Supplemental Table S1a

*Descriptive Statistics for Study Variables in 8 of the Samples*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable |  | HRS | MIDUS | WLSG | WLSS | ELSA | NCDS | TILDA | ELSI |
| Country |  | USA | USA | USA | USA | England | UK | Ireland | Brazil |
| Age (years) |  | 66.32 (11.13) | 56.45 (12.34) | 71.20 (.92) | 69.06 (6.77) | 63.60 (10.70) | 50 | 62.70 (9.25) | 62.57 (9.44) |
| Age range |  | 27-101 | 32-84 | 70-74 | 47-92 | 20-99 | -- | 49-80 | 50-99 |
| Gender (female) |  | 60% | 55% | 53% | 53% | 56% | 52% | 56% | 56% |
| Educationa |  | 13.00 (2.93) | 7.28 (2.54) | 13.89 (2.41) | 13.58 (2.39) | 3.26 (2.23) | 2.32 (1.77) | 3.74 (1.56) | 6.65 (4.39) |
| Raceb (white) |  | 77% | 89% | 100% | 100% | 99% | 100% | 100% | 37% |
| Race (Black) |  | 16% | 3% | -- | -- | -- | -- | -- | 10% |
| Race (Brown) |  | -- | -- | -- | -- | -- | -- | -- | 46% |
| Race (Indigenous) |  | -- | -- | -- | -- | -- | -- | -- | 2% |
| Race (Biracial) |  | -- | 4% | -- | -- | -- | -- | -- | -- |
| Race (other/unknown) |  | 7% | 4% | -- | -- | 1% c | -- | -- | 5% |
| Verbal fluency |  | 17.70 (7.27) | 18.81 (6.17) | 19.88 (5.94) | 19.73 (5.92) | 19.67 (6.29) | 22.43 (6.25) | 20.84 (7.05) | 12.04 (4.33) |
| Purpose in lifec |  | 4.65 (.94) | 5.50 (.99) | 4.51 (.96) | 4.45 (.96) | -- | -- | -- | -- |
| Meaning in lifed |  | -- | -- | -- | -- | 3.57 (.72) | 3.45 (.71) | 3.72 (.60) | 2.77 (.54) |
| *N* |  | 12,819 | 3,685 | 2,247 | 1,279 | 10,627 | 8,642 | 6,983 | 8,214 |

*Note*. Values are a mean (standard deviation), range, or percent. HRS=Health and Retirement Study. MIDUS=Midlife in the United States. WLSG=Wisconsin Longitudinal Study Graduate sample. WLSS=Wisconsin Longitudinal Study Sibling sample. ELSA=English Longitudinal Study of Ageing. NCDS=National Child Development Study. TILDA= The Irish LongituDinal study on Ageing. ELSI= Brazilian Longitudinal Study of Aging. a Education is in years for HRS, WLSG, and WLSS. Education was reported on a scale from 1 (no school) to 12 (advanced or professional degree) in MIDUS. Education was reported on a scale from 0 (no qualification) to 7 (degree) in ELSA and from 0 (no qualification) to 6 (higher degree) in NCDS. In TILDA, education was reported on a scale from 1 (some primary, not complete) to 7 (postgraduate/higher degree). In ELSI, education was reported from 1 (never studied) to 18 (doctoral degree/PhD). b Race categories are based on available data in each study, how each study records such information, and percentages of participants in each category. c ELSA does not report specific racial categories other than white because of the low percentage of participants from racial/ethnic backgrounds other than white. c Purpose in life was measured on a scale from 1 (strongly disagree) to 6 (strongly agree) in HRS and from 1 (strongly disagree) to 7 (strongly agree) in MIDUS. Meaning in life was measured on a scale from 1 (never) to 4 (often) in ELSA, NCDS, and TILDA and from 1 (never) to 3 (always) in ELSI.

Supplemental Table S1b

*Descriptive Statistics for Samples from the Survey of Health, Ageing and Retirement in Europe*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable |  | Austria | Germany | Sweden | Netherlands | Spain | Italy | France | Denmark | Greece | Switzerland | Belgium |
| Age (years) |  | 68.39 (9.53) | 65.61 (9.74) | 69.54 (9.25) | 65.47(9.72) | 68.42 (10.18) | 66.01 (9.85) | 66.90 (10.72) | 64.77 (10.11) | 66.06 (10.30) | 67.81 (9.74) | 65.45 (10.80) |
| Age range |  | 32-97 | 32-95 | 32-102 | 31-98 | 31-102 | 35-101 | 34-98 | 32-100 | 31-94 | 30-99 | 24-97 |
| Gender (female) |  | 59% | 53% | 54% | 55% | 55% | 55% | 57% | 55% | 57% | 55% | 56% |
| Educationa |  | 3.22 (1.32) | 3.55 (1.10) | 3.16 (1.55) | 2.99(1.40) | 1.68 (1.50) | 2.07 (1.32) | 2.69 (1.66) | 3.63 (1.34) | 2.43 (1.63) | 3.22(1.13) | 3.18 (1.53) |
| Verbal fluency |  | 23.49 (7.58) | 22.97 (7.47) | 23.33 (7.36) | 21.34(6.94) | 16.25 (6.78) | 16.43 (6.98) | 18.27 (6.03) | 24.57 (7.38) | 12.56 (5.10) | 21.78 (6.90) | 21.46 (7.27) |
| Meaning in lifeb |  | 3.72 (.57) | 3.72 (.62) | 3.73 (.58) | 3.78(.58) | 3.44 (.76) | 3.48 (.73) | 3.52 (.76) | 3.83 (.46) | 3.30 (.77) | 3.76(.56) | 3.55 (.75) |
| *N* |  | 3,067 | 4,248 | 3,694 | 3,975 | 4,804 | 4,912 | 3,664 | 3,622 | 4,745 | 2,702 | 5,525 |

