**Clinical Core Codebook**

**Note: “composite score not validated” means the scale score was calculated and provided by Einstein team and was not checked and validated by PSU team. In this case, the data user is responsible for calculating and checking the composite score to make sure it’s correct.**

**Table of Contents**

[Filter Variables 4](#_Toc2071852)

[Identification Variables 5](#_Toc2071853)

[Diagnosis and Rating Variables 6](#_Toc2071854)

[Clinical Core 8](#_Toc2071855)

[Blessed 8](#_Toc2071856)

[Montreal Cognitive Assessment 9](#_Toc2071857)

[Free and Cued Selective Reminding Test-Immediate 14](#_Toc2071858)

[Demographics 25](#_Toc2071859)

[Social Activities 29](#_Toc2071860)

[Medical History 48](#_Toc2071861)

[Medications 65](#_Toc2071862)

[Smoking and Alcoholic History 67](#_Toc2071863)

[Social Network: Social and Caregiver Strain 69](#_Toc2071864)

[Family Medical History 78](#_Toc2071865)

[GDS 81](#_Toc2071866)

[Lawton Brody 83](#_Toc2071867)

[FAST 88](#_Toc2071868)

[Free and Cued Selective Reminding Test- Delay 90](#_Toc2071869)

[Craft Story 21 Recall (Immediate) 98](#_Toc2071870)

[Benson Complex Figure 106](#_Toc2071871)

[Number Span Test: Forward 108](#_Toc2071872)

[Number Span Test: Backward 110](#_Toc2071873)

[Trail Making Test 112](#_Toc2071874)

[Craft Story 21 Recall (Delayed) 115](#_Toc2071875)

[Wechsler Memory Scale: Revised Logical Memory I Story A- Immediate 122](#_Toc2071876)

[Benson Complex Figure- Recall (Delayed) 124](#_Toc2071877)

[Benson Complex Figure- Recognition (Delayed) 126](#_Toc2071878)

[WAIS-III Digit Symbol 127](#_Toc2071879)

[WAIS-III Block Design 129](#_Toc2071880)

[Wechsler Memory Scale: Revised Logical Memory (Delayed Recall) 133](#_Toc2071881)

[Verbal Fluency: Phonemic Test 134](#_Toc2071882)

[Category Fluency 136](#_Toc2071883)

[MINT (Multilingual Naming Test) 138](#_Toc2071884)

[WRAT-4 (Wide Range Achievement Test) Reading Subtest 142](#_Toc2071885)

[Life Events 143](#_Toc2071886)

[Cognitive Change Index (CCI) 145](#_Toc2071887)

[MOS Sleep Scale 152](#_Toc2071888)

[Pain Questionnaires 156](#_Toc2071889)

# Filter Variables

*The following are variables created for data analysis*

# Identification Variables

**(14 ITEMS)**

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**DESCRIPTION**

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This section contains demographic variables recorded by research staff at Einstein.

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|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Description** | **Item Values** |
| SubjectId | Subject’s ID Number |  |
| Wave | Subject’s wave number |  |
| Gender | Subject’s gender | 1= male  2= female |
| Ethnic | Ethnic | 1=Caucasian  2=African American  3=Hispanic, White  4=Hispanic, Black  5=Asian  6=Other |
| Educyrs | Subject’s years of education |  |
| Current Status | Subject’s current status | 0= alive  1= dead  2= dead & autopsy  3= drop-refused  4= drop-moved  5= drop-excluded  6= loss of contact  7= home visit, tel. interview  8= drop-very sick  9= not available, call in future  12= resides in nursing home |
| Dob | Subject’s date of birth |  |
| Day1InitialDate | Day 1 |  |
| AgeYears | Subject’s rounded age at visit in years |  |
| AgeAtWave | Subject’s exact age at visit in years |  |
| Deathdte | Subject’s death date |  |
| Dropdte | Date subject dropped from the study |  |
| Epidat | Date questionnaire was completed |  |
| Tester | Tester’s initials |  |

# Diagnosis and Rating Variables

**(14 items)**

**DESCRIPTION**

These variables are for patient diagnosis of mild cognitive impairment and dementia.

**ASSOCIATED PAPERS**

N/A

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| CDR | Clinical Dementia Rating |  |
| aMCI1 | Amnestic Mild Cognitive Impairment | 0=No  1=Yes  9=Unknown |
| naMCI1 | Non-amnestic Mild Cognitive Impairment | 0=No  1=Yes  9=Unknown |
| DomainAtt | Number of Attention Domains |  |
| DomainLang | Number of Language Domains |  |
| DomainExFn | Number of Executive Function Domains |  |
| DomainViso | Number of Visual Domains |  |
| TotalDoms | Total Number of Domains |  |
| aMCISingle | Amnestic Mild Cognitive Impairment with a single impaired domain | 0=No  1=Yes |
| aMCIMulti | Amnestic Mild Cognitive Impairment with multiple impaired domains | 0=No  1=Yes |
| naMCISingle | Non-amnestic Mild Cognitive Impairment with a single impaired domain | 0=No  1=Yes |
| naMCIMulti | Non-amnestic Mild Cognitive Impairment with multiple impaired domains | 0=No  1=Yes |
| FinalDiagDate | Subject's Diagnosis date for the diagnosis at the wave |  |
| FinalPrimaryDiag | Subject's final diagnosis code at the wave | 0=Normal  1=Probable Alzheimer's Disease  2=Possible Alzheimer's Disease  3=Probable Ischemic Vascular Dementia  4=Possible Ischemic Vascular Dementia  5=Binswanger's Syndrome  6=Possible/Probable Dementia with Lewy Bodies  7=Frontotemporal Dementia  8=Symptomatic hydrocephalus  9=Hypothyroidism  10=Subacute combined degeneration – B12  11=Traumatic brain damage  12=Neurosyphilis  13=Aids dementia  14=Brain tumor  15=Creutzfeldt Jacob disease  16=Down's syndrome  17=Herpes encephalitis  18=Huntington's disease  19=Leukodystrophy (specify type)  20=Motor neuron disease  21=Multiple sclerosis  22=Multi-system atrophy  23=Progressive subcortical gliosis  24=Progressive supranuclear palsy  25=Mixed Dementia-Alzheimer's + Vascular  26=Parkinsonian Dementia  27=Other types  28=Pure amnestic syndrome  29=Alcoholic encephalopathy  30=Corticobasal degeneration  41=Dementia (indeterminate)  50=Major depression (DSM-IV)  56=Parkinson’s disease (without dementia)  59=Hyperthyroidism  99=Insufficient Information |

**SCORING OF SCALE**

N/A

# Clinical Core

# Blessed

**(2 items)**

**DESCRIPTION**

This test is used to screen for dementia.

