ($n = 194$) were excluded. The final analytic sample ($n = 7,172$) included respondents with information on the outcome and financial hardship variables. The secondary sample consisted of respondents (≥ 50 years) who participated in the 2020 and 2021 modules and responded to the same financial hardship questionnaire in both years ($n = 894$). This sample examined the impacts of changes in financial hardship indicators from 2020 to 2021 on EWB, measured in 2021.

2.2 Measures and covariates

2.2.1 Outcome variable: Emotional well-being (EWB)

EWB is measured using the Positive and Negative Affect Schedule (PANAS), an instrument widely used in the literature.^[37-42] This scale indicates the degree to which individuals had positive and negative experiences (affect) during the pandemic. It was measured using the positivity ratio (positive-to-negative affect scores ratio),^[37] which comprised 12 items from the original 20-item PANAS scale.^[38] The five positive affect items were hopeful, happy, determined, calm, and content in life, whereas the seven negative affect items included bored, distressed, afraid, worried, lonely, sad, and nervous. Survey participants were asked to rate their affective responses on a 5-point scale (“very much,” “quite a lot,” “moderately,” “a little,” and “not at all”), indicating the extent to which each of the positive and negative emotions that respondents felt in the last 30 days during the pandemic. Each item on the positive and negative affect scale ranges from 1 to 5. To derive the score, each item for positive and negative affect scales was summed and divided by the number of items on each scale. Higher scores indicated more

intensive affectivities (1-5). Each participant’s positivity ratio was computed by dividing the positive by the negative affect score (0.2-5). The higher positivity ratio indicates higher EWB. This score is highly internally consistent and has been validated^[37-40] in studies of EWB in community-dwelling individuals.^[41]

2.2.2 Independent variable: Financial hardship

Financial hardship was measured by difficulties of paying bills and food insecurity domains (see Figure 1). Difficulty paying bills included credit card, rent/mortgage, utilities, and medical bills. Survey participants were asked whether they missed any bills for rent/mortgage, utilities, credit cards, or medical care during the pandemic. A binary variable (“1” or “0”) was created based on responses from the survey participants in the abovementioned areas. Two questions measured food insecurity: Since March 2020,

“How often did you not have enough money to buy food?”
 “How often have you had trouble buying food even though you had money?”

The first question addresses food affordability, whereas the second focuses on access to food necessary for maintaining an active and healthy lifestyle. Responses were coded as 1 when individuals reported “sometimes,” “often,” or “always,” and 0 if they reported “never” to these questions. Three indicators of hardships were used in the analysis: 1) difficulty paying bills related to rent/ mortgage, credit card, utility, and medical bills (yes/no), 2) food affordability (yes/no), and 3) food accessibility (yes/no). For the repeated analysis, the hardship variable was created with three categories: 1) those who experienced hardship in any of the three domains in 2020 but no hardship in the respective domains in 2021; 2) those who experienced no hardship in 2020 but experienced hardship in 2021; and 3) those who experienced no change in financial hardship between 2020 and 2021, [reference category].