*Note*.Values are a mean (standard deviation), range, or percent. a The 1997 International Standard Classification of Education was used to categorize and harmonize education statistics across European countries (UNESCO, 2003) in SHARE. Specifically, level of education ranged from 0 (pre-primary level of education) to 6 (second stage of tertiary education). bMeaning in life was measured on a scale from 1 (never) to 4 (often).

*Supplemental Table S1b Continued*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable |  | Israel | Czech | Poland | Ireland | Luxembourg | Hungary | Portugal | Slovenia | Estonia | Croatia |
| Age (years) |  | 68.48 (9.60) | 67.45 (8.96) | 65.38 (9.64) | 63.68 (9.95) | 64.37(9.46) | 63.99 (9.70) | 66.53 (8.95) | 66.75 (9.68) | 67.59 (10.56) | 64.53 (9.46) |
| Age range |  | 24-105 | 27-102 | 40-97 | 30-91 | 35-96 | 29-111 | 41-93 | 40-100 | 36-99 | 29-95 |
| Gender (female) |  | 58% | 60% | 57% | 55% | 55% | 57% | 55% | 58% | 63% | 56% |
| Educationa |  | 3.18 (1.67) | 2.80 (1.15) | 2.60 (1.26) | 3.27 (1.73) | 2.74(1.56) | 3.06 (1.04) | 1.69 (1.38) | 2.90 (1.23) | 3.37 (1.19) | 2.55 (1.29) |
| Verbal fluency |  | 19.60 (8.58) | 23.67 (8.08) | 17.68 (6.78) | 15.95 (6.34) | 19.22(6.44) | 17.18 (5.84) | 15.80 (6.07) | 21.67 (7.43) | 22.25 (8.18) | 19.15 (4.47) |
| Meaning in lifeb |  | 3.38 (.82) | 3.52 (.68) | 3.44 (.75) | 3.76 (.58) | 3.70(.61) | 3.45 (.85) | 3.33 (.79) | 3.61 (.66) | 3.33 (.85) | 3.59 (.65) |
| *N* |  | 1,647 | 4,559 | 1,599 | 998 | 1,478 | 3,002 | 1,449 | 4,010 | 5,122 | 2,428 |

*Note*. Values are a mean (standard deviation), range, or percent.  a The 1997 International Standard Classification of Education was used to categorize and harmonize education statistics across European countries (UNESCO, 2003) in SHARE. Specifically, level of education ranged from 0 (pre-primary level of education) to 6 (second stage of tertiary education). bMeaning in life was measured on a scale from 1 (never) to 4 (often).

Supplemental Table S2a

*Descriptive Statistics for Study Variables in 8 of the Samples for Episodic Memory*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable |  | HRS | MIDUS | WLSG | WLSS | ELSA | NCDS | TILDA | ELSI |
| Country |  | USA | USA | USA | USA | England | UK | Ireland | Brazil |
| Age (years) |  | 66.32 (11.13) | 56.28 (12.26) | 71.19 (.90) | 69.25 (6.78) | 63.59 (10.70) | 50 | 62.57 (9.19) | 62.57 (9.44) |
| Age range |  | 27-101 | 32-84 | 70-74 | 44-92 | 20-99 | -- | 49-80 | 50-99 |
| Gender (female) |  | 60% | 55% | 54% | 53% | 56% | 52% | 56% | 56% |
| Educationa |  | 13.00 (2.93) | 7.30 (2.53) | 13.85 (2.40) | 13.58 (2.45) | 3.26 (2.23) | 2.32 (1.77) | 3.72 (1.56) | 6.65 (4.39) |
| Raceb (white) |  | 77% | 89% | 100% | 100% | 99% | 100% | 100% | 37% |
| Race (Black) |  | 16% | 3% | -- | -- | -- | -- | -- | 10% |
| Race (Brown) |  | -- | -- | -- | -- | -- | -- | -- | 46% |
| Race (Indigenous) |  | -- | -- | -- | -- | -- | -- | -- | 2% |
| Race (Biracial) |  | -- | 4% | -- | -- | -- | -- | -- | -- |
| Race (other/unknown) |  | 7% | 4% | -- | -- | 1% c | -- | -- | 5% |
| Episodic memory |  | 9.90 (3.20) | 11.24 (4.63) | 9.07 (2.84) | 9.06 (3.08) | 9.66 (3.49) | 12.04 (2.99) | 11.87 (3.57) | 7.19 (3.21) |
| Purpose in lifec |  | 4.65 (.94) | 5.42 (.99) | 4.52 (.95) | 4.47 (.95) | -- | -- | -- | -- |
| Meaning in lifed |  | -- | -- | -- | -- | 3.57 (.72) | 3.45 (.71) | 3.72 (.59) | 2.77 (.54) |
| *N* |  | 12,819 | 3,521 | 3,740 | 2,077 | 10,618 | 8,585 | 6,877 | 8,214 |