**ASSOCIATED PAPERS**

Blessed, G., Tomlinson, B. E., & Roth, M. (1968). The association between quantitative measures of dementia and of senile change in the cerebral gray matter of elderly subjects. The British Journal of Psychiatry, 114, 797-811. doi: 10.1192/bjp.114.512.797

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| BIMCDate | Date of Blessed Information Memory Concentration Test |  |
| BIMC | Blessed Information Memory Concentration Test Score |  |

**SCORING OF SCALE**

N/A

# Montreal Cognitive Assessment

**(61 items)**

**DESCRIPTION**

The Montreal Cognitive Assessment (MoCA) was designed as a rapid screening instrument for mild cognitive dysfunction. It assesses different cognitive domains: attention and concentration, executive functions, memory, language, visuoconstructional skills, conceptual thinking, calculations, and orientation. Time to administer the MoCA is approximately 10 minutes. The total possible score is 30 points; a score of 26 or above is considered normal.

**ASSOCIATED PAPERS**

Nasreddine, Z. S., Phillips, N. A., Bedirian, V., Charbonneau, S., Whitehead, V., Collin, I., Cummings, J. L., & Chertkow, H. (2005). The Montreal cognitive assessment, MoCA: A Brief screening tool for mild cognitive impairment. *Journal of the American Geriatrics Society, 53,* 695-699.

**SUBJECT INSTRUCTIONS:**

Please see descriptions below:

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| MocaDate | Date MoCA was completed |  |
| AltTrail | Alternate Trail Making | 0=Incorrect  1=Correct |
| Cube | Cube | 0=Incorrect  1=Correct |
| ClockContour | Clock Contour | 0=Incorrect  1=Correct |
| ClockNumbers | Clock Numbers | 0=Incorrect  1=Correct |
| ClockHands | Clock Hands | 0=Incorrect  1=Correct |
| Naming1 | Animal Naming 1 | 0=Incorrect  1=Correct |
| Naming2 | Animal Naming 2 | 0=Incorrect  1=Correct |
| Naming3 | Animal Naming 3 | 0=Incorrect  1=Correct |
| MocaWordList | MoCA List | 1=Word List 1  2=Word List 2 |
| MocaWord1Trial1 | 1st Trial: Moca Word 1 | 0=Incorrect  1=Correct |
| MocaWord2Trial1 | 1st Trial: Moca Word 2 | 0=Incorrect  1=Correct |
| MocaWord3Trial1 | 1st Trial: Moca Word 3 | 0=Incorrect  1=Correct |
| MocaWord4Trial1 | 1st Trial: Moca Word 4 | 0=Incorrect  1=Correct |
| MocaWord5Trial1 | 1st Trial: Moca Word 5 | 0=Incorrect  1=Correct |
| MocaWord1Trial2 | 2nd Trial: Moca Word 1 | 0=Incorrect  1=Correct |
| MocaWord2Trial2 | 2nd Trial: Moca Word 2 | 0=Incorrect  1=Correct |
| MocaWord3Trial2 | 2nd Trial: Moca Word 3 | 0=Incorrect  1=Correct |
| MocaWord4Trial2 | 2nd Trial: Moca Word 4 | 0=Incorrect  1=Correct |
| MocaWord5Trial2 | 2nd Trial: Moca Word 5 | 0=Incorrect  1=Correct |
| FDS | Subject has to repeat 5 digits in forward order | 0=Incorrect  1=Correct |
| BDS | Subject has to repeat 3 digits in backwards order | 0=Incorrect  1=Correct |
| VigilenceErrors | Vigilence Errors |  |
| VigilenceScore | Vigilence Score | If (VigilenceErrors=0 or VigilenceErrors=1) Then VigilenceScore=1 Else VigilenceScore=0 |
| Serial7CorrectAns1 | Serial 7: This is the correct answer the subject should say to the tester for the first answer |  |
| Serial7SubjAns1 | Serial 7: This is the answer the subject said to the tester for the first answer |  |
| Serial7CorrectAns2 | Serial 7: This is the correct answer the subject should say to the tester for the second answer  Note: If the subject's answer to Serial7SubjAns1 is incorrect, Serial7CorrectAns2 is automatically recalulated by  taking the incorrect answer given for Serial7SubjAns1 and subtracting 7 |  |
| Serial7SubjAns2 | Serial 7: This is the answer the subject said to the tester for the second answer |  |
| Serial7CorrectAns3 | Serial 7: This is the correct answer the subject should say to the tester for the third answer  Note: If the subject's answer to Serial7SubjAns2 is incorrect, Serial7CorrectAns3 is automatically recalulated by  taking the incorrect answer given for Serial7SubjAns2 and subtracting 7 |  |
| Serial7SubjAns3 | Serial 7: This is the answer the subject said to the tester for the third answer |  |
| Serial7CorrectAns4 | Serial 7: This is the correct answer the subject should say to the tester for the fourth answer  Note: If the subject's answer to Serial7SubjAns3 is incorrect, Serial7CorrectAns4 is automatically recalulated by  taking the incorrect answer given for Serial7SubjAns3 and subtracting 7 |  |
| Serial7SubjAns4 | Serial 7: This is the answer the subject said to the tester for the fourth answer |  |
| Serial7CorrectAns5 | Serial 7: This is the correct answer the subject should say to the tester for the fifth answer  Note: If the subject's answer to Serial7SubjAns4 is incorrect, Serial7CorrectAns5 is automatically recalulated by  taking the incorrect answer given for Serial7SubjAns4 and subtracting 7 |  |
| Serial7SubjAns5 | Serial 7: This is the answer the subject said to the tester for the fifth answer |  |
| Serial7Score | Serial7 Score | 0=0 correct  1=1 correct  2=2 or 3 correct  3=4 or 5 correct |
| SentenceRep1 | Tester reads a sentence to the subject and subject is asked to repeat it back EXACTLY as it was read | 0=Incorrect  1=Correct |
| SentenceRep2 | Tester reads a sentence to the subject and subject is asked to repeat it back EXACTLY as it was read | 0=Incorrect  1=Correct |
| VerbalFluWordTotal | This is a count of the total words subject says. Subject is asked to say as many words that they can think of that begin  with a certain letter of the alphabet that the tester will tell them. The subject can say any kind of word, except for  proper noun, numbers, or words that begin with the same sound but have a different suffix, for example, love, lover,  loving. Subject has one minute. |  |
| Abstraction1 | Subject is asked the similarity between two words, for example "banana" and "orange" | 0=Incorrect  1=Correct |
| Abstraction2 | Subject is asked the similarity between two words, for example "banana" and "orange" | 0=Incorrect  1=Correct |
| MocaWord1FR | Delayed Free Recall: Subject is asked to recall words without any cues. This variable refers to the recall of Word1 | 0=Incorrect  1=Correct |
| MocaWord2FR | Delayed Free Recall: Subject is asked to recall words without any cues. This variable refers to the recall of Word2 | 0=Incorrect  1=Correct |
| MocaWord3FR | Delayed Free Recall: Subject is asked to recall words without any cues. This variable refers to the recall of Word3 | 0=Incorrect  1=Correct |
| MocaWord4FR | Delayed Free Recall: Subject is asked to recall words without any cues. This variable refers to the recall of Word4 | 0=Incorrect  1=Correct |
| MocaWord5FR | Delayed Free Recall: Subject is asked to recall words without any cues. This variable refers to the recall of Word5 | 0=Incorrect  1=Correct |
| MocaWord1CR | Delayed Cued Recall: If subject did not freely recall Word1, a category cue is given | 0=Incorrect  1=Correct |
| MocaWord2CR | Delayed Cued Recall: If subject did not freely recall Word2, a category cue is given | 0=Incorrect  1=Correct |
| MocaWord3CR | Delayed Cued Recall: If subject did not freely recall Word3, a category cue is given | 0=Incorrect  1=Correct |
| MocaWord4CR | Delayed Cued Recall: If subject did not freely recall Word4, a category cue is given | 0=Incorrect  1=Correct |
| MocaWord5CR | Delayed Cued Recall: If subject did not freely recall Word5, a category cue is given | 0=Incorrect  1=Correct |
| MocaWord1MCR | Delayed Recall with multiple choice cues: If subject did not recall Word1 with a category cue, give multiple choice | 0=Incorrect  1=Correct |
| MocaWord2MCR | Delayed Recall with multiple choice cues: If subject did not recall Word2 with a category cue, give multiple choice | 0=Incorrect  1=Correct |
| MocaWord3MCR | Delayed Recall with multiple choice cues: If subject did not recall Word3 with a category cue, give multiple choice | 0=Incorrect  1=Correct |
| MocaWord4MCR | Delayed Recall with multiple choice cues: If subject did not recall Word4 with a category cue, give multiple choice | 0=Incorrect  1=Correct |
| MocaWord5MCR | Delayed Recall with multiple choice cues: If subject did not recall Word5 with a category cue, give multiple choice | 0=Incorrect  1=Correct |
| Orientation Date | Subject is asked today's date | 0=Incorrect  1=Correct |
| OrientationMonth | Subject is asked what is the current month | 0=Incorrect  1=Correct |
| OrientationYear | Subject is asked what is the current year | 0=Incorrect  1=Correct |
| OrientationDay | Subject is asked what is the current day of the month | 0=Incorrect  1=Correct |
| OrientationPlace | Subject is asked what is the name of the place where they are | 0=Incorrect  1=Correct |
| OrientationCity | Subject is asked what is the name of the city where they are | 0=Incorrect  1=Correct |

