SGS SOUTHERN GERONTOLOGICAL SOCIETY

Journal of Applied Gerontology
2022, Vol. 41(5) 1465–1472

DOI: 10.1177/07334648211066920
journals.sagepub.com/home/jag
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Latinos and the Pandemic: Results from the National Social Life, Health, and Aging Project—COVID-19 Study

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Abstract

Pre-pandemic disparities placed Latinos at risk for COVID-19. This report describes the associations between *increased viral exposure through social contact* and *material hardship* and the uneven distribution of COVID-19 morbidity among Latino older adults using data from the recently released supplement to the National Social Life, Heath, and Aging Project (NSHAP) (N = 2672), a population-based panel study of adults born 1920–1965. Logistic regression revealed that material hardship and reliance on outside help were significantly correlated with COVID-19 infection, which may partially explain the disproportionate burden Latinos experience during the pandemic.

Keywords

COVID-19, health disparities, hispanics, Latinos

Pre-pandemic disparities in living and working conditions placed Latinos at higher risk for COVID-19. U.S. Latinos are three times as likely to get COVID-19 and twice as likely to die of it than the general population (Oppel et al., 2020), reducing life expectancy estimates from a survival advantage of more than 3 years to less than one (Andrasfay & Goldman, 2021). However, research on factors that have contributed to Latino older adults' vulnerability during the pandemic has been thin (Sáenz & Garcia, 2021).

Latinos disproportionately live in dense neighborhoods and larger households, which pose barriers to social distancing (U.S. Census Bureau, 2020). They are more than twice as likely to live in multi-generational households (Cohn & Passel, 2016; Johnson & Appold, 2017) and four times as likely to live with their grandchildren (Chen et al., 2015) than non-Latino whites.

Latinos are overrepresented among essential workers in industries most affected by the pandemic (Rho et al., 2020), which increased their viral exposure (Hooper et al., 2020); only 16% of Latinos reported being able to work from home, compared to 31.4% of non-Latino Whites (Gould & Shierholz, 2020). This disparity is further accentuated among foreign-born Latinos and those residing in mixed citizenship-status households because many immigrants, even those with lawful status, may not qualify for federal pandemic relief and safety net programs (Gonzalez et al., 2020; Olayo-Méndez et al., 2021). Moreover, the inclination for people to associate with others who share their ethnicity, religion, education, and occupation reinforces the concentration of disadvantage for those who are already underprivileged (Smith et al., 2014), which means that for populations where disadvantage converges along racial/ethnic and class lines, we can expect to see disproportionate pandemic-related outcomes (Gauthier et al., 2021).

Economic hardships among Latinos are well-documented. Nationwide, 61% reported job or income loss in the household during COVID-19, far more than non-Latino Whites (38%) (Lopez et al., 2020). Karpman et al. (2020) found that 46% of Latinos (ages 18–64) reported material hardship—the inability to pay rent, mortgage, or utilities on time (or at all); ongoing food insecurity; and unmet medical needs—compared to 25% of non-Latino Whites. These vulnerabilities may motivate people to take unwanted health

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risks—such as increasing their involvement in an informal economy—to avoid material hardship (Venkatesh, 2006).

For this investigation, we used national data to investigate associations between *increased viral exposure through social contact* and *material hardship* and the uneven distribution of COVID-19 morbidity among Latino older adults.

Methods

Study Population and Data Source

We used data from a sample of community-dwelling older adults enrolled in the National Social Life, Health, and Aging Project (NSHAP), a population-based panel study of adults born 1920–1965 that began in 2005 (Waite et al., 2020). Sample recruitment and characteristics have been reported elsewhere (O'Muircheartaigh et al., 2009, 2014). The target sample for the recently released supplement study (NSHAP-COVID) was drawn from the 4777 respondents during the 2015–16 data collection (NSHAP-R3).

Data were collected between September 14, 2020, and January 27, 2021, using web, phone, and paper/pencil (PAPI) surveys; the projected sample size was 3390. Ultimately, 2650 individuals responded (79% of the target sample; 56% of the total NSHAP sample); 263 identified as Latino/Hispanic. All estimates are survey-weighted (using R3 weights) by the reciprocal of the probability of selection and adjusted for non-response based on age and urbanicity. Here, we compare these 263 Latinos with the sample's 1913 non-Latino White participants; all provided written informed consent. National Opinion Research Center (NORC) at the University of Chicago (Protocol Number: 14.06.01) approved all protocols.