*Note*. Values are a mean (standard deviation), range, or percent. HRS=Health and Retirement Study. MIDUS=Midlife in the United States. WLSG=Wisconsin Longitudinal Study Graduate sample. WLSS=Wisconsin Longitudinal Study Sibling sample. ELSA=English Longitudinal Study of Ageing. NCDS=National Child Development Study. TILDA= The Irish LongituDinal study on Ageing. ELSI= Brazilian Longitudinal Study of Aging. a Education is in years for HRS, WLSG, and WLSS. Education was reported on a scale from 1 (no school) to 12 (advanced or professional degree) in MIDUS. Education was reported on a scale from 0 (no qualification) to 7 (degree) in ELSA and from 0 (no qualification) to 6 (higher degree) in NCDS. In TILDA, education was reported on a scale from 1 (some primary, not complete) to 7 (postgraduate/higher degree). In ELSI, education was reported from 1 (never studied) to 18 (doctoral degree/PhD). b Race categories are based on available data in each study, how each study records such information, and percentages of participants in each category. c ELSA does not report specific racial categories other than white because of the low percentage of participants from racial/ethnic backgrounds other than white. c Purpose in life was measured on a scale from 1 (strongly disagree) to 6 (strongly agree) in HRS and from 1 (strongly disagree) to 7 (strongly agree) in MIDUS. Meaning in life was measured on a scale from 1 (never) to 4 (often) in ELSA, NCDS, and TILDA and from 1 (never) to 3 (always) in ELSI.

Supplemental Table S2b

*Descriptive Statistics for Samples from the Survey of Health, Ageing and Retirement in Europe for Episodic Memory*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable |  | Austria | Germany | Sweden | Netherlands | Spain | Italy | France | Denmark | Greece | Switzerland | Belgium |
| Age (years) |  | 68.39 (9.54) | 65.61 (9.74) | 69.54 (9.25) | 65.48(9.73) | 68.45 (10.19) | 66.00 (9.85) | 66.90 (10.72) | 64.77 (10.11) | 66.06 (10.30) | 67.80 (9.75) | 65.43 (10.78) |
| Age range |  | 32-97 | 32-95 | 32-102 | 31-98 | 31-102 | 35-101 | 34-98 | 32-100 | 31-94 | 30-99 | 24-97 |
| Gender (female) |  | 59% | 53% | 54% | 55% | 55% | 55% | 57% | 55% | 57% | 55% | 56% |
| Educationa |  | 3.22 (1.32) | 3.55 (1.10) | 3.16 (1.55) | 2.99(1.40) | 1.68 (1.50) | 2.07 (1.32) | 2.69 (1.66) | 3.63 (1.35) | 2.43 (1.63) | 3.23(1.13) | 3.18 (1.53) |
| Episodic memory |  | 23.49 (7.58) | 22.97 (7.47) | 23.33 (7.36) | 21.34(6.94) | 16.25 (6.78) | 16.43 (6.98) | 18.27 (6.03) | 24.57 (7.38) | 12.56 (5.10) | 21.78 (6.90) | 21.46 (7.27) |
| Meaning in lifeb |  | 10.76 (3.69) | 10.34 (3.51) | 9.73 (3.55) | 9.88(3.48) | 7.18 (3.54) | 8.11 (3.39) | 9.38 (3.69) | 10.61 (3.54) | 8.63 (3.34) | 10.67 (3.53) | 9.93 (3.67) |
| *N* |  | 3,072 | 4,243 | 3,686 | 3,973 | 4,811 | 4,904 | 3,664 | 3,620 | 4,746 | 2,699 | 5,521 |

*Note*.Values are a mean (standard deviation), range, or percent. a The 1997 International Standard Classification of Education was used to categorize and harmonize education statistics across European countries (UNESCO, 2003) in SHARE. Specifically, level of education ranged from 0 (pre-primary level of education) to 6 (second stage of tertiary education). bMeaning in life was measured on a scale from 1 (never) to 4 (often).