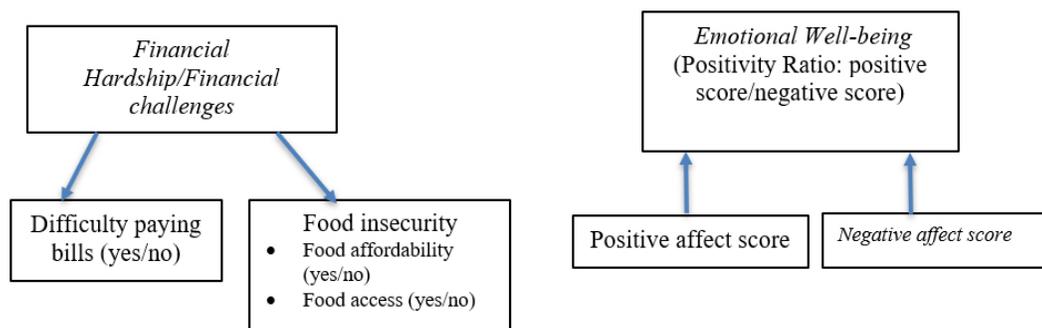


Figure 1. Definition and measures of financial hardship and EWB components

2.2.3 Model covariates

The statistical analysis was adjusted for demographic, socioeconomic, and health characteristics from the HRS 2020 wave. Demographic and socioeconomic characteristics included age (50-64, 65-74, 75-84, and 85+ [reference]), marital status (married/partnered, divorced/separated/widowed and never married [reference]), change in household income since the pandemic (same, increased, decreased [reference]), years of education (GED, some college, graduate degree, [reference]). Health-related variables included the number of chronic conditions (e.g., diabetes, high blood pressure, cholesterol, heart disease, chronic lung disease, arthritis) respondents reported in the survey (0-6) and the pandemic-related stress by creating a binary variable indicating whether a respondent experienced job loss (temporary or permanent) during the pandemic or if there was a death of any family members or friends because COVID-19. Gender was coded as male or female, and Race/ethnicity was coded as White, non-Hispanic; African American; or Hispanic of any race.

Statistical analysis

Descriptive analysis included one-way analysis of variance (ANOVA) for positive and negative affect scores and the positivity ratio, and chi-square tests of binary indicators of financial hardship. Multiple comparisons using the Tukey test were performed to compare means of continuous outcome variables across race/ethnicity groups. Multivariate ordinary least squares (OLS) regression models with robust standard errors were estimated in SAS version 9.4 to examine the association between financial hardship indicators and the positivity ratio. The potential effect modification by gender and race/ethnicity was examined in two ways: the financial hardship-EWB association within each gender and race/ethnicity stratum, and the joint exposure of financial hardship and gender (or race/ethnicity). The joint exposure was investigated by adding interaction terms between hardship measures and gender or race/ethnicity in the model. The reference groups in these analyses were individuals experiencing financial hardship in each domain and: 1) men (for gender analysis), 2) African American, non-Hispanic (for race/ethnicity analysis). Separate models were estimated for the difficulty of paying bills and food insecurity.

3. RESULTS

Table 1 presents descriptive statistics of the full sample and bivariate analyses of differences in EWB and indicators of financial hardship across race/ethnicity groups and gender. Nearly 60% of the sample were female, 63% were White, 19% were African American, and 13% were Hispanic. The mean positivity ratio was 1.73, with a range of 0.02-5. Nearly 20% of respondents reported difficulty paying bills, 13%

reported food affordability issues, and 18% reported food access issues during the pandemic. The bivariate differences in hardship indicators suggested that nearly 11% of White, non-Hispanic individuals reported difficulty paying bills, 13% reported difficulty with food affordability, and 7% reported food access, compared to 36% of African American, non-Hispanic respondents. A significantly higher percentage of Hispanic individuals had financial hardship in all three indicators and a lower positivity ratio than their White counterparts. Compared to males, females had a lower positivity ratio (1.91 vs. 1.60; $p < .001$), while a significantly greater percentage of females experienced hardship in all three indicators than males.

Table 2 presents bivariate differences in the repeated sample across race/ethnicity and gender. In the repeated sample for those who participated in both the 2020 and 2021 surveys, on average, a higher percentage of individuals reported experiencing hardship in all indicators in 2021 than in 2020. Additionally, a higher proportion of respondents transitioned from no hardship in 2020 to hardship in 2021 across all three indicators (see Table 2). A significant difference was observed between African American and white respondents who transitioned from no hardship in 2020 to hardship in 2021 across domains.

Table 3 presents results from the linear regressions examining the association between hardship indicators and the positivity ratio. Adjusting for demographics, socioeconomic status, health-related variables, difficulty paying bills (Model-1), and food affordability and access (Model-2) were differentially associated with a lower positivity ratio. Individuals who faced difficulties of paying bills, food affordability, and food access experienced lower positivity ratio by 0.27 (95% CI: [-0.33, -0.21]), 0.13 (95% CI: [-0.22, -0.05]) and 0.33 (95% CI: [-0.39, -0.24]), respectively than who did not face financial hardship in these indicators. There were negative associations between hardship domains and the positivity ratio for women compared with men, and for White non-Hispanic individuals compared with African American, non-Hispanic, and Hispanic individuals.