**SCORING OF SCALE**  (**NOTE: composite score not validated)**

MOCAScore = AltTrail + Cube + ClockContour + ClockNumbers + ClockHands + Naming1 + Naming2 +

Naming3 + FDS + BDS + VigilenceScore + Serial7Score + SentenceRep1 + SentenceRep2 +

(If VerbalFluWordTotal >= 11 Then 1 Else 0) + Abstraction1 + Abstraction2 + MocaWord1FR +

MocaWord2FR + MocaWord3FR + MocaWord4FR + MocaWord5FR + OrientationDate +

OrientationMonth + OrientationYear + OrientationDay + OrientationPlace + OrientationCity +

(If MOCAScore < 30 And Educyrs <= 12 Then 1 Else 0)

ZScoreMoca=Moca Z Score

# Free and Cued Selective Reminding Test-Immediate

**(197 items)**

**DESCRIPTION**

This test is a descendant of the original Buschke (1973) selective reminding test, which presented a new way of investigating item storage and recall memory. On the first trial, all the items are presented. Over subsequent recall trials, the Subject is presented with only the items he/she did not recall on the prior trial.

**ASSOCIATED PAPERS**

Grober, E., Sanders, A. E., Hall, C., & Lipton, R. B. (2010). Free and cued selective reminding identifies very mild dementia in primary care. *Alzheimer Disease and Associated Disorders, 24,* 284-290.

**SUBJECT INSTRUCTIONS:**

Please see descriptions below:

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| FCDate | Date the FCSR test was administred |  |
| FormNo | Free-Cued Selective Reminding: Form Number | 1 = Form 1  2 = Form 2 |
| FName1 | Naming Administration: *“We are going to do a memory test. For the first part of the task, I will show you 16 different pictures on a computer screen, one at a time, and ask you to tell me the name of each picture so that I know that you and I call them by the same name”* | Naming Scoring: Score 1 for each correct answer. If participant fails to name object in 10 seconds, prompt with semantic cue. If participant fails to name object in 10 additional seconds, prompt with phonemic cue. If a participant persists in using a synonym for an object (e.g., a banjo for guitar), accept it as correct if it is used consistently.  Type of naming response subject gives after viewing the picture of Word 1  1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName2 | Type of naming response subject gives after viewing the picture of Word 2 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName3 | Type of naming response subject gives after viewing the picture of Word 3 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName4 | Type of naming response subject gives after viewing the picture of Word 4 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName5 | Type of naming response subject gives after viewing the picture of Word5 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName6 | Type of naming response subject gives after viewing the picture of Word 6 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName7 | Type of naming response subject gives after viewing the picture of Word 7 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName8 | Type of naming response subject gives after viewing the picture of Word 8 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName9 | Type of naming response subject gives after viewing the picture of Word 9 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName10 | Type of naming response subject gives after viewing the picture of Word 10 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName11 | Type of naming response subject gives after viewing the picture of Word 11 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName12 | Type of naming response subject gives after viewing the picture of Word 12 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName13 | Type of naming response subject gives after viewing the picture of Word 13 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName14 | Type of naming response subject gives after viewing the picture of Word 14 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName15 | Type of naming response subject gives after viewing the picture of Word 15 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| FName16 | Type of naming response subject gives after viewing the picture of Word 16 | 1 = Freely Named  2 = Named after semantic cue is given  3 = Named after phonemic cue is given  4 = Subject failed to name the word even after semantic and phonemic cues were given |
| Word1Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 1. | Free 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W1FreeOrder1 | If Word1Run1=1, then W1FreeOrder1 represents the sequential order number in which Word 1 was recalled |  |
| Word2Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 2. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W2FreeOrder1 | If Word2Run1=1, then W2FreeOrder1 represents the sequential order number in which Word 2 was recalled |  |
| Word3Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 3. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W3FreeOrder1 | If Word3Run1=1, then W3FreeOrder1 represents the sequential order number in which Word 3 was recalled |  |
| Word4Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 4 | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W4FreeOrder1 | If Word4Run1=1, then W4FreeOrder1 represents the sequential order number in which Word 4 was recalled |  |
| Word5Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 5 | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W5FreeOrder1 | If Word5Run1=1, then W5FreeOrder1 represents the sequential order number in which Word 5 was recalled |  |
| Word6Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 6 | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W6FreeOrder1 | If Word6Run1=1, then W6FreeOrder1 represents the sequential order number in which Word 6 was recalled |  |
| Word7Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 7. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W7FreeOrder1 | If Word7Run1=1, then W7FreeOrder1 represents the sequential order number in which Word 7 was recalled |  |
| Word8Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 8 | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W8FreeOrder1 | If Word8Run1=1, then W8FreeOrder1 represents the sequential order number in which Word 8 was recalled |  |
| Word9Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 9. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W9FreeOrder1 | If Word9Run1=1, then W9FreeOrder1 represents the sequential order number in which Word 9 was recalled |  |
| Word10Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 10. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W10FreeOrder1 | If Word10Run1=1, then W10FreeOrder1 represents the sequential order number in which Word 10 was recalled |  |
| Word11Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 11. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W11FreeOrder1 | If Word11Run1=1, then W11FreeOrder1 represents the sequential order number in which Word 11 was recalled |  |
| Word12Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 12. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W12FreeOrder1 | If Word12Run1=1, then W12FreeOrder1 represents the sequential order number in which Word 12 was recalled |  |
| Word13Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 13. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W13FreeOrder1 | If Word13Run1=1, then W13FreeOrder1 represents the sequential order number in which Word 13 was recalled |  |
| Word14Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 14. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W14FreeOrder1 | If Word14Run1=1, then W14FreeOrder1 represents the sequential order number in which Word 14 was recalled |  |
| Word15Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 15. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W15FreeOrder1 | If Word15Run1=1, then W15FreeOrder1 represents the sequential order number in which Word 15 was recalled |  |
| Word16Run1 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 16. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W16FreeOrder1 | If Word16Run1=1, then W16FreeOrder1 represents the sequential order number in which Word 16 was recalled |  |
| Word1Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 1. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W1FreeOrder2 | If Word1Run2=1, then W1FreeOrder2 represents the sequential order number in which Word 1 was recalled |  |
| Word2Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 2. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W2FreeOrder2 | If Word2Run2=1, then W2FreeOrder2 represents the sequential order number in which Word 2 was recalled |  |
| Word3Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 3. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W3FreeOrder2 | If Word3Run2=1, then W3FreeOrder2 represents the sequential order number in which Word 3 was recalled |  |
| Word4Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 4. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W4FreeOrder2 | If Word4Run2=1, then W4FreeOrder2 represents the sequential order number in which Word 4 was recalled |  |
| Word5Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 5. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W5FreeOrder2 | If Word5Run2=1, then W5FreeOrder2 represents the sequential order number in which Word 5 was recalled |  |
| Word6Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 6. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W6FreeOrder2 | If Word6Run2=1, then W6FreeOrder2 represents the sequential order number in which Word 6 was recalled |  |
| Word7Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 7. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W7FreeOrder2 | If Word7Run2=1, then W7FreeOrder2 represents the sequential order number in which Word 7 was recalled |  |
| Word8Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 8. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W8FreeOrder2 | If Word8Run2=1, then W8FreeOrder2 represents the sequential order number in which Word 8 was recalled |  |
| Word9Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 9. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W9FreeOrder2 | If Word9Run2=1, then W9FreeOrder2 represents the sequential order number in which Word 9 was recalled |  |
| Word10Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 10. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W10FreeOrder2 | If Word10Run2=1, then W10FreeOrder2 represents the sequential order number in which Word 10 was recalled |  |
| Word11Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 11. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W11FreeOrder2 | If Word11Run2=1, then W11FreeOrder2 represents the sequential order number in which Word 11 was recalled |  |
| Word12Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 12. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W12FreeOrder2 | If Word12Run2=1, then W12FreeOrder2 represents the sequential order number in which Word 12 was recalled |  |
| Word13Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 13. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W13FreeOrder2 | If Word13Run2=1, then W13FreeOrder2 represents the sequential order number in which Word 13 was recalled |  |
| Word14Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 14. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W14FreeOrder2 | If Word14Run2=1, then W14FreeOrder2 represents the sequential order number in which Word 14 was recalled |  |
| Word15Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 15. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W15FreeOrder2 | If Word15Run2=1, then W15FreeOrder2 represents the sequential order number in which Word 15 was recalled |  |
| Word16Run2 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 16. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W16FreeOrder2 | If Word16Run2=1, then W16FreeOrder2 represents the sequential order number in which Word 16 was recalled |  |
| Word1Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 1. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W1FreeOrder3 | If Word1Run3=1, then W1FreeOrder3 represents the sequential order number in which Word 1 was recalled |  |
| Word2Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 2. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W2FreeOrder3 | If Word2Run3=1, then W2FreeOrder3 represents the sequential order number in which Word 2 was recalled |  |
| Word3Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 3. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W3FreeOrder3 | If Word3Run3=1, then W3FreeOrder3 represents the sequential order number in which Word 3 was recalled |  |
| Word4Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 4. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W4FreeOrder3 | If Word4Run3=1, then W4FreeOrder3 represents the sequential order number in which Word 4 was recalled |  |
| Word5Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 5. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W5FreeOrder3 | If Word5Run3=1, then W5FreeOrder3 represents the sequential order number in which Word 5 was recalled |  |
| Word6Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 6. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W6FreeOrder3 | If Word6Run3=1, then W6FreeOrder3 represents the sequential order number in which Word 6 was recalled |  |
| Word7Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 7. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W7FreeOrder3 | If Word7Run3=1, then W7FreeOrder3 represents the sequential order number in which Word 7 was recalled |  |
| Word8Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 8. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W8FreeOrder3 | If Word8Run3=1, then W8FreeOrder3 represents the sequential order number in which Word 8 was recalled |  |
| Word9Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 9. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W9FreeOrder3 | If Word9Run3=1, then W9FreeOrder3 represents the sequential order number in which Word 9 was recalled |  |
| Word10Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 10. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W10FreeOrder3 | If Word10Run3=1, then W10FreeOrder3 represents the sequential order number in which Word 10 was recalled |  |
| Word11Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 11. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W11FreeOrder3 | If Word11Run3=1, then W11FreeOrder3 represents the sequential order number in which Word 11 was recalled |  |
| Word12Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 12. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W12FreeOrder3 | If Word12Run3=1, then W12FreeOrder3 represents the sequential order number in which Word 12 was recalled |  |
| Word13Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 13. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W13FreeOrder3 | If Word13Run3=1, then W13FreeOrder3 represents the sequential order number in which Word 13 was recalled |  |
| Word14Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 14. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W14FreeOrder3 | If Word14Run3=1, then W14FreeOrder3 represents the sequential order number in which Word 14 was recalled |  |
| Word15Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 15. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W15FreeOrder3 | If Word15Run3=1, then W15FreeOrder3 represents the sequential order number in which Word 15 was recalled |  |
| Word16Run3 | Subject is asked to freely recall as many words as they can, this is the status of recalling Word 16. | 0 = Cued Recall  1 = Free Recall  66 = Word could not be recalled even with a cue |
| W16FreeOrder3 | If Word16Run3=1, then W16FreeOrder3 represents the sequential order number in which Word 16 was recalled |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

Total Score of Recall: sum the total free recall (from all 3 trials) and sum the total cued recall (from all 3 trials). Add the total free and total cued to calculate the total recall score. Total possible score is 48.

# Demographics

**(65 items)**

**DESCRIPTION**

Items were selected to gather participants’ background information.