*Supplemental Table S2b Continued*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable |  | Israel | Czech | Poland | Ireland | Luxembourg | Hungary | Portugal | Slovenia | Estonia | Croatia |
| Age (years) |  | 68.48 (9.59) | 67.43 (8.96) | 65.39 (9.64) | 63.69 (9.96) | 64.37(9.47) | 64.03 (9.73) | 66.51 (8.93) | 66.74 (9.68) | 67.61 (10.55) | 64.53 (9.46) |
| Age range |  | 24-105 | 27-102 | 40-97 | 30-91 | 35-96 | 29-111 | 41-93 | 40-100 | 36-99 | 29-95 |
| Gender (female) |  | 58% | 60% | 57% | 55% | 55% | 57% | 55% | 58% | 63% | 56% |
| Educationa |  | 3.18 (1.67) | 2.80 (1.15) | 2.60 (1.26) | 3.27 (1.73) | 2.73(1.56) | 3.06 (1.04) | 1.69 (1.38) | 2.91 (1.23) | 3.37 (1.19) | 2.55 (1.29) |
| Episodic memory |  | 9.32 (3.79) | 9.93 (3.50) | 7.63 (3.29) | 9.47 (3.74) | 10.29(3.78) | 8.78 (3.64) | 7.41 (3.27) | 8.49 (3.60) | 9.29 (3.85) | 8.93 (3.65) |
| Meaning in lifeb |  | 3.38 (.82) | 3.52 (.68) | 3.44 (.76) | 3.76 (.59) | 3.70(.62) | 3.45 (.85) | 3.33 (.79) | 3.62 (.66) | 3.33 (.85) | 3.59 (.65) |
| *N* |  | 1,646 | 4,551 | 1,598 | 998 | 1,480 | 3,005 | 1,449 | 4,008 | 5,123 | 2,428 |

*Note*. Values are a mean (standard deviation), range, or percent.  a The 1997 International Standard Classification of Education was used to categorize and harmonize education statistics across European countries (UNESCO, 2003) in SHARE. Specifically, level of education ranged from 0 (pre-primary level of education) to 6 (second stage of tertiary education). bMeaning in life was measured on a scale from 1 (never) to 4 (often).

*Supplemental Table S2b Continued*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable |  | Lithuania | Bulgaria | Cyprus | Finland | Latvia | Malta | Romania | Slovakia |
| Age (years) |  | 65.74 (10.82) | 65.84 (9.95) | 68.42 (10.79) | 65.51 (9.83) | 66.14 (10.77) | 66.31 (9.11) | 64.89 (9.73) | 61.40 (8.50) |
| Age range |  | 34-97 | 37-95 | 42-100 | 34-93 | 30-98 | 33-93 | 35-99 | 22-101 |
| Gender (female) |  | 64% | 58% | 60% | 55% | 63% | 56% | 57% | 54% |
| Educationa |  | 3.47 (1.33) | 2.95 (1.20) | 2.19 (1.60) | 3.33 (1.60) | 3.46 (1.22) | 2.15 (1.42) | 2.49 (1.10) | 3.11 (.78) |
| Episodic memory |  | 7.88 (3.54) | 7.93 (3.16) | 7.37 (3.72) | 9.47 (3.51) | 8.72 (3.94) | 8.31 (3.40) | 7.57 (3.74) | 9.51 (4.01) |
| Meaning in lifeb |  | 3.31 (.84) | 3.21 (.83) | 3.48 (.76) | 3.59 (.69) | 3.12 (.92) | 3.58 (.64) | 3.21(.99) | 3.56 (.65) |
| *N* |  | 2012 | 1972 | 1197 | 1911 | 1661 | 1243 | 2096 | 2057 |

*Note*. Values are a mean (standard deviation), range, or percent.  a The 1997 International Standard Classification of Education was used to categorize and harmonize education statistics across European countries (UNESCO, 2003) in SHARE. Specifically, level of education ranged from 0 (pre-primary level of education) to 6 (second stage of tertiary education). bMeaning in life was measured on a scale from 1 (never) to 4 (often).

