## Supplemental Tables

## Supplemental table 1

Age-stratified univariate associations of sociodemographic and behavioral determinants of SA

|  | Under 60y |  |  |  | 60y and over |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Physiological $\beta(95 \% \mathrm{CI})$ | Mental Health $\beta(95 \% \mathrm{CI})$ | $\begin{gathered} \text { Cognitive } \\ \beta(95 \% \mathrm{CI}) \\ \hline \end{gathered}$ | Sociological $\beta(95 \% \mathrm{CI})$ | Physiological $\beta(95 \% \mathrm{CI})$ | Mental Health $\beta(95 \% \mathrm{CI})$ | $\begin{gathered} \text { Cognitive } \\ \beta(95 \% \mathrm{CI}) \end{gathered}$ | Sociological $\beta(95 \% \mathrm{CI})$ |
| Age (y) |  |  |  |  |  |  |  |  |
| <50 | Ref | Ref | Ref | Ref |  |  |  |  |
| 50-55 | -0.05 [-0.28, 0.17] | 0.19 [-0.17, 0.54] | -0.11 [-0.54, 0.33] | -0.24 [-0.47,-0.01] |  |  |  |  |
| 55-60 | -0.11 [-0.34, 0.11] | 0.12 [-0.23, 0.47] | -0.09 [-0.52, 0.34] | -0.29 [-0.52,-0.07] |  |  |  |  |
| 60-65 |  |  |  |  | Ref | Ref | Ref | Ref |
| >65 |  |  |  |  | -0.34 [-0.53,-0.16] | -0.29 [-0.51,-0.08] | -0.70 [-0.97,-0.43] | -0.15 [-0.30, 0.00 ] |
| Marital Status |  |  |  |  |  |  |  |  |
| Never | 0.35 [-0.39, 1.10] | -0.47 [-1.60, 0.67] | 0.71 [-0.68, 2.10] | -0.13 [-0.88, 0.62] | - ${ }^{\text {a }}$ | - ${ }^{\text {a }}$ | - ${ }^{\text {a }}$ | - ${ }^{\text {a }}$ |
| Married | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Widowed | 0.01 [-0.13, 0.15] | -0.15 [-0.37, 0.08] | -0.37 [-0.64,-0.10] | -0.00 [-0.15, 0.14] | -0.30 [-0.49,-0.11] | 0.04 [-0.19, 0.26] | -0.47 [-0.76,-0.19] | -0.03 [-0.19,0.12] |
| Separated | -0.01 [-0.23, 0.2] | -0.06 [-0.39, 0.27] | 0.21 [-0.20, 0.62] | -0.14 [-0.36, 0.08] | -0.09 [-0.64, 0.45] | -0.28 [-0.91, 0.35] | 0.37 [-0.44, 1.20] | 0.33 [-0.11,0.77] |
| Educational <br> attainment |  |  |  |  |  |  |  |  |
| <Primary | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Primary | -0.03 [-0.17, 0.11] | -0.03 [-0.24, 0.19] | 0.97 [0.74, 1.20] | 0.18 [0.04, 0.32] | -0.06 [-0.30, 0.19] | 0.09 [-0.19, 0.36] | 1.00 [0.69, 1.30] | 0.22 [0.03, 0.42] |
| Some |  |  |  |  |  |  |  |  |
| secondary | -0.10 [-0.23, 0.04] | 0.07 [-0.14, 0.27] | 1.60 [1.30, 1.80] | 0.17 [0.03, 0.30] | 0.09 [-0.15, 0.33] | 0.38 [0.11, 0.65] | 1.60 [1.30, 1.90] | 0.17 [-0.02, 0.36] |
| Secondary or more | -0.04 [-0.26, 0.17] | 0.37 [0.03, 0.70] | 2.00 [1.60, 2.40] | 0.17 [-0.05, 0.39] | 0.08 [-0.22, 0.37] | 0.68 [0.34, 1.00] | 2.30 [1.90, 2.70] | 0.26 [0.03, 0.50] |
| Urbanicity |  |  |  |  |  |  |  |  |
| tertile | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Mid tertile | -0.21 [-0.35,-0.08] | 0.01 [-0.20, 0.23] | 0.18 [-0.08, 0.44] | -0.08 [-0.22, 0.06] | -0.25 [-0.48,-0.02] | 0.05 [-0.22, 0.31] | 0.40 [0.06, 0.74] | -0.05 [-0.24, 0.13] |
| Highest tertile | -0.29 [-0.42,-0.15] | 0.13 [-0.08, 0.34] | 0.11 [-0.15, 0.37] | $0.05[-0.09,0.18]$ | -0.38 [-0.61,-0.15] | 0.02 [-0.25, 0.28] | 0.55 [0.21, 0.89] | 0.01 [-0.17, 0.19] |
| Urban SES |  |  |  |  |  |  |  |  |
| tertile | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Mid tertile | -0.02 [-0.17, 0.14] | 0.05 [-0.20, 0.30] | 0.74 [0.44, 1.00] | 0.12 [-0.05, 0.28] | 0.02 [-0.24, 0.28] | 0.09 [-0.21, 0.38] | 0.40 [0.05, 0.76] | -0.08 [-0.29, 0.12] |
| Highest tertile | -0.07 [-0.23, 0.08] | 0.08 [-0.16, 0.31] | 1.00 [0.73, 1.30] | 0.15 [0.00, 0.31] | $-0.01[-0.26,0.25]$ | 0.12 [-0.17, 0.41] | 1.60 [1.20, 1.90] | -0.01 [-0.20, 0.20] |
| Rural SES |  |  |  |  |  |  |  |  |
| Lowest |  |  |  |  |  |  |  |  |
| tertile | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| Mid tertile | -0.06 [-0.22, 0.10] | 0.13 [-0.12, 0.38] | 0.13 [-0.18, 0.44] | 0.23 [0.07, 0.40] | -0.07 [-0.36, 0.21] | 0.08 [-0.25, 0.41] | 0.40 [0.00, 0.81] | -0.02 [-0.25, 0.20] |
| Highest | -0.07 [-0.22, 0.09] | 0.10 [-0.14, 0.34] | 0.40 [0.10, 0.70] | 0.15 [-0.01, 0.30] | 0.14 [-0.13, 0.41] | 0.22 [-0.10, 0.53] | 1.30 [0.95, 1.70] | 0.00 [-0.22, 0.22] |