**ASSOCIATED PAPERS**

N/A

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| DEMO11 | What is your date of birth?  (This question is no longer asked because Subject's DOB was previously recorded) | (enter date) |
| DEMO12 | What sex were you assigned at birth on your birth certificate? | M  F  (string variables) |
| DEMO12a | What is your current gender? | 1=Male  2=Female  3=Transgender male  4=Transgender female  5=Other/Self-identified  6=Prefer not to answer |
| Demo12aOther | If DEMO12a = 5, Subject's answer as to "Other" gender |  |
| DEMO12b | Do you think of yourself as: | 1=Heterosexual/straight  2=Lesbian  3=Gay  4=Bisexual  5=Other/Self-identified  6=Prefer not to answer |
| DEMO12bOther | If DEMO12a = 5, Subject’s answer as to "Other" sexuality |  |
| DEMO13a | Where were you born? (city) | (enter city) |
| DEMO13b | Where were you born? (state) | (enter state) |
| DEMO13c | Where were you born? (country) | (enter country) |
| DEMO14 | Was English your first language? | 0=No  1=Yes |
| DEMO15 | At what age did you learn English? | (enter age) |
| DEMO16 | What was the first language that you learned? |  |
| DEMO161 | What percent of time do you speak English at home? |  |
| DEMO17 | How many years of education have you had? (This question is no longer asked because it was previously recorded) **NOTE: SEE IDENTIFICATION VARIABLES SECTION FOR THIS INFORMATION** |  |
| DEMO171 | Where did you receive most of your education? |  |
| DEMO18 | How well did you do in school? A Student?, etc. | 1=A Student  2=B Student  3=C Student  4=D Student  5=Don’t Know |
| DEMO19 | What is the highest degree that you hold? | 1=None  2=High School Diploma/GED  3=Bachelors  4=Masters  5=Doctorate  6=Other |
| DEMO19Other | If Demo19 = 6, List other degree |  |
| DEMO110 | To which ethnic group do you belong? (This question is no longer asked because it was previously recorded) **NOTE: SEE IDENTIFICATION VARIABLES SECTION FOR THIS INFORMATION** | 1=Caucasian  2=Black  3=Hispanic, White  4=Hispanic, Black  5=Asian  6=Other |
| DEMO110Other | If Demo110 = 6, List other ethnicity **NOTE: SEE IDENTIFICATION VARIABLES SECTION FOR THIS INFORMATION** |  |
| DEMO111 | What is your religious preference? | 1=Protestant  2=Catholic  3=Jewish  4=Other  5=None stated  6=Don’t know |
| DEMO111Other | If Demo111 = 6, List other religion |  |
| DEMO112 | If Jewish, are you Ashkenazi or Sephardic? | 1=Ashkenazi  2=Sephardic  3=Don't Know |
| DEMO130 | What is your primary insurance? |  |
| DEMO1302 | What is your primary insurance policy number? |  |
| DEMO131 | What is your Medicare #? (include suffix) |  |
| DEMO21 | What is your current work status? | 1=Working for pay  2=Unemployed but looking for work  3=Unemployed and NOT looking for work  4=Homemaker  5=Retired |
| DEMO211 | At what age do you plan on stop working? |  |
| DEMO22Month | When did you retire? Month | (enter month) |
| DEMO22Year | When did you retire? Year | (enter year) |
| DEMO222 | Why did you retire? | 1=Mandatory due to age  2=Physical illness  3=Mental illness/cognitive impairment  4=Job description changed/unable to meet demands  5=Elective  6=Other |
| DEMO222Other | If Demo2 = 6, List other retirement reason |  |
| DEMO23Title | What is/was your primary occupation? | (text) |
| DEMO25Vol | Are you working now as either a volunteer and/or in a paid position? | 0=No  1=Yes |
| DEMO25Paid | Are you working now as either a volunteer and/or in a paid position? | 0=No  1=Yes |
| DEMO26VolHrs | If DEMO25Vol=1, Hours per week as a volunteer? |  |
| DEMO26PaidHrs | If DEMO25Paid=1, Hours per week in the paid position? |  |
| DEMO27 | What is your current income? | 1=<Poverty Level; Less than $15,000  2=PL up to 2 times PL; Between $15,001 and $30,000  3=>2 times PL; Greater than $30,000  4=Refused  5=Don’t know |
| DEMO31 | What is your current marital status? | 1=Married  2=Separated  3=Widowed  4=Divorced  5=Never married |
| DEMO32 | How long have you been married or living with your partner? (years) | (record in years) |
| DEMO33 | In what year were you widowed/divorced/separated? |  |
| DEMO34 | How many times have you been married? |  |
| DEMO51 | Which term best describes your current residence? | 1=Private home or apt.  2=Retirement community/assisted living  3=Nursing home or health-related facility  4=Other |
| DEMO51Other | If Demo51 = 4, List other residence |  |
| DEMO521 | Do you live alone? | 0=No  1=Yes |
| DEMO522 | Do you live with a spouse? | 0=No  1=Yes |
| DEMO523 | Do you live with a friend? | 0=No  1=Yes |
| DEMO524 | Do you live with a brother or sister? | 0=No  1=Yes |
| DEMO525 | Do you live with one of your children? | 0=No  1=Yes |
| DEMO526 | Do you live with someone other than the previous people mentioned? | 0=No  1=Yes |
| DEMO526Other | If Demo526 = 1, List other person |  |
| DEMO527 | Do you live alone but with assistance? | 0=No  1=Yes |
| DEMO528 | Do you live with a partner? | 0=No  1=Yes |
| DEMO53 | Do you currently receive assistance at home? | 0=No  1=Yes |
| DEMO541a | Do you have a visiting nurse? | 0=No  1=Yes |
| DEMO542a | Do you have an aide? | 0=No  1=Yes |
| DEMO543a | Do you receive food from Meals on Wheels? | 0=No  1=Yes |
| DEMO544a | Do you receive any other type of home assistance? | 0=No  1=Yes |
| DEMO526Other | If Demo544a = 1, List other type of home assistance |  |
| Demo545a | Do you receive Supplemental Nutrition Assistance Program (SNAP) or EBT? | 0=No  1=Yes |
| DifficultToPay | How difficult is it for you (and your family) to pay your monthly bills? | 1=Very Difficult  2=Somewhat Difficult  3=Not Very Difficult  4=Not At All Difficult |
| EnoughMoney | In general, would you say you (and your family living with you) have more money than you need, just enough for your needs, or not enough to meet your needs? | 1=More money than you need  2=Just enough money  3=Not enough money |
| FinSituationRating | How would you rate your financial situation these days? | 0=Worst Possible Situation through 10=Best Possible Situation |
| FinControlRating | How would you rate the amount of control you have over your financial situation these days? | 0=No Control at all through 10=Very Much Control |
| FinThought | How much thought and effort do you put into your financial situation these days? | 0=No Thought or Effort through 10=Very Much Thought and Effort |

**SCORING OF SCALE**

**data** wk;

set wk;

\*renaming demographic variables to be more intuitive;

SEX = DEMO12;

GENDER = DEMO12a;

GENDER\_OTHER = DEMO12aOther;

SEX\_ORIENT = DEMO12b;

SEX\_ORIENT\_OTHER = DEMO12bOther;

CITY\_BORN = DEMO13a;

STATE\_BORN = DEMO13b;

COUNTRY\_BORN = DEMO13c;

ENGLISH\_FIRST\_LANG = DEMO14;

AGE\_LEARN\_ENGLISH = DEMO15;

FIRST\_LANG = DEMO16;

TIME\_SPEAK\_ENGLISH = DEMO161;

YEARS\_EDUC = DEMO17;

WHERE\_EDUC = DEMO171;

GRADE\_SCHOOL = DEMO18;