Supplemental Table S3

*Interactions between Purpose/Meaning and Age, Sex, and Education (Verbal Fluency)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Age Interactions |  | Sex Interactions |  | Education Interactions |
| Sample |  | β | 95% CI | *p* |  | β | 95% CI | *p* |  | β | 95% CI | *p* |
| HRS (United States) |  | .017 | .002, .032 | .029 |  | .007 | -.015, .015 | .995 |  | .026 | .010, .041 | .001 |
| MIDUS (United States) |  | .014 | -.015, .043 | .344 |  | .011 | -.018, .039 | .471 |  | .004 | -.024, .033 | .775 |
| WLSG (United States) |  | -- | -- | -- |  | -.005 | -.044, .034 | .804 |  | -.025 | -.068, .016 | .222 |
| WLSS (United States) |  | -.011 | -.060, .039 | .670 |  | .023 | -.028, .074 | .375 |  | -.059 | -.106, -.008 | .023 |
| ELSA (England) |  | .005 | -.011, .021 | .536 |  | .008 | -.009, .025 | .349 |  | -.005 | -.023, .013 | .586 |
| NCDS (UK) |  | -- | -- | -- |  | .001 | -.019, .022 | .895 |  | -.005 | -.026, .015 | .607 |
| TILDA (Ireland) |  | -.003 | -.023, .018 | .808 |  | -.004 | -.025, .018 | .746 |  | -.017 | -.040, .005 | .130 |
| ELSI (Brazil) |  | .000 | -.019, .018 | .962 |  | -.013 | -.033, .007 | .197 |  | .008 | -.012, .029 | .408 |
| SHARE |  |  |  |  |  |  |  |  |  |  |  |  |
|  Austria |  | .014 | -.017, .042 | .413 |  | -.012 | -.080, .050 | .652 |  | .006 | -.026, .037 | .711 |
|  Germany |  | -.034 | -.060, -.006 | .016 |  | .013 | -.037, .074 | .506 |  | -.009 | -.038, .019 | .525 |
|  Sweden |  | -.022 | -.047, .008 | .172 |  | .000 | -.058, .058 | .995 |  | .011 | -.018, .039 | .481 |
|  Netherlands |  | .001 | -.025, .028 | .930 |  | -.005 | -.062, .049 | .814 |  | -.026 | -.051, .002 | .071 |
|  Spain |  | .008 | -.017, .034 | .512 |  | .002 | -.048, .052 | .936 |  | -.006 | -.032, .020 | .644 |
|  Italy |  | -.023 | -.048, .003 | .078 |  | .003 | -.048, .056 | .894 |  | -.005 | -.032, .021 | .681 |
|  France |  | .009 | -.019, .035 | .550 |  | -.009 | -.070, .046 | .684 |  | -.021 | -.051, .008 | .151 |
|  Denmark |  | .010 | -.017, .033 | .547 |  | -.030 | -.101, .018 | .171 |  | -.018 | -.046, .012 | .244 |
|  Greece |  | .025 | -.002, .052 | .066 |  | -.013 | -.071, .037 | .539 |  | .027 | -.001, .055 | .055 |
|  Switzerland |  | .014 | -.019, .046 | .425 |  | .008 | -.057, .080 | .742 |  | .023 | -.012, .055 | .201 |
|  Belgium |  | -.011 | -.033, .012 | .355 |  | .008 | -.037, .057 | .667 |  | .026 | .002. .048 | .032 |
|  Israel |  | .163 | .112, .193 | .000 |  | .004 | -.080, .090 | .905 |  | -.053 | -.092, -.008 | .018 |
|  Czech Republic |  | .009 | -.017, .034 | .525 |  | .002 | -.052, .056 | .942 |  | -.013 | -.039, .013 | .333 |
|  Poland |  | -.026 | -.071, .018 | .241 |  | -.038 | -.138, .038 | .265 |  | .010 | -.033, .053 | .658 |
|  Ireland |  | -.004 | -.057, .050 | .908 |  | -.048 | -.182, .055 | .293 |  | -.041 | -.091, .021 | .220 |
|  Luxembourg |  | -.039 | -.083, .008 | .103 |  | .004 | -.088, .100 | .905 |  | -.025 | -.073, .022 | .298 |
|  Hungary |  | -.003 | -.033, .027 | .837 |  | .017 | -.042, .086 | .503 |  | -.034 | -.068, -.002 | .040 |
|  Portugal |  | .005 | -.039, .049 | .836 |  | .012 | -.077, .110 | .736 |  | -.056 | -.113, -.007 | .026 |
|  Slovenia |  | .012 | -.015, .037 | .397 |  | .015 | -.035, .073 | .487 |  | .021 | -.006, .048 | .135 |
|  Estonia |  | -.024 | -.047, .001 | .056 |  | -.013 | -.067, .034 | .524 |  | -.006 | -.030, .018 | .612 |
|  Croatia |  | .019 | -.018, .052 | .334 |  | .025 | -.043, .107 | .398 |  | -.060 | -.099, -.022 | .002 |
| Meta-analytic partial *r* |  | .005 | -.007, .018 | .417 |  | .000 | -.006, .005 | .941 |  | -.007 | -.017, .002 | .108 |
| Heterogeneity |  |  |  |  |  |  |  |  |  |  |  |  |
|  Q |  | 85.82 | -- | .000 |  | 12.03 | -- | .996 |  | 68.44 | -- | .000 |
|  I2 |  | 76.84 | -- | -- |  | .000 | -- | -- |  | 59.08 | -- | -- |

*Note*. Total *N*=125,746. *N*=114,857 for age interactions because WLSG and NCDS did not have sufficient variance in participant age. Coefficients in the individual studies are standardized beta coefficients and 95% Confidence Intervals from linear regression controlling for age, gender, education, and race (where applicable). HRS=Health and Retirement Study. MIDUS=Midlife in the United States. WLSG=Wisconsin Longitudinal Study Graduate sample. WLSS=Wisconsin Longitudinal Study Sibling sample. ELSA=English Longitudinal Study of Ageing. NCDS=National Child Development Study. TILDA= The Irish LongituDinal study on Ageing. ELSI= Brazilian Longitudinal Study of Aging. SHARE= Survey of Health, Ageing and Retirement in Europe.