Table 4 presents associations between indicators of financial hardship, the positivity ratio for each stratum by race/ethnicity and gender, and the joint exposure of hardship and race/ethnicity. When comparing the financial hardship-positivity ratio associations across racial/ethnic groups, food access indicator and difficulty paying bills were stronger for African American, and non-Hispanic ($\beta = -0.42$; 95% CI: [-0.60, -0.24]; $\beta = -0.39$; 95% CI: [-0.52, -0.26]) than their White counterparts ($\beta = -0.27$; 95% CI: [-0.36, -0.17]; $\beta = -0.22$; 95% CI: [-0.32, -0.13]). Furthermore, food access was

statistically significantly associated with a lower positivity ratio among Hispanic than non-Hispanic respondents ($\beta = -0.29$; 95% CI: [-0.47, -0.09]). Difficulty paying bills and food accessibility were associated with a lower positivity ratio for men ($\beta = -0.23$; 95% CI: [-0.38, 0.07]; $\beta = -0.35$; 95% CI: [-0.47, -0.21]) than women ($\beta = -0.12$; 95% CI: [-0.22, 0.01]; $\beta = -0.29$; 95% CI: [-0.38, -0.20]). No significant associations between joint exposure to financial hardship and race/ethnicity and the positivity ratio were observed (results not shown; available from the author upon request).

hardship indicators from 2020 to 2021 and the positivity ratio in 2021. The table provides estimates and 95% CIs. The reference group for this analysis was those who experienced no change in hardship from 2020 to 2021. Results suggest that both groups with food access difficulty (hardship in 2020 to no hardship in 2021 and no hardship in 2020 to hardship in 2021) experienced a lower positivity ratio of -0.33 [95% CI: -0.59, -0.06] and -0.47 [95% CI: -0.69, -0.26] compared to those who experienced no hardship in either year. Finally, those who reported difficulty with food affordability in 2020 but not in 2021 experienced a higher positivity ratio of 0.43 [95% CI: 0.003-0.87].

Table 5 shows the association between the change in financial

Table 1. Descriptive of the study sample HRS COVID-19 2021 and differences in EWB and financial hardship indicators across race/ethnicity and gender

	Full sample (n = 7,172)	White	African American	Hispanic	Male	Female
<i>Variables Used in the Analysis</i>						
positive Affect score (1-5)	3.26 (0.87)	3.27 (0.80)	3.35 (0.97)**	3.07 (0.94)***	3.31 (0.83)	3.14 (0.86)***
Negative affect score (1-5)	2.36 (0.92)	2.28 (0.88)	2.36 (0.99)	2.48 (1.01)***	2.13 (0.85)	2.44 (0.95)***
Positivity ratio (0.20-5) (Positive/negative score)	1.73 (1.07)	1.74 (1.02)	1.79 (1.13)*	1.57 (1.09)***	1.91 (1.10)	1.60 (1.01)***
Independent variables (%)	%					
<i>Financial Hardship indicators</i>						
Difficulty paying bills	19.0	11.3	35.8***	31.6***	0.16	0.21***
Food affordability	13.4	7.4	25.2***	24.1***	0.11	0.15***
Food access	17.7	13.4	24.8***	26.8***	0.14	0.20***
Age: 54-64	20.7	-	-	-	-	-
65-74	40.0	-	-	-	-	-
75-84	24.8	-	-	-	-	-
85+	14.5	-	-	-	-	-
Female	59.7	-	-	-	-	-
White	63.4	-	-	-	-	-
African American	19.0	-	-	-	-	-
Other race	15.6	-	-	-	-	-
Hispanic	13.0	-	-	-	-	-
Married/partnered	73.6	-	-	-	-	-
GED	13.8	-	-	-	-	-
HS graduate	28.6	-	-	-	-	-
Some college	57.6	-	-	-	-	-
Income increased in pandemic	11.6	-	-	-	-	-
Income remained same	71.4	-	-	-	-	-
Income decreased	14.3	-	-	-	-	-
COVID related strain	46.8	-	-	-	-	-
# of health conditions (0-10)	2.5 (1.8)	-	-	-	-	-

Note. Ranges of the positive, negative affect scores and positivity ratio are shown in the parentheses; *** $p < .001$; ** $p < .01$; * $p < .05$; Chi-sq test for group differences in financial hardship indicators and positive and negative affects.

Table 2. Change in hardship indicators among those who participated both in 2020 and 2021 COVID-19 modules (*n* = 894)

Hardship indicators (%)	June 2020	September 2021	Change from 2020-2021	
			No hardship in 2020 to hardship in 2021	Hardship in 2020 to no hardship in 2021
Difficulty Paying bills	9.2	17.2	11.0***	3.1
Food affordability	5.3	12.4	10.3***	3.3
Food Access	12.1	18.1	14.2***	8.2

Change in Financial Hardship by Race/Ethnicity

Change in Hardship indicators (%)	No hardship in 2020 to hardship in 2021			Hardship in 2020 to No Hardship in 2021		
	African American	White	Hispanic	African American	White	Hispanic
Paying bills	17.5***	7.0	20.3***	6.3***	1.5	6.3*
Food affordability	18.8***	5.7	18.0***	3.1	2.6	4.2
Food access	18.3**	10.4	21.3*	6.3	8.6	5.3

Note. *** *p* < .001; ** *p* < .01; * *p* < .05; Chi-sq test for group differences in financial hardship indicators and ANOVA for positivity ratio; positive and negative affect.