HIGHEST\_DEGREE = DEMO19;

HIGHEST\_DEGREE\_OTHER = DEMO19Oher;

\*ETHNIC = DEMO110 -- question not asked -- included in Identification variables;

\*ETHNIC\_OTHER = DEMO110Other -- question not asked -- included in Identification variables;

RELIGION = DEMO111;

RELIGION\_OTHER = DEMO111Other;

JEWISH\_AorS = DEMO112;

INSURANCE = DEMO130;

INS\_POLICY\_NUM = DEMO1302;

MEDICARE = DEMO131;

WORK = DEMO21;

AGE\_STOP\_WORK = DEMO211;

RETIRE\_MONTH = DEMO22Month;

RETIRE\_YEAR = DEMO22YEAR;

WHY\_RETIRE = DEMO222;

WHY\_RETIRE\_OTHER = DEMO222Oher;

OCCUPATION = DEMO23Title;

WORK\_NOW = DEMO25Paid;

WORK\_NOW\_VOL\_HRS = DEMO26VolHrs;

WORK\_NOW\_PAY\_HRS = DEMO26PaidHrs;

INCOME = DEMO27;

MARITAL = DEMO31;

YEARS\_MARRIED = DEMO32;

YEAR\_END\_MARRIAGE = DEMO33;

TIMES\_MARRIED = DEMO34;

RESIDENCE = DEMO51;

RESIDENCE\_OTHER = DEMO51Other;

LIVE\_ALONE = DEMO521;

LIVE\_SPOUSE = DEMO522;

LIVE\_FRIEND = DEMO523;

LIVE\_SIBLING = DEMO524;

LIVE\_CHILD = DEMO525;

LIVE\_OTHER = DEMO526;

LIVE\_OTHER\_WHO = DEMO526Other;

LIVE\_ALONE\_ASSIST = DEMO527;

LIVE\_PARTNER = DEMO528;

HOME\_ASSIST = DEMO53;

HOME\_NURSE = DEMO541a;

HOME\_AIDE = DEMO542a;

MEALS\_ON\_WHEELS = DEMO543a;

HOME\_ASSIST\_OTHER = DEMO544a;

HOME\_ASSIST\_TYPE = DEMO526Other;

SNAP\_EBP = DEMO545a;

**run**;

# Social Activities

**(278 items)**

**DESCRIPTION**

These questions are designed to capture the mentally stimulating and physically active social activities that participants do.

**ASSOCIATED PAPERS**

Chang, P. J., Wray, L., & Lin, Y. (2014). Social relationships, leisure activity, and health in older adults. *Health Psychology, 33,* 516-523.

Cornwell, E. Y., & Waite, L. J. (2009). Measuring social isolation among older adults using multiple indicators from the nshap study. *The Journals of Gerontology: Series B, 64B,* i38-i46.