Supplemental Table S4

*Interactions between Purpose/Meaning and Age, Sex, and Education (Episodic Memory)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Age Interactions |  | Sex Interactions |  | Education Interactions |
| Sample |  | β | 95% CI | *p* |  | β | 95% CI | *p* |  | β | 95% CI | *P* |
| HRS (United States) |  | .035 | .019, .048 | .000 |  | .003 | -.012, .018 | .723 |  | -.002 | -.018, .013 | .779 |
| MIDUS (United States) |  | .032 | .002, .062 | .034 |  | .024 | -.005, .054 | .105 |  | -.043 | -.072, .013 | .004 |
| WLSG (United States) |  | -- | -- | -- |  | .024 | -.006, .054 | .119 |  | -.046 | -.078, -.015 | .004 |
| WLSS (United States) |  | .006 | -.033, .045 | .756 |  | .009 | -.031, .048 | .661 |  | -.015 | -.055, .024 | .438 |
| ELSA (England) |  | .001 | -.014, .016 | .902 |  | .007 | -.010, .023 | .425 |  | .004 | -.013, .022 | .613 |
| NCDS (UK) |  | -- | -- | -- |  | .009 | -.011, .029 | .382 |  | -.031 | -.051, -.011 | .003 |
| TILDA (Ireland) |  | .010 | -.010, .030 | .325 |  | -.003 | -.023, .018 | .812 |  | -.015 | -.036, .007 | .173 |
| ELSI (Brazil) |  | -.007 | -.024, .011 | .458 |  | -.009 | -.028, .009 | .325 |  | .016 | -.003, .036 | .092 |
| SHARE |  |  |  |  |  |  |  |  |  |  |  |  |
|  Austria |  | .005 | -.024, .035 | .726 |  | -.028 | -.092, .037 | .398 |  | -.004 | -.035, .027 | .804 |
|  Germany |  | .007 | -.018, .032 | .580 |  | .007 | -.045, .059 | .791 |  | -.003 | -.029, .024 | .838 |
|  Sweden |  | .001 | -.026, .028 | .932 |  | .021 | -.036, .077 | .476 |  | -.004 | -.032, .024 | .799 |
|  Netherlands |  | .006 | -.020, .032 | .655 |  | .027 | -.027, .081 | .973 |  | -.033 | -.029, -.007 | .013 |
|  Spain |  | .022 | -.002, .047 | .073 |  | -.012 | -.060, .036 | .625 |  | -.019 | -.044, .006 | .130 |
|  Italy |  | -.016 | -.040, .008 | .196 |  | .002 | -.048, .052 | .947 |  | -.010 | -.036, .016 | .449 |
|  France |  | .018 | -.007, .044 | .155 |  | .010 | -.044, .054 | .727 |  | -.021 | -.049, .006 | .127 |
|  Denmark |  | .018 | -.006, .042 | .136 |  | .031 | -.026, .088 | .282 |  | -.025 | -.053, .002 | .074 |
|  Greece |  | .015 | -.010, .040 | .239 |  | -.013 | -.063, .037 | .608 |  | .048 | .023, .074 | .000 |
|  Switzerland |  | .025 | -.006, .056 | .109 |  | .051 | -.014, .116 | .127 |  | .003 | -.029, .034 | .867 |
|  Belgium |  | .018 | -.004, .039 | .107 |  | .011 | -.034, .056 | .635 |  | .001 | -.021, .022 | .954 |
|  Israel |  | .108 | .068, .148 | .000 |  | .021 | -.062, .105 | .618 |  | -.091 | -.131, -.050 | .000 |
|  Czech Republic |  | .009 | -.016, .034 | .491 |  | .030 | -.023, .082 | .266 |  | -.032 | -.058, -.007 | .011 |
|  Poland |  | -.025 | -.068, .019 | .263 |  | -.029 | -.115, .057 | .506 |  | -.027 | -.069, .015 | .208 |
|  Ireland |  | .016 | -.032, .063 | .516 |  | -.043 | -.149, .062 | .423 |  | -.012 | -.062, .038 | .631 |
|  Luxembourg |  | .015 | -.029, .058 | .510 |  | .022 | -.068, .111 | .638 |  | .001 | -.045, .047 | .973 |
|  Hungary |  | -.006 | -.034, .022 | .675 |  | .022 | -.038, .081 | .481 |  | -.016 | -.048, .015 | .304 |
|  Portugal |  | -.021 | -.061, .019 | .302 |  | .038 | -.047, .123 | .384 |  | -.023 | -.072, .025 | .347 |
|  Slovenia |  | .023 | -.002, .048 | .066 |  | .016 | -.036, .068 | .546 |  | .007 | -.019, .034 | .592 |
|  Estonia |  | .014 | -.009, .037 | .224 |  | -.029 | -.076, .018 | .228 |  | -.007 | -.030, .016 | .561 |
|  Croatia |  | .010 | -.023, .044 | .542 |  | .005 | -.066, .077 | .882 |  | -.050 | -.087, -.013 | .008 |
|  Lithuania |  | .008 | -.029, .046 | .666 |  | -.027 | -.104, .051 | .503 |  | -.013 | -.051, .024 | .483 |
|  Bulgaria |  | -.040 | -.079, -.001 | .043 |  | .013 | -.067, .092 | .756 |  | .045 | .008, .082 | .017 |
|  Cyprus |  | -.005 | -.049, .039 | .814 |  | .056 | -.036, .148 | .234 |  | .045 | -.007, .097 | .090 |
|  Finland |  | .021 | -.014, .056 | .247 |  | .028 | -.047, .102 | .465 |  | -.033 | -.070, .004 | .084 |
|  Latvia |  | .004 | -.038, .045 | .175 |  | .017 | -.071, .105 | .707 |  | .025 | -.017, .067 | .248 |
|  Malta |  | -.008 | -.058, .042 | .757 |  | .060 | -.043, .162 | .255 |  | .022 | -.029, .073 | .403 |
|  Romania |  | .003 | -.031, .038 | .844 |  | .007 | -.068, .083 | .849 |  | .031 | -.006, .068 | .097 |
|  Slovakia |  | .015 | -.022, .052 | .434 |  | -.040 | -.119, .038 | .316 |  | .006 | -.035, .047 | .776 |
| Meta-analytic partial *r* |  | .013 | .005, .020 | .001 |  | .004 | -.001, .009 | .117 |  | -.010 | -.020, -.001 | .035 |
| Heterogeneity |  |  |  |  |  |  |  |  |  |  |  |  |
|  Q |  | 63.47 | -- | .002 |  | 20.37 | -- | .983 |  | 101.49 | -- | .000 |
|  I2 |  | 42.23 | -- | -- |  | .000 | -- | -- |  | 66.93 | -- | -- |