## tertile

Household
Composition
Single

| person | 0.25 [-0.23, 0.73] | 0.14 [-0.61, 0.89] | -0.42 [-1.30, 0.50] | -0.25[-0.73, 0.23] | -0.93 [-1.50,-0.33] | -0.17 [-0.86, 0.51] | -0.50 [-1.40, 0.39] | 0.16 [-0.31, 0.63] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| One nuclear family <br> Horiz. and/or vert ext | Ref | Ref | Ref | Ref | Ref | Ref | Ref | Ref |
| family | -0.07 [-0.21, 0.08] | 0.05 [-0.18, 0.28] | -0.14 [-0.43, 0.14] | 0.47 [0.32, 0.61] | -0.24 [-0.50, 0.02] | 0.07 [-0.23, 0.37] | -0.01 [-0.39, 0.38] | 0.34 [0.14, 0.55] |
| Multinuclear family Smoking | -0.08 [-0.20, 0.05] | -0.08 [-0.27, 0.11] | 0.13 [-0.11, 0.36] | 0.32 [0.19, 0.44] | 0.01 [-0.22, 0.24] | 0.09 [-0.17, 0.36] | 0.25 [-0.09, 0.59] | 0.22 [0.04, 0.40] |
| Status | -0.03 [-0.14, 0.09] | 0.10 [-0.08, 0.27] | -0.16 [-0.38, 0.06] | -0.10 [-0.22, 0.02] | 0.01 [-0.19, 0.20] | 0.14 [-0.09, 0.37] | -0.37 [-0.67,-0.08] | 0.06 [-0.10, 0.22] |
| Alcohol |  |  |  |  |  |  |  |  |
| Consumer | 0.01 [-0.09, 0.12] | -0.01 [-0.18, 0.15] | -0.02 [-0.22, 0.18] | 0.10 [-0.01, 0.21] | 0.07 [-0.12, 0.26] | 0.09 [-0.12, 0.30] | 0.10 [-0.17, 0.38] | 0.12 [-0.02, 0.27] |
| Employed | 0.13 [0.02, 0.25] | 0.28 [0.10, 0.46] | 0.11 [-0.12, 0.33] | - ${ }^{\text {b }}$ | 0.33 [0.14, 0.52] | 0.29 [.08, 0.50] | -0.23 [-0.51, 0.05] | - ${ }^{\text {b }}$ |
| Insured | 0.02 [-0.08, 0.13] | 0.11 [-0.06, 0.27] | 0.56 [0.36, 0.76] | 0.15 [0.04, 0.25] | 0.12 [-0.09, 0.33] | 0.15 [-0.09, 0.38] | 0.38 [0.08, 0.69] | 0.08 [-0.08, 0.25] |

Note. ${ }^{\text {a }}$ No observations for never married participants over age 60 y .
${ }^{\mathrm{b}}$ Not analyzed due to inclusion of employment in construction of sociological domain variable.