Table 3. Linear regression model of predicting positivity ratio and hardship indicators on positivity ratio (COVID-19 2021 sample, *n* = 7,172)

Hardship Indicators	Linear Regression Results: Positivity Ratio (β [95% CI])	
	Model-1	Model-2
Paying bills	-0.27 (-0.33, -0.21)***	-
Food affordability	-	-0.13 (-0.22, 0.05)***
Food Access	-	-0.33 (-0.39, -0.24)***
Female	-0.26 (-0.31, -0.22)***	-0.25 (-0.34, -0.17)***
White, non Hispanic	-0.22 (-0.23, -0.11)***	-0.17 (-0.23, -0.12)***
Hispanic	-0.16 (-0.25, -0.080)***	-0.16 (-0.24, -0.08)***
F-value	42.77 (<i>p</i> < .001)	51.47 (<i>p</i> < .001)

Note. *** *p* < .001; Models controlled for demographic (age, marital status), Socioeconomic status (change in income during the pandemic, education), health-related variables (number of chronic health conditions, self-rated general health), and COVID-19 related stress; a reference group is African American non Hispanic. Model-1 included difficulty paying bills; Model-2 included food affordability and food access.

Table 4. Stratified model of financial hardship and positivity ratio by race/ethnicity and gender (estimated coefficients [95% CI])

Financial Hardship Indicators	Positivity Ratio (β [95%CI])				
	White, NH	African American, NH	Hispanic	Male	Female
<i>n</i>	4,595	1,333	914	2,891	4,281
Hardship indicators					
Paying bills	-0.22 (-0.32, -0.13)***	-0.39 (-0.52, -0.26)***	-0.21 (-0.40, -0.01)*	-0.23 (-0.38, 0.07)**	-0.12 (-0.22, 0.01)**
Food affordability	-0.11 (-0.24, 0.01)	-0.17 (-0.31, 0.01)	-0.01 (-0.21, 0.22)	-0.04 (-0.21, 0.12)	-0.14 (-0.24, 0.03)**
Food Access	-0.27 (-0.36, -0.17)***	-0.42 (-0.60, -0.24)***	-0.29 (-0.47, -0.09)**	-0.35 (-0.47, -0.21)***	-0.29 (-0.38, -0.20)***

Note. *** *p* < .001; ** *p* < .01; * *p* < .05; Models were adjusted for demographics (age, gender, marital status), Socioeconomic status (education, change in household income during the pandemic), health-related variables (self-rated health and number of chronic health condition), and covid-related stress. Difficulty in bill payment and food insecurity measures were entered separately in the models.

Table 5. Estimates (β) and 95% Confidence interval (CI) from Regression models with changed scores of financial hardship indicators on the positivity ratio (Reference category = those who experienced no hardship change from 2020 to 2021 in all indicators)

Hardship indicators	Change from hardship in 2020 to no hardship in 2021	Change from no Hardship in 2020 to hardship in 2021
	Positivity Ratio	Positivity Ratio
Difficulty paying bills	-0.06 (-0.49, 0.37)	-0.24 (-0.50, -0.01)
Food affordability	0.43 (0.003, 0.87)*	0.23 (-0.003, 0.46)
Food access	-0.33 (-0.59, -0.06)**	-0.47 (-0.69, -0.26)***

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; The models controlled for demographics (age, gender, race/ethnicity, marital status), Socioeconomic status (education, change in household income during pandemic), health-related variables (number of chronic health conditions self-rated health) and COVID-related stress; each hardship indicators were entered in the model separately.

4. DISCUSSION

In a national sample of U.S. adults aged 50 and older, this study examined how domains of financial hardship and their changes during the pandemic relate to EWB and whether these associations vary by gender and race/ethnicity. Three main findings emerged: difficulty paying bills, food affordability, and food access were each associated with the positivity ratio. These associations were stronger among men and African American, non-Hispanic respondents, and changes in financial hardship were also linked to the positivity ratio, highlighting potential long-term consequences for EWB.