*Note*. Total *N*=141,825. *N*=128,702 for age interactions because WLSG and NCDS did not have sufficient variance in participant age. Coefficients in the individual studies are standardized beta coefficients and 95% Confidence Intervals from linear regression controlling for age, gender, education, and race (where applicable). HRS=Health and Retirement Study. MIDUS=Midlife in the United States. WLSG=Wisconsin Longitudinal Study Graduate sample. WLSS=Wisconsin Longitudinal Study Sibling sample. ELSA=English Longitudinal Study of Ageing. NCDS=National Child Development Study. TILDA=The Irish LongituDinal study on Ageing. ELSI=Brazilian Longitudinal Study of Aging. SHARE=Survey of Health, Ageing and Retirement in Europe.

Supplemental Table S5

*Association between Purpose/Meaning and Verbal Fluency in the Full Sample and Excluding Reported ADRD*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sample |  | nADRD |  | Full Sample |  | No Reported ADRD |
|  |  |  |  | β | 95% CI | *p* |  | β | 95% CI | *p* |
| HRS (United States) |  | 287 |  | .075 | .060, .091 | .000 |  | .071 | .055, .086 | .000 |
| ELSI (Brazil) |  | 30 |  | .063 | .044, .083 | .000 |  | .063 | .043, .083 | .000 |
| SHARE |  |  |  |  |  |  |  |  |  |  |
|  Austria |  | 175 |  | .142 | .111, .174 | .000 |  | .129 | .095, .163 | .000 |
|  Germany |  | 109 |  | .099 | .071, .127 | .000 |  | .093 | .064, .122 | .000 |
|  Sweden |  | 105 |  | .112 | .081, .141 | .000 |  | .101 | .070, .132 | .000 |
|  Netherlands |  | 33 |  | .068 | .039, .095 | .000 |  | .056 | .028, .085 | .000 |
|  Spain |  | 225 |  | .159 | .133, .184 | .000 |  | .142 | .115, .169 | .000 |
|  Italy |  | 120 |  | .188 | .163, .215 | .000 |  | .180 | .153, .207 | .000 |
|  France |  | 70 |  | .087 | .057, .115 | .000 |  | .083 | .054, .113 | .000 |
|  Denmark |  | 42 |  | .104 | .073, .133 | .000 |  | .087 | .056, .117 | .000 |
|  Greece |  | 67 |  | .109 | .081, .137 | .000 |  | .108 | .080, .136 | .000 |
|  Switzerland |  | 49 |  | .068 | .033, .103 | .000 |  | .058 | .023, .093 | .001 |
|  Belgium |  | 129 |  | .085 | .061, .108 | .000 |  | .082 | .058, .106 | .000 |
|  Israel |  | 74 |  | -.021 | -.062, .023 | .357 |  | -.042 | -.086, .001 | .058 |
|  Czech Republic |  | 122 |  | .080 | .053, .106 | .000 |  | .072 | .045, .099 | .000 |
|  Poland |  | 54 |  | .099 | .054, .142 | .000 |  | .092 | .047, .137 | .000 |
|  Ireland |  | 6 |  | .073 | .013, .133 | .017 |  | .074 | .014, .133 | .014 |
|  Luxembourg |  | 42 |  | .047 | .001, .095 | .046 |  | .051 | .002, .100 | .042 |
|  Hungary |  | 70 |  | .184 | .151, .217 | .000 |  | .176 | .142, .210 | .000 |
|  Portugal |  | 35 |  | .076 | .028, .124 | .002 |  | .077 | .028, .125 | .002 |
|  Slovenia |  | 188 |  | .123 | .095, .150 | .000 |  | .112 | .083, .141 | .000 |
|  Estonia |  | 177 |  | .136 | .111, .162 | .000 |  | .131 | .105, .156 | .000 |
|  Croatia |  | 47 |  | .120 | .083, .159 | .000 |  | .121 | .082, .159 | .000 |

*Note*. Participants reported a diagnosis of Alzheimer’s disease or dementia (ADRD) in HRS, ELSI, and SHARE. nADRD is the number of participants who reported ADRD in each sample. MIDUS, WLSG, WLSS, NCDS, and TILDA did not ask about ADRD at the assessment used in the present research and there were only two reported cases in ELSA at the baseline assessment used in this research. The Full Sample associations are from Table 3. The No Reported ADRD associations are excluding participants who reported ADRD.