## Supplemental table 2

Age-stratified multivariable associations of sociodemographic and behavioral determinants of SA

|  | Under 60y |  |  |  | 60 y and over |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Variables | Physiological $\beta$ (95\% CI) | Mental Health $\beta(95 \% \mathrm{CI})$ | $\begin{gathered} \text { Cognitive } \\ \beta(95 \% \mathrm{CI}) \end{gathered}$ | $\begin{gathered} \text { Sociological } \\ \beta(95 \% \mathrm{CI}) \end{gathered}$ | Physiological $\beta$ (95\% CI) | Mental Health $\beta(95 \% \mathrm{CI})$ | $\begin{gathered} \text { Cognitive } \\ \beta(95 \% \mathrm{CI}) \end{gathered}$ | $\begin{gathered} \text { Sociological } \\ \beta(95 \% \mathrm{CI}) \end{gathered}$ |
| Age (y) |  |  |  |  |  |  |  |  |
| $<50$ (ref) |  |  |  |  |  |  |  |  |
| 50-55 | -0.05 [-0.27,0.18] | 0.18 [-0.17,0.53] | -0.25 [-0.64,0.13] | -0.23 [-0.45,-0.01] |  |  |  |  |
| 55-60 | -0.11 [-0.33,0.12] | 0.09 [-0.26,0.44] | -0.24 [-0.62,0.15] | -0.31 [-0.53,-0.09] |  |  |  |  |
| 60-65 (ref) |  |  |  |  |  |  |  |  |
| >65 |  |  |  |  | -0.30 [-0.50,-0.11] | -0.25 [-0.48,-0.03] | -0.43 [-0.67,-0.18] | -0.15 [-0.31,0.00] |
| Marital Status |  |  |  |  |  |  |  |  |
| Never <br> Married (ref) | 0.27 [-0.49,1.04] | -0.53 [-1.72,0.66] | 0.68 [-0.62,1.98] | -0.01 [-0.76,0.74] | - ${ }^{\text {a }}$ | - ${ }^{\text {a }}$ | - ${ }^{\text {a }}$ | - ${ }^{\text {a }}$ |
| Widowed | 0.02 [-0.13, 0.18$]$ | -0.14 [-0.38,0.10] | -0.15 [-0.41, 0.11$]$ | -0.01 [-0.16,0.14] | -0.15 [-0.35,0.05] | 0.14 [-0.09,0.37] | -0.13 [-0.38,0.13] | -0.05 [-0.21,0.11] |
| Separated | -0.01 [-0.23, 0.20$]$ | -0.08 [-0.41,0.26] | 0.2 [-0.18,0.57] | -0.11 [-0.33, 0.10] | 0.05 [-0.50,0.60] | -0.47 [-1.11,0.16] | 0.07 [-0.65,0.79] | 0.17 [-0.27, 0.62 ] |
| Educational attainment <Primary (ref) |  |  |  |  |  |  |  |  |
| Primary <br> Some | -0.01 [-0.15,0.13] | -0.05 [-0.27,0.17] | 0.88 [0.64,1.13] | 0.18 [0.04, 0.32$]$ | -0.05 [-0.30,0.20] | 0.11 [-0.18,0.39] | 0.81 [0.48,1.13] | 0.25 [0.05, 0.45] |
| secondary Secondary | -0.05 [-0.19,0.08] | 0.06 [-0.16,0.28] | 1.45 [1.21,1.69] | 0.14 [0.01,0.28] | 0.11 [-0.15,0.38] | 0.47 [0.16,0.77] | 1.26 [0.92,1.60] | 0.2 [-0.02,0.41] |
| or more | 0.04 [-0.20,0.27] | 0.35 [-0.01, 0.71$]$ | 1.75 [1.35,2.15] | 0.18 [-0.05, 0.41$]$ | 0.18 [-0.16,0.51] | 0.88 [0.49,1.26] | 1.79 [1.37,2.22] | 0.33 [0.06, 0.60] |
| Urbanicity Low tertile (ref) |  |  |  |  |  |  |  |  |
| Mid tertile | -0.22 [-0.36,-0.07] | 0.02 [-0.20,0.24] | -0.12 [-0.36,0.13] | -0.15 [-0.29,-0.01] | -0.22 [-0.46, 0.03] | -0.06 [-0.35, 0.22$]$ | -0.08 [-0.40,0.24] | -0.12 [-0.32,0.08] |
| High tertile | -0.29 [-0.43,-0.15] | 0.14 [-0.08,0.35] | -0.21 [-0.45,0.02] | -0.03 [-0.17,0.10] | -0.33 [-0.59,-0.08] | -0.07 [-0.37,0.23] | -0.02 [-0.36,0.31] | -0.09 [-0.29,0.12] |
| Urban SES <br> Low tertile (ref) |  |  |  |  |  |  |  |  |
| Mid tertile | 0.08 [-0.11,0.27] | -0.01 [-0.31,0.29] | 0.73 [0.40,1.05] | 0.07 [-0.12,0.25] | -0.14 [-0.47,0.19] | -0.09 [-0.48,0.30] | -0.04 [-0.48,0.39] | -0.12 [-0.39,0.15] |
| High tertile | 0.07 [-0.17, 0.31$]$ | -0.03 [-0.40,0.35] | 0.91 [0.50,1.32] | 0.16 [-0.07,0.40] | -0.31 [-0.73, 0.12$]$ | -0.33 [-0.82,0.16] | 0.31 [-0.24,0.86] | -0.1 [-0.43, 0.24$]$ |
| Rural SES |  |  |  |  |  |  |  |  |
| Low tertile |  |  |  |  |  |  |  |  |