Participant Characteristics

Table 1 features the demographic characteristics of Latinos, non-Latino Whites, and the total sample. Compared to non-Latino Whites and the total sample, Latinos are younger (54% < 65 years). Nearly half (46%) were born outside the United States; 43% completed the survey in Spanish. Latinos reported lower levels of education; more than a third (34%) had less than high school. Non-Latino Whites preferred web-based (60%); Latinos favored data collection by phone (44%). Before the pandemic, most Latinos (91%) reported having enough (or more) income to meet basic needs; this number dropped to 66% during the pandemic. Compared to NSHAP-R3 Latino respondents, NSHAP-COVID Latino participants have higher levels of education, better self-rated health, and higher household income ($p < .01$).

Half of Latino respondents live in households of three or more, compared to 22% of non-Latino Whites. Among these, nearly a third of Latinos live with at least one minor, compared to only 12% of non-Latino Whites. More Latinos were working before the pandemic (60%) than non-Latino Whites (50%) or the total sample (53%). More employed Latinos experienced COVID-19-related changes in their work (37%) than non-Latinos (30%).

Contrary to expectations, Latinos had less contact weekly with family (26% vs 38%) and friends (20% vs 33%) than non-Latino Whites. Nearly half (49%) reported that they saw their family less often than before the pandemic, compared to 36% of non-Latino Whites; visits by friends follow this pattern. However, Latinos were more likely to receive outside help with tasks (17%) than non-Latino Whites (8%).

Outcome Variables

We examined factors associated with affirmations to the question, *Has a doctor or other healthcare provider diagnosed (a) you, (b) spouse/partner, (c) someone else in the household, (d) friend or family member outside the household, or (e) acquaintance with COVID-19?*

Independent Variables

We examined the main effects of three exposure factors: household size (lives alone, two persons, or three or more), reliance on outside help for everyday tasks (yes/no), and experience of a change in work due to the pandemic (yes/no/not working). The variable "task help" indicated responses to the question: *Since the start of the COVID-19 pandemic, have you relied on someone outside your household to regularly help you with everyday tasks?* These tasks included running errands, getting necessities, completing household repairs, or arranging for outside services. We also examined material hardship, measured by the question: *How has the pandemic affected your income and ability to meet your basic expenses and pay your bills [same/better or same/worse]?* We hypothesized that these exposure factors and material hardship would be positively associated with COVID-19 diagnosis.

Statistical Analyses

Analyses were performed using STATA SE 16.1. All except the correlation analyses were weighted to account for selection probability. We used descriptive statistics to summarize and compare characteristics for the overall sample, chi-squared tests to compare categorical variables, and t-tests for continuous variables.

We used logistic regressions to examine the relationship between exposure variables, material hardship, and a COVID-19 diagnosis in the household. The following modeling procedures were used. In Model 1, diagnosis was adjusted for demographic variables and survey mode. Model

Table 1. Descriptive Statistics for Total Sample and by Latino/Non-Latino White Grouping.