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| SA11 | This set of questions refers to activities you may have done in the past two weeks. During the past two weeks, did you…Get together socially with friends or neighbors? | 0=No  1=Yes  9=Don’t Know |
| SA12 | During the past two weeks, did you…Talk with friends or neighbors on the telephone? | 0=No  1=Yes  9=Don’t Know |
| SA13 | During the past two weeks, did you…Get together with any relatives (not including household members)? | 0=No  1=Yes  9=Don’t Know |
| SA14 | During the past two weeks, did you…Talk with any relatives on the phone? | 0=No  1=Yes  9=Don’t Know |
| SA15 | During the past two weeks, did you…Go to church, temple, or senior citizen center services or other activities? | 0=No  1=Yes  9=Don’t Know |
| PastYearPuzzles | I am going to ask if, in the past year, you have learned or started certain new activities. If yes, I will ask how many days in a week or month you have done this activity.  In the past year, have you learned or started certain new activities such as a puzzle, game, card game? | (text)  Weekly  Monthly  N/A |
| PastYearPuzzlesNumDaysWeekly | If PastYearPuzzles = Weekly, ask how many days per week? |  |
| PastYearPuzzlesNumDaysMonthly | If PastYearPuzzles = Monthly, ask how many days per month? |  |
| PastYearCraft | In the past year, have you learned or started certain new activities such as a craft? | (text)  Weekly  Monthly  N/A |
| PastYearCraftNumDaysWeekly | If PastYearCraft = Weekly, ask how many days per week? |  |
| PastYearCraftNumDaysMonthly | If PastYearCraft = Monthly, ask how many days per month? |  |
| PastYearComputerGame | In the past year, have you learned or started certain new activities such as a computer or phone app game? | (text)  Weekly  Monthly  N/A |
| PastYearComputerGameNumDaysWeekly | If PastYearComputerGame = Weekly, ask how many days per week? |  |
| PastYearComputerGameNumDaysMonthly | If PastYearComputerGame = Monthly, ask how many days per month? |  |
| PastYearMusic | In the past year, have you learned or started new activities such as a musical instrument or began singing? | (text)  Weekly  Monthly  N/A |
| PastYearMusicNumDaysWeekly | If PastYearMusic = Weekly, ask how many days per week? |  |
| PastYearMusicNumDaysMonthly | If PastYearMusic = Monthly, ask how many days per month? |  |
| PastYearLanguage | In the past year, have you learned or started new activities such as a new language? | (text)  Weekly  Monthly  N/A |
| PastYearLanguageNumDaysWeekly | If PastYearLanguage = Weekly, ask how many days per week? |  |
| PastYearLanguageNumDaysMonthly | If PastYearLanguage = Monthly, ask how many days per month? |  |
| PastYearAdultLearning | In the past year, have you learned or started new activities such as an adult learning class? | (text)  Weekly  Monthly  N/A |
| PastYearAdultLearningNumDaysWeekly | If PastYearAdultLearning = Weekly, ask how many days per week? |  |
| PastYearAdultLearningNumDaysMonthly | If PastYearAdultLearning = Monthly, ask how many days per month? |  |
| ReadNewspaper | I am going to read you a list of mentally stimulating activities. Tell me if you have participated in any of them in the last month. If so, tell me how many days per week, or days per month you participated.  In the last month, have you read the newspaper? | (text)  Weekly  Monthly  N/A |
| ReadNewspaperNumDaysWeekly | If ReadNewspaper = Weekly, ask how many days per week? |  |
| ReadNewspaperNumDaysMonthly | If ReadNewspaper = Monthly, ask how many days per month? |  |
| ReadNewspaperYears | If ReadNewspaper = Weekly or Monthly, ask for how many years? |  |
| ReadBooks | In the last month, have you read books? | (text)  Weekly  Monthly  N/A |
| ReadBooksNumDaysWeekly | If ReadBooks = Weekly, ask how many days per week? |  |
| ReadBooksNumDaysMonthly | If ReadBooks = Monthly, ask how many days per month? |  |
| ReadBooksYears | If ReadBooks = Weekly or Monthly, ask for how many years? |  |
| Knitting | In the last month, have you knitted or crocheted? | (text)  Weekly  Monthly  N/A |
| KnittingNumDaysWeekly | If Knitting = Weekly, ask how many days per week? |  |
| KnittingNumDaysMonthly | If Knitting = Monthly, ask how many days per month? |  |
| KnittingYears | If Knitting = Weekly or Monthly, ask for how many years? |  |
| KnittingExpertise | If Knitting = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Crossword | In the last month, have you worked on any crossword puzzles? | (text)  Weekly  Monthly  N/A |
| CrosswordNumDaysWeekly | If Crossword = Weekly, ask how many days per week? |  |
| CrosswordNumDaysMonthly | If Crossword = Monthly, ask how many days per month? |  |
| CrosswordYears | If Crossword = Weekly or Monthly, ask for how many years? |  |
| CrosswordExpertise | If Crossword = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Boardgames | In the last month, have you played any board games? | (text)  Weekly  Monthly  N/A |
| BoardgamesNumDaysWeekly | If Boardgames = Weekly, ask how many days per week? |  |
| BoardgamesNumDaysMonthly | If Boardgames = Monthly, ask how many days per month? |  |
| BoardgamesYears | If Boardgames = Weekly or Monthly, ask for how many years? |  |
| BoardgamesExpertise | If Boardgames = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Cards | In the last month, have you played any card games? | (text)  Weekly  Monthly  N/A |
| CardsNumDaysWeekly | If Cards = Weekly, ask how many days per week? |  |
| CardsNumDaysMonthly | If Cards = Monthly, ask how many days per month? |  |
| CardsYears | If Cards = Weekly or Monthly, ask for how many years? |  |
| CardsExpertise | If Cards = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Computers | In the last month, have you played any computer games? | (text)  Weekly  Monthly  N/A |
| ComputersNumDaysWeekly | If Computers = Weekly, ask how many days per week? |  |
| ComputersNumDaysMonthly | If Computers = Monthly, ask how many days per month? |  |
| ComputersYears | If Computers = Weekly or Monthly, ask for how many years? |  |
| ComputersExpertise | If Computers = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Email | In the last month, have you used the Internet or sent emails? | (text)  Weekly  Monthly  N/A |
| EmailNumDaysWeekly | If Email = Weekly, ask how many days per week? |  |
| EmailNumDaysMonthly | If Email = Monthly, ask how many days per month? |  |
| EmailYears | If Email = Weekly or Monthly, ask for how many years? |  |
| EmailExpertise | If Email = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Writing | In the last month, have you written anything for pleasure? | (text)  Weekly  Monthly  N/A |
| WritingNumDaysWeekly | If Writing = Weekly, ask how many days per week? |  |
| WritingNumDaysMonthly | If Writing = Monthly, ask how many days per month? |  |
| WritingYears | If Writing = Weekly or Monthly, ask for how many years? |  |
| WritingExpertise | If Email = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Music | In the last month, have you played a musical instrument? | (text)  Weekly  Monthly  N/A |
| MusicNumDaysWeekly | If Music = Weekly, ask how many days per week? |  |
| MusicNumDaysMonthly | If Music = Monthly, ask how many days per month? |  |
| MusicYears | If Music = Weekly or Monthly, ask for how many years? |  |
| MusicExpertise | If Music = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Singing | In the last month, have you sung, such as with a choir or similar group? | (text)  Weekly  Monthly  N/A |
| SingingNumDaysWeekly | If Singing = Weekly, ask how many days per week? |  |
| SingingNumDaysMonthly | If Singing = Monthly, ask how many days per month? |  |
| SingingYears | If Singing = Weekly or Monthly, ask for how many years? |  |
| SingingExpertise | If Singing = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Museums | In the last month, have visited any museums? | (text)  Weekly  Monthly  N/A |
| MuseumsNumDaysWeekly | If Museums = Weekly, ask how many days per week? |  |
| MuseumsNumDaysMonthly | If Museums = Monthly, ask how many days per month? |  |
| MuseumsYears | If Museums = Weekly or Monthly, ask for how many years? |  |
| MuseumsExpertise | If Museums = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| TV | In the last month, have watched TV? | (text)  Weekly  Monthly  N/A |
| TVNumDaysWeekly | If TV = Weekly, ask how many days per week? |  |
| TVNumDaysMonthly | If TV = Monthly, ask how many days per month? |  |
| TVYears | If TV = Weekly or Monthly, ask for how many years? |  |
| Theater | In the last month, have gone to the theater or a concert? | (text)  Weekly  Monthly  N/A |
| TheaterNumDaysWeekly | If Theater = Weekly, ask how many days per week? |  |
| TheaterNumDaysMonthly | If Theater = Monthly, ask how many days per month? |  |
| TheaterYears | If Theater = Weekly or Monthly, ask for how many years? |  |
| TheaterExpertise | If Theater = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| LearnProg | In the last month, have you participated in an adult learning program? | (text)  Weekly  Monthly  N/A |
| LearnProgType | If LearnProg = Weekly or Monthly, ask what type of adult learning program? |  |
| LearnProgNumDaysWeekly | If LearnProg = Weekly, ask how many days per week? |  |