## (ref)

| Mid tertile | -0.1 [-0.29,0.10] | 0.13 [-0.17, 0.44] | -0.34 [-0.67,-0.01] | 0.12 [-0.07, 0.31$]$ | -0.05 [-0.40,0.30] | 0.1 [-0.30, 0.51$]$ | 0.06 [-0.39,0.52] | -0.01 [-0.30, 0.27$]$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| High tertile | -0.13 [-0.37,0.11] | 0.09 [-0.28,0.46] | -0.52 [-0.93,-0.12] | -0.07 [-0.30,0.16] | 0.16 [-0.26,0.58] | 0.25 [-0.24,0.74] | 0.48 [-0.07,1.03] | -0.05 [-0.39,0.29] |
| Household |  |  |  |  |  |  |  |  |
| Composition Single |  |  |  |  |  |  |  |  |
| person One nuclear | 0.17 [-0.34,0.68] | 0.26 [-0.53,1.06] | -0.31 [-1.18,0.57] | -0.19 [-0.69,0.31] | -0.88 [-1.49,-0.27] | -0.14 [-0.84, 0.56$]$ | 0 [-0.80, 0.79] | 0.19 [-0.30,0.68] |
| family (ref) |  |  |  |  |  |  |  |  |
| Horizontally |  |  |  |  |  |  |  |  |
| and/or <br> vertically <br> extended |  |  |  |  |  |  |  |  |
| family | -0.05 [-0.20,0.10] | 0.03 [-0.20,0.27] | -0.03 [-0.29,0.23] | 0.50 [0.35,0.65] | -0.18 [-0.44,0.07] | 0.13 [-0.17,0.43] | 0.05 [-0.28,0.39] | 0.37 [0.16,0.58] |
| Multi- |  |  |  |  |  |  |  |  |
| nuclear family | -0.03 [-0.16,0.09] | -0.1 [-0.30, 0.10$]$ | 0.19 [-0.03, 0.41$]$ | 0.35 [0.22,0.47] | 0.1 [-0.13, 0.33$]$ | 0.14 [-0.13, 0.40] | 0.06 [-0.23,0.36] | 0.22 [0.04, 0.41$]$ |
| Smoking |  |  |  |  |  |  |  |  |
| Status | -0.01 [-0.13, 0.11$]$ | 0.13 [-0.05, 0.31$]$ | -0.02 [-0.23,0.18] | -0.14 [-0.25,-0.02] | 0 [-0.20,0.20] | 0.2 [-0.03, 0.44$]$ | -0.08 [-0.34,0.18] | 0.09 [-0.07,0.25] |
| Alcohol |  |  |  |  |  |  |  |  |
| Consumer | 0.01 [-0.10,0.12] | -0.03 [-0.20,0.13] | 0.02 [-0.16,0.21] | 0.14 [0.03, 0.25] | 0.07 [-0.12,0.25] | 0.06 [-0.16,0.27] | 0.16 [-0.07,0.40] | 0.12 [-0.03, 0.27] |
| Employed | 0.13 [0.01,0.25] | 0.28 [0.09,0.46] | 0.22 [0.01, 0.43$]$ | - b | 0.30 [0.11,0.49] | 0.32 [0.10,0.54] | -0.01 [-0.25, 0.23$]$ | - b |
| Insured | 0.02 [-0.09,0.13] | 0.06 [-0.12,0.23] | 0.26 [0.07, 0.45$]$ | 0.12 [0.02, 0.23] | 0.1 [-0.11, 0.31$]$ | 0.11 [-0.14,0.35] | 0.05 [-0.22,0.32] | 0.04 [-0.13, 0.21] |
| F | 1.43 | 1.25 | 12.98 *** | 4.92*** | $3.29 * * *$ | 2.56 *** | 13.23 *** | 1.89 ** |
| $\mathrm{R}^{2}$ | 0.0309 | 0.0271 | 0.2254 | 0.0942 | 0.0981 | 0.078 | 0.3114 | 0.0558 |

Note. ${ }^{\text {a }}$ No observations for never married participants over age 60 y .
${ }^{\mathrm{b}}$ Not analyzed due to inclusion of employment in construction of sociological domain variable.

* $p<.05, * * p<.01, * * * p<.001$