	Total Sample		Latino		Non-Latino White		Group Contrast
Variable	*N*	%	*N*	%	*N*	%	*p*
Sex	2650		257		1913		
Male		43.95		50.37		44.01	.047
Female		56.05		49.63		55.99	
Age	2650		257		1913		
Mean (sd.)		67.65 (9.65)		64.80 (12.10)		68.35 (8.86)	
< 65		42.41		53.90		39.44	.003
65 ≤		57.59		46.10		60.56	.012
Language of survey	2650		257		1913		
English		96.86		56.96		100.00	< .0001
Spanish		3.14		43.04		0.00	
Nativity	2384		222		1769		
Foreign-born		6.80		45.75		2.13	< .0001
Mode of survey	2650		257		1913		
Web		56.59		42.56		59.52	.003
Phone		34.12		44.34		31.61	
Paper/pen		9.29		13.10		8.87	
Education	2650		257		1913		
Less than H.S. (High school)		7.66		34.38		4.74	< .0001
H.S. diploma/equivalent		21.06		14.04		21.67	
Some college/professional degree		35.97		28.13		36.29	
College/Grad		35.30		23.45		37.30	
Married or partnered	2650	74.95	257	75.63	1913	76.17	.8841
Income for basic needs (before COVID-19)	2598		249		1881		
More than enough		45.39		26.16		50.88	< .0001
Enough		45.98		65.02		41.82	
Expenses somewhat greater than income		6.63		6.47		5.77	
Expenses much greater than income		2.01		2.36		1.53	
Ability to meet basic needs since COVID-19	2618		252		1894		
Better off		4.90		4.24		4.98	
About the same		75.10		62.70		77.51	
Bit worse off		15.97		24.48		14.02	
Much worse off		4.03		8.58		3.49	
Since COVID-19, needed outside help with tasks	2634		254		1906		
Yes		15.97		24.82		13.97	.0011
No		84.03		75.18	X	75.18	
Work affected by COVID-19	2134		248		1886		
Yes		31.44		37.40		29.60	.1441
No		20.70		21.99		20.54	
Not working when it started		47.85		40.61		49.86	
Household size	2625		251		1905		
1 person		19.44		13.26		20.16	
2 persons		53.54		36.64		57.53	< .0001
3 + persons		27.02		50.10		22.31	
Youth (< 18) in household	2592		235		1895		
Yes		12.56		26.67		9.57	< .0001
No		87.44		73.33		90.43	
Positive diagnosis for a household member	2546		225		1867		
Yes		6.09		13.59		5.26	.0089
No		93.91		86.41		94.74	
Positive diagnosis (outside household)	2594		247		1883		

(continued)

Table 1. (continued)

	Total Sample		Latino		Non-Latino White		Group Contrast
Variable	*N*	%	*N*	%	*N*	%	*p*
Yes		55.38		64.61		54.55	.0105
No		44.62		35.39		45.45	
Diagnosed with COVID-19 self	2534	3.38	223	9.58	1861	2.72	.0060
Spouse/partner	2437	2.45	210	4.87	1799	2.06	.1021
Someone else in household	2471	2.96	221	9.32	1812	2.14	.0005
Friend/family not in household	2549	38.20	233	44.61	1862	36.96	.0317
Acquaintance	2515	42.49	224	52.20	1848	41.94	.0363
COVID-19related death (within household)	2536		225		1856		.0001
Yes	.14%		1.37%		0.00%		
No	99.86%		98.63%		100.0%		
COVID-19related death (outside household)	2596		244		1888		
Yes		21.44		41.48		17.37	< .0001
No		78.56		58.52		82.63	
COVID-19related deaths							
Spouse/partner	2509	0.01	223	1.38	1840	0.00	.0001
Someone else in household	2508	0.11	220	1.09	1843	0.00	.0363
Friend/family not in household	2555	10.09	229	21.48	1870	6.49	< .0001
Acquaintance	2541	16.51	229	34.77	1870	14.23	< .0001
Family in-person visits since COVID-19	2151		249		1902		
Weekly or more often		36.55		26.21		38.28	< .0001
Less than once per week		40.98		38.97		41.31	
Never		22.47		34.82		20.41	
Frequency of family visits before pandemic	2124		244		1880		
More often		7.97		9.55		7.01	
Less often		37.95		49.02		35.97	.0002
Same		54.08		41.43		57.02	
Friend in-person visits since COVID-19	2142		248		1894		
Everyday		2.27		0		2.65	
Weekly		28.05		19.93		29.51	< .0001
Less than once per week		44.49		35.69		46.38	
Never		25.19		44.38		21.46	
Frequency of friend visits before pandemic	2118		238		1880		
More often		6.32		7.04		5.42	
Less often		40.16		44.02		40.07	.324
Same		40.07		48.94		54.52	

2 adjusted for all covariates in Model 1 and added household size. Model 3 included all covariates in Model 1 plus whether working prior to COVID-19 or if work changed due to COVID-19. Model 4 adjusted for all covariates included in Model 1 and added reliance on outside help for everyday tasks. Model 5 included Model 1 and added material hardship. Model 6 included all the exposure variables and material hardship. Model 7 was constrained to significant variables found in Models 2–5. We also conducted sensitivity tests to check the influence of preference for English language use, a crude indicator of acculturation; 57% of the Latino sample and 97% of the total sample completed the survey in English.

