Depression and CAD

Biobank analysis with sex and age

Anish Shah

Tidying data

Depression scores

```
##    vars    n  mean   sd median trimmed  mad min max range skew kurtosis
## X1    1 7673 11.17 6.74     11   10.96 2.97   0  36    36 0.24     0.53
##      se
## X1 0.08
```

Sex and age categories

```
##          vars    n    mean      sd median trimmed     mad  min     max
## uniqueid    1 7673 3848.49 2229.65 3840.0 3844.18 2852.52 1.00 7749.00
## age         2 7652   62.25   12.96   63.2   62.83   12.52 0.54   99.63
## gend        3 7630    0.63    0.48    1.0    0.67    0.00 0.00    1.00
## ageBin      4 7652    1.18    0.82    1.0    1.23    1.48 0.00    2.00
## sexy*       5 7617     NaN      NA     NA     NaN      NA  Inf    -Inf
##            range  skew kurtosis    se
## uniqueid 7748.00  0.01    -1.19 25.45
## age        99.08 -0.45     0.19  0.15
## gend        1.00 -0.56    -1.69  0.01
## ageBin      2.00 -0.35    -1.45  0.01
## sexy*       -Inf    NA       NA    NA
```

Coronary artery disease

```
##             vars    n    mean      sd median trimmed     mad min  max
## uniqueid       1 7673 3848.49 2229.65   3840 3844.18 2852.52   1 7749
## prevmi         2 7496    0.23    0.42      0    0.16    0.00   0    1
## cad            3 5387    0.59    0.49      1    0.61    0.00   0    1
## cadhist        4 6224    0.50    0.50      1    0.50    0.00   0    1
## ang1results    5 3070    0.75    0.43      1    0.81    0.00   0    1
## ihd            6 7673    0.66    0.47      1    0.71    0.00   0    1
##             range  skew kurtosis    se
## uniqueid     7748  0.01    -1.19 25.45
## prevmi          1  1.32    -0.27  0.00
## cad             1 -0.35    -1.88  0.01
## cadhist         1  0.00    -2.00  0.01
## ang1results     1 -1.16    -0.67  0.01
## ihd             1 -0.70    -1.51  0.01
```

Mortality and outcomes

```
##   Status
## 1   1996
```

```
##          vars    n    mean      sd median trimmed    mad min  max range
## uniqueid    1 6990 3538.07 2067.31 3503.5 3523.13 2633.1   1 7567  7566
## status      2 6990    0.24    0.43    0.0    0.17    0.0   0    1     1
##          skew kurtosis    se
## uniqueid 0.04    -1.16 24.73
## status   1.23    -0.48  0.01
```

Analysis of MDD and CAD

```
##
## --------Summary descriptives table by 'ihd'---------
##
## _____________________________________________________
##                       0           1       p.overall
##                     N=2232      N=4758
## _____________________________________________________
## sexy:                                        <0.001
##     Middle Men   390 (17.5%) 954 (20.1%)
##     Middle Women 290 (13.0%) 416 (8.75%)
##     Old Men      385 (17.3%) 1638 (34.5%)
##     Old Women    384 (17.2%) 803 (16.9%)
##     Young Men    444 (19.9%) 652 (13.7%)
##     Young Women  338 (15.2%) 289 (6.08%)
## phq              10.6 (6.85) 11.5 (6.71)   <0.001
## -----------------------------------------------------
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harva
## % Date and time: Thu, Nov 14, 2019 - 10:53:22 AM
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] & ihd \\
## \hline \\[-1.8ex]
##  phq & 0.019$^{**}$ \\
##   & (0.009) \\
##   & \\
##  sexyMiddle Women & $-$0.519$^{***}$ \\
##   & (0.182) \\
##   & \\
##  sexyOld Men & 0.388$^{**}$ \\
##   & (0.163) \\
```

```
##   & \\
##  sexyOld Women & $-$0.102 \\
##   & (0.167) \\
##   & \\
##  sexyYoung Men & $-$0.637$^{***}$ \\
##   & (0.163) \\
##   & \\
##  sexyYoung Women & $-$1.223$^{***}$ \\
##   & (0.195) \\
##   & \\
##  phq:sexyMiddle Women & $-$0.002 \\
##   & (0.014) \\
##   & \\
##  phq:sexyOld Men & 0.017 \\
##   & (0.014) \\
##   & \\
##  phq:sexyOld Women & $-$0.005 \\
##   & (0.013) \\
##   & \\
##  phq:sexyYoung Men & 0.012 \\
##   & (0.013) \\
##   & \\
##  phq:sexyYoung Women & 0.012 \\
##   & (0.014) \\
##   & \\
##  Constant & 0.680$^{***}$ \\
##   & (0.118) \\
##   & \\
## \hline \\[-1.8ex]
## Observations & 6,983 \\
## Log Likelihood & $-$4,168.824 \\
## Akaike Inf. Crit. & 8,361.647 \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}


##
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## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] & status \\
## \hline \\[-1.8ex]
##  phq & 0.004 \\
##   & (0.020) \\
##   & \\
```

```
##  sexyMiddle Women & 0.106 \\
##   & (0.356) \\
##   & \\
##  sexyOld Men & 0.007 \\
##   & (0.344) \\
##   & \\
##  sexyOld Women & 0.467 \\
##   & (0.327) \\
##   & \\
##  sexyYoung Men & $-$0.434 \\
##   & (0.331) \\
##   & \\
##  sexyYoung Women & $-$1.049$^{**}$ \\
##   & (0.411) \\
##   & \\
##  ihd1 & $-$0.195 \\
##   & (0.298) \\
##   & \\
##  phq:sexyMiddle Women & $-$0.011 \\
##   & (0.028) \\
##   & \\
##  phq:sexyOld Men & 0.037 \\
##   & (0.029) \\
##   & \\
##  phq:sexyOld Women & 0.011 \\
##   & (0.026) \\
##   & \\
##  phq:sexyYoung Men & 0.038 \\
##   & (0.026) \\
##   & \\
##  phq:sexyYoung Women & 0.043 \\
##   & (0.029) \\
##   & \\
##  phq:ihd1 & 0.013 \\
##   & (0.023) \\
##   & \\
##  sexyMiddle Women:ihd1 & 0.143 \\
##   & (0.453) \\
##   & \\
##  sexyOld Men:ihd1 & 0.477 \\
##   & (0.399) \\
##   & \\
##  sexyOld Women:ihd1 & 0.043 \\
##   & (0.398) \\
##   & \\
##  sexyYoung Men:ihd1 & 0.390 \\
##   & (0.424) \\
##   & \\
##  sexyYoung Women:ihd1 & 1.545$^{***}$ \\
##   & (0.524) \\
##   & \\
##  phq:sexyMiddle Women:ihd1 & $-$0.004 \\
##   & (0.035) \\
##   & \\
```

```
##  phq:sexyOld Men:ihd1 & $-$0.031 \\
##   & (0.032) \\
##   & \\
##  phq:sexyOld Women:ihd1 & $-$0.012 \\
##   & (0.031) \\
##   & \\
##  phq:sexyYoung Men:ihd1 & $-$0.051 \\
##   & (0.032) \\
##   & \\
##  phq:sexyYoung Women:ihd1 & $-$0.073$^{**}$ \\
##   & (0.037) \\
##   & \\
##  Constant & $-$1.409$^{***}$ \\
##   & (0.247) \\
##   & \\
## \hline \\[-1.8ex]
## Observations & 6,983 \\
## Log Likelihood & $-$3,757.534 \\
## Akaike Inf. Crit. & 7,563.069 \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```