

Supplementary Material

Appendix. STATA code

Descriptive Statistics:

- `tab Experienceconfusionmemoryprob`
`label define memory 0 "No" 1 "Yes"`
`label values memory memory`
`tab memory`
- `summarize AgeatScreeningAdjudicatedR, detail`
`rename AgeatScreeningAdjudicatedR age`
`recode age 20/49=0 50/64=1 65/85=2, generate(Age3)`
`tab Age3`
- `tab Compareactivitywotherssamea, missing`
`rename Compareactivitywotherssamea Pa3`
`recode Pa3 7=. 9=.`
`tab Pa3`
`label define activity 1 "More active" 2 "Less active" 3 "Same activity"`
`label values Pa3 Pa3`
`tab Pa3, missing`
`recode Pa3 1=0 2=1 3=0, generate (Pa2)`
`tab Pa2 Pa2`
`label variable Pa2 "Less active compared to peers"`
`tab Pa2`
- `label define gender 1 "Male" 2 "Female"`
`label values Gender Gender`
`tab Gender`
- `tab EducationLevelAdults20, missing`
`recode EducationLevelAdults20 7=. 9=.`
`recode EducationLevelAdults20 1=0 2=0 3=1 4=2 5=2, gen (Education2)`
`label define Education2 0 "No High School" 1 "High School or equivalent" 2 "Some college and higher degrees"`
`label value Education2 Education2`
- `tab PHQ`

PHQ9 were assessed again by sum each question individually

tab Littleinterestindointhings

recode Littleinterestindointhings 9=., generate (PHQ1Little)

tab Feelingdowndepressedorhope

recode Feelingdowndepressedorhope 9=., generate (PHQ2Down)

tab Troublesleepingorsleepingtoo

recode Troublesleepingorsleepingtoo 9=., generate (PHQ3Sleep)

tab Feelingtiredorhavinglittlee

recode Feelingtiredorhavinglittlee 9=., generate (PHQ4Tired)

tab Poorappetiteorovereating

recode Poorappetiteorovereating 9=., generate (PHQ5Appetite)

tab Feelingbadaboutyourself

recode Feelingbadaboutyourself 9=., generate (PHQ6Bad)

tab Troubleconcentratingonthings

Recode Troubleconcentratingonthings 9=., generate (PHQ7Concentrate)

tab Movingorspeakingslowlyortoo

Recode Movingorspeakingslowlyortoo 9=., generate (PHQ8Moving)

tab Thoughtyouwouldbebetteroff

Recode Thoughtyouwouldbebetteroff 9=., generate (PHQ9Dead)

gen PHQ9new =

PHQ1Little+PHQ2Down+PHQ3Sleep+PHQ4Tired+PHQ5Appetite+PHQ6Bad+PHQ7Concentrate+PHQ8Moving+PHQ9Dead

tab PHQ9new

- tab Evertoldbydoctorhavesleepd, missing

recode Evertoldbydoctorhavesleepd 1=1 2=0 7=. 9=., generate(Sleep)

label define Sleep 0 "No" 1 "Yes"

label values Sleep Sleep

tab Sleep

- tab Evertoldyouhadastroke

```

recode Evertoldyouhadastroke 1=1 2=0 7=. 9=., generate (Stroke)
label define Stroke 0 "No" 1 "Yes"
label values Stroke Stroke
tab Stroke

```

- tab Hadatleast12alcoholdrinks1

```

recode Hadatleast12alcoholdrinks1 1=1 2=0 7=. 9=., generate (Alcohol)
label define Alcohol 0 "No" 1 "Yes"
label values Alcohol Alcohol
tab Alcohol

```

Table_1_mc: done manually

Modeling:

*** Unadjusted:**

1. logistic memory Pa2
2. logistic memory Pa2 if Age3==2
3. logistic memory Pa2 if Age3==1

*** Adjusted:**

1. logistic memory
1. Middle-aged (50-64)
logistic memory c.AgeatScreeningAdjudicatedR i.Gender i.Education2 i.Sleep c.PHQ9new
i.Stroke i.Alcohol if Age3==1
2. Middle-aged (65-85)
logistic memory c.AgeatScreeningAdjudicatedR i.Gender i.Education2 i.Sleep c.PHQ9new
i.Stroke i.Alcohol if Age3==2

Effect Modification:

1. logistic memory i.Pa2##i.Age3 i.Gender i.Education2 i.Sleep c.PHQ9new i.Stroke
i.Alcohol