We used chi-squared tests to examine the characteristics of Latino NSHAP-R3 participants who did not participate in the NSHAP-COVID study.

Results

Rates of COVID Infections

COVID-19 diagnoses were higher for Latinos than non-Latino Whites (see Figure 1). Nearly a quarter of Latino respondents reported that someone in their household had been diagnosed with COVID-19 compared to 7% of non-

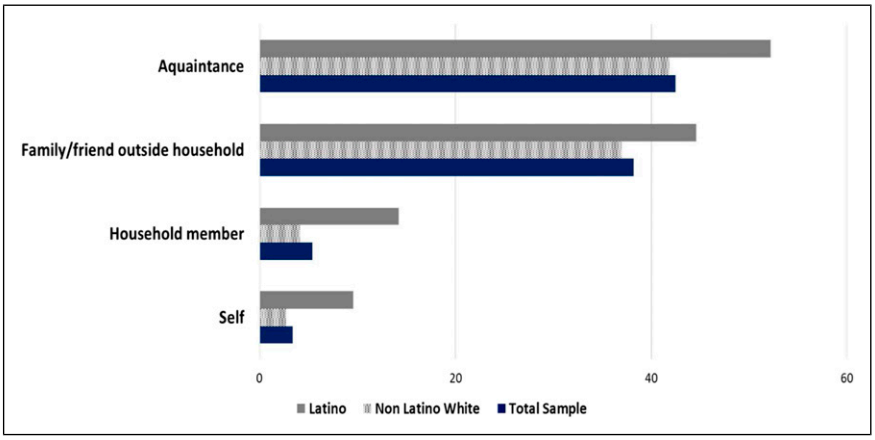

Figure 1. Percentage of COVID-19 diagnoses by total sample ($N = 2650$) and by Latino ($N = 257$) and non-Latino White grouping ($N = 1913$).

Latino Whites and 9% of the total sample. Diagnosis of COVID-19 among friends and family outside of the household were 45% for Latinos and 37% of non-Latino Whites.

Association of Exposure Variables and Material Hardship with Infection

Table 2 displays the odds ratios (OR) for the association between household size, task help, work change, material hardship, and a COVID-19 diagnosis across Models 2–4. Model 5 displays the inclusion of material hardship. Task help in Model 4 (OR, 1.73; $p < 0.05$) and material hardship (OR, 2.21; $p < 0.01$) in Model 5 were significantly associated with a COVID-19 diagnosis within a household. As additional risk factors were introduced into Models 2–7, the statistical weight of the Latino coefficient decreased.

Figure 2 displays the probabilistic predictions of a COVID-19 diagnosis within a household given the presence of outside help with everyday tasks during the pandemic (Model 7). Latino respondents receiving help were 6 percentage points more likely to report a COVID-19 diagnosis within their household than those not receiving help. This difference among non-Latino White households and in the overall sample was 3 percentage points.

Figure 3 displays the probabilistic predictions of a COVID-19 diagnosis within a household by material hardship during the pandemic (Model 7). Latino respondents who reported being worse off financially during the pandemic were 10 percentage points more likely to report a COVID-19 diagnosis within their household than those who were financially better off or the same. In contrast, non-Latino Whites experiencing material hardship were 5 percentage points more likely to report a COVID-19 diagnosis.

Model 6 in Table 2 illustrates that in the single model including the three exposure factors and material hardship, material hardship remained significantly associated with a COVID-19 diagnosis within the household (OR, 2.12; $p <$ .01). Similarly, in Model 7, material hardship alone was significantly associated with a COVID-19 diagnosis (OR, 2.10; $p <$ .01).

Discussion

Our findings corroborate claims that the pandemic disproportionally affected older Latinos (Hooper et al., 2020; Sáenz & Garcia, 2021) and that these consequences are associated with pre-pandemic disadvantage (Gauthier et al., 2021). On average, Latinos live in larger households and experience worse material hardship. Material hardship and reliance on outside help emerged as the two most significant correlates, likely because they made social distancing difficult but also perhaps because they encouraged contact with informal economic networks that were less likely to adhere to public health mandates.

