Conclusions: We observed greater knowledge and concerns about toxic chemicals among more affluent respondents, pregnant women and parents, and people living in India across both groups. While the video enhanced participants' knowledge about toxic chemicals and intentions to reduce exposure, they indicated that barriers hindered them from making behavioral changes.

Paper Session 19: Aging topics: section 4

10:45am - 12:10pm
Saturday, 4th February, 2023
Town & Country Ballroom C

Moderated by: Kayci Vickers

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1 Quantifying the Role of Social Determinants of Health in Racial Disparities

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Objective: In the United States, Black individuals have suffered from 300 years of racism, bias, segregation and have been systematically and intentionally denied opportunities to accrue wealth. These disadvantages have resulted in disparities in health outcomes. Over the last decade there has been a growing interest in examining social determinants of health as upstream factors that lead to downstream health disparities. It is of vital importance to quantify the contribution of SDH factors to racial disparities in order to inform policy and social justice initiatives. This demonstration project uses years of education and white matter hyperintensities (WMH) to illustrate two methods of quantifying the role of a SDH in producing health disparities.

Participants and Methods: The current study is a secondary data analysis of baseline data from a subset of the National Alzheimer's Coordinating Center database with neuroimaging data collected from 2002-2019. Participants were 997 cognitively diverse, Black and White (10.4% Black) individuals, aged 60-94 (mean=73.86, 56.5% female), mean education of 15.18 years (range= 0-23, SD=3.55). First, mediation, was conducted in the SEM framework using the R package lavaan. Black/White race was the independent variable, education was the mediator, WMH volume was the dependent variable, and age/sex were the covariates. Bootstrapped standard errors were calculated using 1000 iterations. The indirect effect was then divided by the total effect to determine the proportion of the total effect attributable to education. Second, a population attributable fraction (PAF) or the expected reduction in WMH if we eliminated low education and structural racism for which Black serves as a proxy was calculated. Two logistic regressions with dichotomous (median split) WMH as the dependent variable, first with low (less than high school) versus high education, and second with Black/White race added as predictors. Age/sex were covariates. PAF of education, and then of Black/White race controlling for education were obtained. Subsequently, a combined PAF was calculated.

Results: In the lavaan model, the total effect of Black/White race on WMH was not significant (B=.040, se=.113, p=.246); however, Black/White race significantly predicted education (B= -.108, se=.390, p=.001) and education significantly predicted WMH burden (B=-.084, se=.008, p=.002). This resulted in a significant indirect effect (effect=.009, se=.014, p=.032). 22.6 % of the relationship between Black/White race and WMH was mediated by education. In the logistic models, the PAF of education was 5.3% and the additional PAF of Black/White race was 2.7%. The combined PAF of Black race and low education was 7.8%.

Conclusions: From our mediation we can conclude that 22.6% of the relationship between Black/White race and WMH volume is explained by education. Our PAF analysis suggests that we could reduce 7.8% of the cases with high WMH burden if we eliminated low education and the structural racism for which Black serves as a

proxy. This is an under estimation of the role that education and structural racism play in WMH burden due to our positively selected sample and crude measure of education. However, these methods can help researchers quantify the contribution of SDH to disparities in older adulthood and provide targets for policy change.

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2 Vigilant Coping Moderates the Relationship between Discrimination and Memory among Black and Latinx Adults

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Objective: In the U.S, Black and Latinx individuals disproportionately experience daily acts of discrimination. To counteract the psychological distress, many individuals develop coping mechanisms, like vigilant coping, where behaviors are modified to attempt to prevent discriminatory experiences. Researchers have investigated how coping mechanisms moderate the relationship between discrimination and psychological stress, but not their role in the relationship between discrimination and cognitive function. Prior research has shown a link between discrimination and poor episodic memory. The current study examined vigilant coping as a potential moderator in the relationship between discrimination and memory among Black and Latinx people.
Participants and Methods: We partnered with 1317 non-Latinx Black (n= 291) and Latinx (n= 1026) individuals who participated in the Offspring Study of Racial and Ethnic Disparities in Alzheimer's Disease. Participants were assessed in English or Spanish, according to their preference. Experiences of discrimination were measured on two scales: Major (civil rights violations) and Everyday (daily hassles), and were coded according to yearly chronicity. Vigilance was measured among people with at least one reported experience of discrimination on either scale, using a 5-item survey which was dichotomized as low and high vigilant coping. The Selective Reminding Test, a 12-item word list task with 6 learning trials and a delayed recall trial, yielded scores for total immediate recall and delayed memory. Linear regression models were used to assess if vigilance moderated the relationship between discrimination and memory, with years of education and age as covariates.
Results: Participants ranged in age from 27 to 91, with a mean age of 56.5 (SD=11.0) years, a mean education of 12.7 (SD=3.7) years, and were 67% women. High vigilant coping was associated with more experiences of major (b = 1.7, 95% CI = 0.9,2.5) and everyday (b = 90.3, 95% CI=66.2,114.3) discrimination. Memory was not associated with reported everyday discrimination, but lower delayed recall was observed among people who reported more experiences of major discrimination (b= -0.04, 95% CI = -0.07,-0.01). This relationship was moderated by vigilance, such that among people with low vigilant coping, major experiences of discrimination predicted lower memory (b= -0.06, 95% CI = -0.12,-0.01), but the association between discrimination and memory was weakened among people with high use of vigilant coping (b= -0.02, 95% CI = -0.05,0.01).
Conclusions: This study builds on Black researchers' work that laid the foundations for examination of stress and coping in marginalized populations. Future studies on discrimination and cognitive health should consider coping mechanisms as key aspects of pathways linking structural racism and inequalities to cognitive health among Black and Latinx individuals.

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3 Area Deprivation Index Interacts with Sex to Predict Atrophy and Cognitive Trajectory Over a 5-Year Follow-Up Period