The association between specific domains of financial hardship and lower EWB may have adverse long-term consequences for the health and well-being of middle-aged and older adults. In particular, food insecurity was associated with lower EWB, with the strongest association observed for food accessibility. These findings are consistent with prior evidence linking food insecurity to poor health outcomes, including chronic medical conditions, self-rated health, and loneliness.^[18] Notably, food insecurity among older adults increased by 38% before the pandemic, affecting an estimated 5.3 million individuals,^[43,44] and the current findings suggest that pandemic-related financial hardship may have further exacerbated this growing public health concern. In addition, individuals experiencing financial hardship during the pandemic may have relied on credit card debt or drawn from retirement savings, strategies that can worsen financial strain by increasing debt-to-asset ratios—an established risk factor for depressive symptoms and stress.^[45] A clearer understanding of how specific domains of financial hardship relate to EWB can help inform policy priorities and intervention design. Importantly, the effects of financial hardship on the health and well-being of older adults extend beyond the healthcare system and call for targeted policy responses, such as providing financial resources to reduce it.^[33] Overall, these findings underscore the importance of assessing the broader financial context—including food affordability and

accessibility—when promoting EWB among older adults.

The current study provides significant evidence that specific domains of financial hardship are differentially associated with EWB across demographic groups. This distinction is critical, as women and other minority populations may be more vulnerable to financial hardship and more sensitive to its effects. Food affordability showed a stronger association with EWB among women, whereas difficulty paying bills was more strongly associated with EWB among men. Additionally, associations between specific hardship domains and EWB were stronger among African American and Hispanic respondents than among White respondents. These findings suggest that financial hardship may have disproportionate impacts on EWB, and potentially longer-term physical and chronic health impacts among women and racial/ethnic minority groups. This is consistent with evidence on cumulative exposure to hardship and on gender differences in the financial hardship–health relationship.^[39] Together, these results underscore the need for targeted, population-specific policy interventions to more effectively address financial hardship and promote EWB.

The findings of the current study underscore important implications for research and policy. The association between pandemic-related financial hardship and EWB suggests that screening for financial hardship may be more relevant than socioeconomic indicators alone. Policies aimed at mitigating the pandemic-related financial challenges may also help reduce inequities in the well-being of middle-aged and older adults. In this study, individuals who experienced pandemic-related financial hardship were more likely to be Black or Hispanic. The negative association between financial hardship and the positivity ratio was also stronger among Black than White participants, suggesting that financial hardship related to the pandemic may widen longstanding socioeconomic disparities across racial and ethnic groups. Prior research demonstrating associations between financial hardship and

increased risks of physical disability, including dementia and frailty,^[18] highlights the importance of incorporating self-reported financial hardship into assessments of health and well-being, regardless of income level. Interventions addressing financial hardship should emphasize food assistance, support for bill payment, and broader economic resources, which may help improve both psychosocial well-being and physical health outcomes.

Some limitations of the current study are worth noting. First, the cross-sectional design of the current study precludes causal inference and captures the link between financial hardship and EWB at a single point in time. Second, the study did not examine cumulative exposure to financial hardship. For some individuals, financial hardship may have worsened over the course of the pandemic, a pattern that cannot be identified using current data. However, the analyses adjusted for changes in income since the onset of the pandemic, which may partially account for pre-pandemic financial hardship when present.

5. CONCLUSION

Despite these limitations, the current study provides evidence that specific indicators of pandemic-related financial hardship are associated with EWB among middle-aged and older adults in the United States, with differential effects by gender and race/ethnicity. Difficulty paying bills and food insecurity were each linked to EWB. These results suggest that pandemic-related financial hardship represents a distinct risk factor beyond income and other social determinants of health, emphasizing the need for targeted economic policies that address specific forms of hardship to protect psychosocial well-being in this population.

ACKNOWLEDGEMENTS

Not applicable.

FUNDING

Not applicable.

CONFLICTS OF INTEREST DISCLOSURE

The author declares no conflicts of interest.

INFORMED CONSENT

The study is based on the HRS data which is publicly available and informed consent were obtained by the University of Michigan, who conducted the HRS survey.

ETHICS APPROVAL

The Publication Ethics Committee of the Sciedu Press. The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

PROVENANCE AND PEER REVIEW

Not commissioned; externally double-blind peer reviewed.

DATA AVAILABILITY STATEMENT

Publicly available HRS survey data available to all registered users. Interested researcher can download the data after registering to the HRS website.

DATA SHARING STATEMENT

No additional data are available.

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