Study limitations include, first, limited generalizability. Although NSHAP is renowned for its rigorous data collection and high response rate (c.f., O'Muircheartaigh et al., 2014), the NSHAP-COVID respondents were younger, more likely to be female, White, highly educated, married, and in better health than R3 participants. Latino NSHAP-COVID respondents reported better self-rated health, more education, and less material hardship than Latino R3 participants. These comparisons suggest that our findings are understated; material hardship and the need for outside help likely heightened vulnerability to a greater degree than our findings reflect. Second, we have no way to ascertain the citizenship status of our participants (legal or otherwise) or whether they live in a mixed-status households, factors which coincided with worse material hardship during the pandemic. Third, although we tested for mortality, the small numbers of COVID-19 deaths precluded our ability to draw conclusions. However, we noted a similar trend for those who knew someone who died of COVID-19 and those who experienced a COVID-19 diagnosis in the household (analyses available upon request). Future research should

Table 2. Odds Ratios of a Positive Household COVID-19 Diagnosis on Household Size, Work Change, Task Help, Material Hardship, and Covariates for Latinos and non-Latino Whites.

	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
N	2092	2092	2081	2059	2083	2070	2026	2066
Age (≥ 65)		0.53* (0.32, 0.87)	0.57* (0.35, 0.92)	0.57 (0.307, 1.04)	0.50** (0.30, 0.84)	0.60 (0.35, 1.03)	0.63 (0.33, 1.17)	0.56* (0.33, 0.97)
Female		1.02 (0.71, 1.47)	1.07 (0.729, 1.56)	1.01 (0.69, 1.47)	0.96 (0.66, 1.39)	1.015 (0.70, 1.47)	1.99 (0.69, 1.53)	0.99 (0.68, 1.43)
High school edu.		0.84 (0.39, 1.83)	0.84 (0.38, 1.85)	0.83 (0.38, 1.79)	0.99 (0.43, 2.30)	0.996 (0.43, 2.31)	1.069 (0.45, 2.54)	1.05 (0.45, 2.42)
Mode (Ref = Web)								
Phone		0.99 (0.40, 2.43)	1.04 (0.42, 2.57)	0.91 (0.41, 2.47)	0.913 (0.33, 2.30)	0.95 (0.39, 2.30)	0.94 (0.37, 2.36)	0.89 (0.36, 2.19)
PAPI		1.65 (0.88, 3.10)	1.75 (0.92, 3.30)	1.61 (0.92, 3.23)	1.61 (0.86, 3.03)	1.59 (0.85, 2.99	1.75 (0.92, 3.33)	1.59 (0.85,2.99)
Latino	2.84** (1.27, 6.35)	2.46* (1.03, 5.84)	2.37 (0.96, 5.82)	2.34 (0.97, 5.60)	2.23 (0.95, 5.23)	2.15 (0.90, 5.13)	1.89 (0.78, 4.58)	2.078 (0.89, 4.88)
Household size (Ref = 1)								
2 persons			1.63 (0.84, 3.18)				1.92 (0.95, 3.87)	
3 + persons			1.85 (0.78, 4.36)				2.13 (0.86, 5.26)	
Work affected by COVID-19								
Work changed				1.31 (0.64,2.69)			1.12 (0.51, 2.42)	
Working before COVID-19				0.92 (0.52, 1.62)			0.94 (0.51, 1.74)	
Task help					1.73* (1.02, 2.93)		1.54 (0.98, 2.54)	1.54 (0.94, 2.5)
Material hardship						2.21** (1.35, 3.59)	2.12** (1.27, 3.53)	2.10** (1.31, 3.36)

Note. Regression results represent Latino and non-Latino White respondents and are weighted using Round 3 NSHAP survey weights, accounting for differential probabilities for selection and non-response based on age and urbanicity. Sample sizes vary by model to account for missing data. Significance level * $p < .05$, ** $p < .01$, *** $p < .001$.

