

## Appendix A

**Table A1: Description of composite measures and indices**

<b>Revised UCLA Loneliness Scale (R-UCLA)</b>	Participants rated, on a four-point scale from “never” to “often,” how often during the past week they (1) lacked companionship, (2) felt left out, and (3) felt isolated from others. “Never” and “hardly ever” item response categories were collapsed per recommendation by Payne et al. and responses summed across items to form a composite score (range: 0 (reported “never/hardly ever” on all items) – 6 (reported “often” on all items)). The R-UCLA has been previously shown to have high concurrent and discriminant validity, high internal consistency ( $\alpha=0.72$ ), and high correlation with the full UCLA loneliness scale ( $r=0.82$ ). Details regarding this measure can be found in Payne et al. and Russell et al. (Payne et al., 2014; Russell et al., 1980).
<b>Modified Charlson Comorbidity Index (CCI)</b>	Modified CCI, based on the well-established CCI (Charlson et al., 1987) combines respondent reported information about chronic condition diagnoses. Participants reported whether they had been told by a doctor that they had the following conditions: heart attack/myocardial infarction, congestive heart failure, coronary procedure, stroke, diabetes, cancer (metastatic and non-metastatic excluding skin cancer), chronic obstructive pulmonary disease, asthma, arthritis, dementia. Conditions were weighted by their association with risk of mortality and summed to produce an index score. The modified CCI is highly correlated with the CCI ( $r=0.89$ ). Details regarding this measure can be found in Vasilopoulos et al. (Vasilopoulos et al., 2014).
<b>Survey Adapted Montreal Cognitive Assessment (MoCA-SA)</b>	The MoCA-SA measures global cognition. The assessment includes tests of the following domains of cognitive function: orientation, executive function, visuospatial skills, memory, attention, language. The MoCA-SA correlates highly with the full MoCA ( $r = 0.97$ ). Details regarding this measure can be found in Dale et al. and Kotwal et al. (Dale et al., 2018; Kotwal et al., 2015).
<b>Instrumental Activities of Daily Living (IADL)</b>	IADLs measured difficulty with meal preparation, managing money, shopping for food, light housework, taking medications, driving during the night, and driving during the day. The number of activities with which the participant reported having “some” or “much” difficulty with was calculated (Katz & Akpom, 1976).
<b>Activities of Daily Living (ADL)</b>	ADLs measured difficulty in walking a block, walking across the room, dressing, bathing, eating, getting in and out of bed, and toileting. The number of activities with which the participant reported having “some” or “much” difficulty with was calculated (Lawton & Brody, 1969).

**Table A2: Weighted regression<sup>a</sup> results specifying the association between functional hearing and loneliness score (N= 3,196)**

	<b>Loneliness score (ordinal)</b> Modeled by ordinal logistic regression OR(95% CI)
<b>Functional hearing (ref: excellent)</b>	
Very good/good	1.10(0.85 - 1.44)
Fair/poor	1.45*(1.05 - 2.01)
<b>Modified Charlson comorbidity index (0 - 16)</b>	0.92*(0.86 - 0.99)
<b>IADL (0-8)</b>	1.16***(1.08 - 1.24)
<b>ADL (0-7)</b>	1.04(0.97 - 1.12)
<b>Cognitive ability<sup>b</sup> (0 - 20)</b>	0.99(0.96 - 1.02)
<b>Self-rated health (ref: excellent)</b>	
Very good	1.14(0.78 - 1.66)
Good	1.53*(1.08 - 2.17)
Fair	1.73**(1.17 - 2.56)
Poor	2.21**(1.33 - 3.66)
<b>Age</b>	0.99*(0.97 - 1.00)
<b>Sex (ref: male)</b>	
Female	1.00(0.80 - 1.25)
<b>Education (ref: &lt;high school)</b>	
High school/equivalent	1.32*(1.03 - 1.69)
Some college/Associate's degree	1.20(0.89 - 1.62)
Bachelor's degree or more	1.21(0.90 - 1.63)
<b>Race (ref: white)</b>	
Black/African American	1.09(0.79 - 1.50)
Hispanic	0.77(0.54 - 1.10)
Other	0.75(0.41 - 1.34)
<b>Marital Status (ref: married)</b>	
Living with a partner	1.16(0.56 - 2.37)
Separated	2.68*(1.01 - 7.16)
Divorced	2.49***(1.86 - 3.32)
Widowed	2.49***(1.92 - 3.23)
Never married	2.31**(1.36 - 3.92)

Abbreviation: OR, odds ratio; CI, confidence interval; ref, reference group, IADL: instrumental activities of daily living, ADL: activities of daily living

<sup>a</sup> Models fully adjusted for Modified Charlson comorbidity index score, self-reported health, number of IADL and ADL impairments, cognitive ability, and demographic characteristics (age, sex, education, race, and marital status)

<sup>b</sup>Cognitive ability measured by the MoCA-SA

\*p-value <0.05, \*\*p-value <0.01, \*\*\*p-value<0.001

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