Supplemental Table S6

*Association between Purpose/Meaning and Episodic Memory in the Full Sample and Excluding Reported ADRD*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | nADRD |  | Full Sample |  | No Reported ADRD |
| Sample |  |  |  | β | 95% CI | *p* |  | β | 95% CI | *p* |
| HRS (United States) |  | 287 |  | .108 | .093, .124 | .000 |  | .101 | .086, .117 | .000 |
| ELSI (Brazil) |  | 30 |  | .068 | .049, .086 | .000 |  | .068 | .049, .086 | .000 |
| SHARE |  |  |  |  |  |  |  |  |  |  |
|  Austria |  | 176 |  | .145 | .114, .177 | .000 |  | .130 | .097, .163 | .000 |
|  Germany |  | 108 |  | .078 | .052, .104 | .000 |  | .067 | .041, .094 | .000 |
|  Sweden |  | 104 |  | .091 | .062, .120 | .000 |  | .077 | .047, .107 | .000 |
|  Netherlands |  | 32 |  | .046 | .019, .073 | .001 |  | .038 | .011, .066 | .006 |
|  Spain |  | 227 |  | .167 | .142, .191 | .000 |  | .157 | .131, .182 | .000 |
|  Italy |  | 119 |  | .161 | .136, .185 | .000 |  | .149 | .124, .174 | .000 |
|  France |  | 70 |  | .114 | .087, .141 | .000 |  | .111 | .083, .138 | .000 |
|  Denmark |  | 42 |  | .089 | .061, .118 | .000 |  | .079 | .050, .109 | .000 |
|  Greece |  | 67 |  | .152 | .126, .178 | .000 |  | .150 | .124, .176 | .000 |
|  Switzerland |  | 49 |  | .086 | .053, .118 | .000 |  | .073 | .039, .106 | .000 |
|  Belgium |  | 128 |  | .071 | .048, .093 | .000 |  | .065 | .042, .087 | .000 |
|  Israel |  | 74 |  | .036 | -.005, .078 | .088 |  | .019 | -.024, .062 | .380 |
|  Czech Republic |  | 121 |  | .065 | .039, .091 | .000 |  | .061 | .035, .087 | .000 |
|  Poland |  | 54 |  | .116 | .073, .159 | .000 |  | .111 | .067, .155 | .000 |
|  Ireland |  | 6 |  | .112 | .059, .166 | .000 |  | .113 | .060, .166 | .000 |
|  Luxembourg |  | 44 |  | .085 | .040, .130 | .000 |  | .078 | .031, .124 | .000 |
|  Hungary |  | 71 |  | .159 | .128, .290 | .000 |  | .150 | .118, .181 | .000 |
|  Portugal |  | 35 |  | .118 | .075, .161 | .000 |  | .124 | .080, .167 | .000 |
|  Slovenia |  | 188 |  | .116 | .090, .143 | .000 |  | .101 | .073, .129 | .000 |
|  Estonia |  | 177 |  | .099 | .075, .122 | .000 |  | .093 | .069, .117 | .000 |
|  Croatia |  | 47 |  | .118 | .082, .154 | .000 |  | .119 | .082, .155 | .000 |
|  Lithuania |  | 44 |  | .089 | .051, .126 | .000 |  | .082 | .043, .120 | .000 |
|  Bulgaria |  | 21 |  | .181 | .141, .222 | .000 |  | .181 | .141, .222 | .000 |
|  Cyprus |  | 38 |  | .113 | .067, .160 | .000 |  | .113 | .067, .160 | .000 |
|  Finland |  | 30 |  | .091 | .052, .129 | .000 |  | .091 | .052, .129 | .000 |
|  Latvia |  | 19 |  | .255 | .212, .299 | .000 |  | .255 | .212, .299 | .000 |
|  Malta |  | 8 |  | .027 | -.025, .078 | .305 |  | .027 | -.025, .078 | .305 |
|  Romania |  | 18 |  | .093 | .055, .131 | .000 |  | .093 | .055, .131 | .000 |
|  Slovakia |  | 2 |  | .246 | .206, .286 | .000 |  | .246 | .206, .268 | .000 |

*Note*. Participants reported a diagnosis of Alzheimer’s disease or dementia (ADRD) in HRS, ELSI, and SHARE. nADRD is the number of participants who reported ADRD in each sample. MIDUS, WLSG, WLSS, NCDS, and TILDA did not ask about ADRD at the assessment used in the present research and there were only two reported cases in ELSA at the baseline assessment used in this research. The Full Sample associations are from Table 4. The No Reported ADRD associations are excluding participants who reported ADRD.