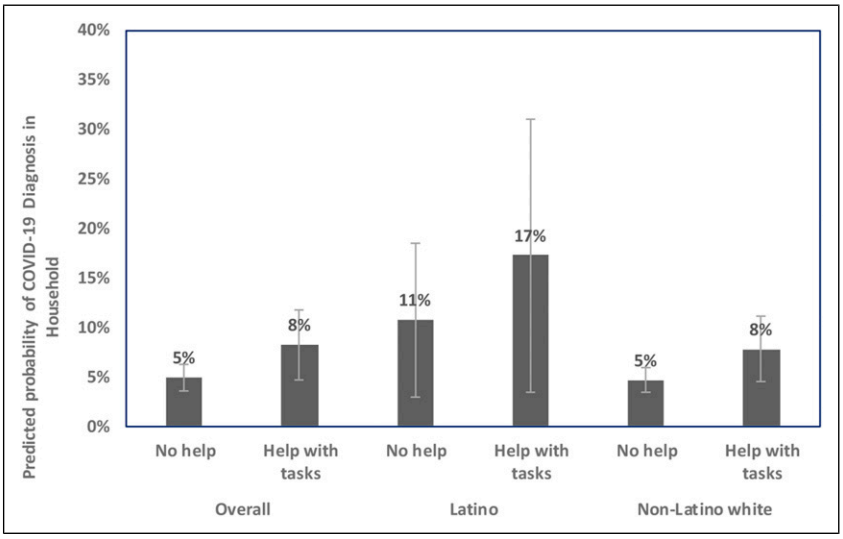

Figure 2. Predicted probability of COVID-19 diagnosis in household for task help by overall sample (*N* = 2650), Latino (*N* = 257) and non-Latino White (*N* = 1913) groupings.Note. Predicted probability of COVID-19 diagnosis in household with controls for age, gender, education level, survey mode, Latino, material hardship, and task help (Model 7).

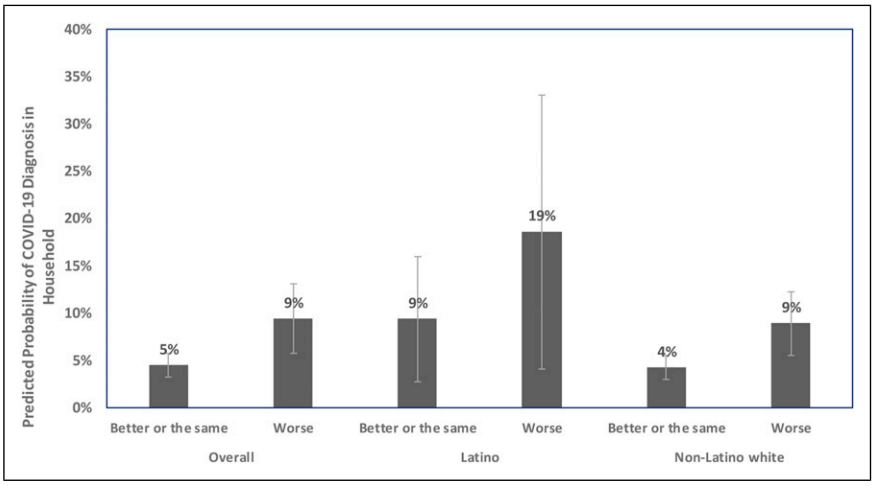

Figure 3. Predicted probability of COVID-19 diagnosis in household for material hardship by overall sample (*N* = 2650), Latino (*N* = 257) and non-Latino White (*N* = 1913) groupings.Note. Predicted probability of COVID-19 diagnosis in household with controls for age, gender, education level, survey mode, Latino, material hardship, and task help (Model 7).

consider the long-term impacts of the pandemic on Latinos, especially for those enduring material hardship and who must rely on outside help with daily tasks.

Acknowledgments

We wish to thank Kristen Wroblewski and Janet Liechty for their thoughtful comments, suggestions, and support. Thanks also to the JAG reviewers for their insightful feedback, which helped sharpen and strengthen the report.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: All research reported in this publication was supported by the National Institute on Aging of the National Institutes of Health (grant numbers: R01AG048511 and R01AG04538). The National Social Life, Health and Aging Project COVID-19 study (PI: Louise Hawkley) was supported with grant number AG043538-08S1. The lead author (Lissette Piedra) is supported by an administrative supplement (R01AG048511-08S1). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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