| LearnProgNumDaysMonthly | If LearnProg = Monthly, ask how many days per month? |  |
| LearnProgYears | If LearnProg = Weekly or Monthly, ask for how many years? |  |
| LearnProgExpertise | If LearnProg = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| SuppGrps | In the last month, have you participated in a support group? | (text)  Weekly  Monthly  N/A |
| SuppGrpsNumDaysWeekly | If SuppGrps = Weekly, ask how many days per week? |  |
| SuppGrpsNumDaysMonthly | If SuppGrps = Monthly, ask how many days per month? |  |
| SuppGrpsYears | If SuppGrps = Weekly or Monthly, ask for how many years? |  |
| Other1Stim | In the last month, have you participated in an other stimulating or social activities? | (text)  Weekly  Monthly  N/A |
| Other1StimProgType | What type of adult learning program? | (text) |
| Other1StimNumDaysWeekly | If Other1Stim = Weekly, ask how many days per week? |  |
| Other1StimNumDaysMonthly | If Other1Stim = Monthly, ask how many days per month? |  |
| Other1StimYears | If Other1Stim = Weekly or Monthly, ask for how many years? |  |
| Other1StimExpertise | If Other1Stim = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Other2Stim | In the last month, have you participated in an other stimulating or social activities? | (text)  Weekly  Monthly  N/A |
| Other2StimProgType | What type of adult learning program? | (text) |
| Other2StimNumDaysWeekly | If Other2Stim = Weekly, ask how many days per week? |  |
| Other2StimNumDaysMonthly | If Other2Stim = Monthly, ask how many days per month? |  |
| Other2StimYears | If Other2Stim = Weekly or Monthly, ask for how many years? |  |
| Other2StimExpertise | If Other2Stim = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| Other3Stim | In the last month, have you participated in an other stimulating or social activities? | (text)  Weekly  Monthly  N/A |
| Other3StimProgType | What type of adult learning program? | (text) |
| Other3StimNumDaysWeekly | If Other3Stim = Weekly, ask how many days per week? |  |
| Other3StimNumDaysMonthly | If Other3Stim = Monthly, ask how many days per month? |  |
| Other3StimYears | If Other3Stim = Weekly or Monthly, ask for how many years? |  |
| Other3StimExpertise | If Other3Stim = Weekly or Monthly, ask what is your expertise level? | (text)  Beginner  Intermediate  Expert |
| BlocksWalkedPerDay | About how many blocks do you walk on a given day? |  |
| HrsSeatedPerDay | In a usual 24 hour period, how many hours do you spend seated or lying down? (Include all time spent sleeping, resting and lying down, and also include all time spent watching TV, eating, reading, and any other time sitting down) |  |
| WalkYesNo | In the last 14 days, have you walked for exercise? | 0=No  1=Yes |
| Walk14Days | If WalkYesNo = 1, ask what is the average number of times you walked in the past 14 days? |  |
| WalkMinutes | If WalkYesNo = 1, ask what is the average number of minutes spent walking on each occasion? |  |
| WalkMonths | If WalkYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| WalkYear | If WalkYes=0 then ask "Have you walked (for exercise) in past year?" | (text)  Weekly  Monthly  N/A |
| WalkYearNumDaysWeekly | If WalkYear = Weekly, ask how many days per week? |  |
| WalkYearNumDaysMonthly | If WalkYear = Monthly, ask how many days per month? |  |
| WalkYears | If WalkYear = Weekly or Monthly, ask for how many years? |  |
| JogYesNo | In the last 14 days, have you jogged for exercise? | 0=No  1=Yes |
| Jog14Days | If JogYesNo = 1, ask what is the average number of times you jogged in the past 14 days? |  |
| JogMinutes | If JogYesNo = 1, ask what is the average number of minutes spent jogging on each occasion? |  |
| JogMonths | If JogYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Jogging | If JogYesNo=0 then ask "Have you gone jogging or running in the last year"? | (text)  Weekly  Monthly  N/A |
| JoggingNumDaysWeekly | If Jogging = Weekly, ask how many days per week? |  |
| JoggingNumDaysMonthly | If Jogging = Monthly, ask how many days per month? |  |
| JoggingYears | If Jogging = Weekly or Monthly, ask for how many years? |  |
| HikingYesNo | In the last 14 days, have you gone hiking? | 0=No  1=Yes |
| Hiking14Days | If HikingYesNo = 1, ask what is the avg number of times you went hiking in the past 14 days? |  |
| HikingMinutes | If HikingYesNo = 1, ask what is the avg number of minutes spent on hiking on each occasion? |  |
| HikingMonths | If HikingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Hiking | If HikingYesNo=0 then ask "Have you gone hiking in the past year?" | (text)  Weekly  Monthly  N/A |
| HikingNumDaysWeekly | If Hiking = Weekly, ask how many days per week? |  |
| HikingNumDaysMonthly | If Hiking = Monthly, ask how many days per month? |  |
| HikingYears | If Hiking = Weekly or Monthly, ask for how many years? |  |
| GardeningYesNo | In the last 14 days, have you done gardening or done yard work? | 0=No  1=Yes |
| Gardening14Days | If GardeningYesNo = 1, ask what is the avg number of times you gardened or did yard work in the past 14 days? |  |
| GardeningMinutes | If GardeningYesNo = 1, ask what is the avg number of minutes spent gardening on each occasion? |  |
| GardeningMonths | If GardeningYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Gardening | If GardeningYesNo=0 then ask "Have you gardened in the past year?" | (text)  Weekly  Monthly  N/A |
| GardeningNumDaysWeekly | If Gardening = Weekly, ask how many days per week? |  |
| GardeningNumDaysMonthly | If Gardening = Monthly, ask how many days per month? |  |
| GardeningYears | If Gardening = Weekly or Monthly, ask for how many years? |  |
| AerobicsYesNo | In the last 14 days, have you done aerobics? | 0=No  1=Yes |
| Aerobics14Days | If AerobicsYesNo = 1, ask what is the average number of times you did aerobics in the past 14 days? |  |
| AerobicsMinutes | If AerobicsYesNo = 1, ask what is the average number of minutes spent on aerobics on each occasion? |  |
| AerobicsMonths | If AerobicsYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| DancingYesNo | In the last 14 days, have you danced? | 0=No  1=Yes |
| DancingType | If DancingYesNo = 1, ask what type of dancing? | (text) |
| Dancing14Days | If DancingYesNo = 1, ask what is the average number of times you danced in the past 14 days? |  |
| DancingMinutes | If DancingYesNo = 1, ask what is the average number of minutes spent dancing on each occasion? |  |
| DancingMonths | If DancingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| CalisthenicsYesNo | In the last 14 days, have you done calisthenics? | 0=No  1=Yes |
| Calisthenics14Days | If CalisthenicsYesNo = 1, ask what is the average number of times you did calisthenics in the past 14 days? |  |
| CalisthenicsMinutes | If CalisthenicsYesNo = 1, ask what is the average number of minutes spent on calisthenics on each occasion? |  |
| CalisthenicsMonths | If CalisthenicsYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| GolfYesNo | In the last 14 days, have you played golf? | 0=No  1=Yes |
| Golf14Days | If GolfYesNo = 1, ask what is the average number of times you played in the past 14 days? |  |
| GolfMinutes | If GolfYesNo = 1, ask what is the average number of minutes spent playing on each occasion? |  |
| GolfMonths | If GolfYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Golf | If GolfYesNo=0 then ask "Have you played golf in the last year?" | (text)  Weekly  Monthly  N/A |
| GolfNumDaysWeekly | If Golf = Weekly, ask how many days per week? |  |
| GolfNumDaysMonthly | If Golf = Monthly, ask how many days per month? |  |
| GolfYears | If Golf = Weekly or Monthly, ask for how many years? |  |
| TennisYesNo | In the last 14 days, have you played tennis? | 0=No  1=Yes |
| Tennis14Days | If TennisYesNo = 1, ask what is the average number of times you played in the past 14 days? |  |
| TennisMinutes | If TennisYesNo = 1, ask what is the average number of minutes spent playing on each occasion? |  |
| TennisMonths | If TennisYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Tennis | If TennisYesNo=0 then ask "Have you played tennis in the last year?" | (text)  Weekly  Monthly  N/A |
| TennisNumDaysWeekly | If Tennis = Weekly, ask how many days per week? |  |
| TennisNumDaysMonthly | If Tennis = Monthly, ask how many days per month? |  |
| TennisYears | If Tennis = Weekly or Monthly, ask for how many years? |  |
| BowlingYesNo | In the last 14 days, have you gone bowling? | 0=No  1=Yes |
| Bowling14Days | If BowlingYesNo = 1, ask what is the avg number of times you went bowling in the past 14 days? |  |
| BowlingMinutes | If BowlingYesNo = 1, ask what is the avg number of minutes spent on bowling on each occasion? |  |
| BowlingMonths | If BowlingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| BicyclingYesNo | In the last 14 days, have you bicycled for exercise? | 0=No  1=Yes |
| Bicycling14Days | If BicyclingYesNo = 1, ask what is the average number of times you bicycled in the past 14 days? |  |
| BicyclingMinutes | If BicyclingYesNo = 1, ask what is the average number of minutes spent bicycling on each occasion? |  |
| BicyclingMonths | If BicyclingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Bicycling | If BicyclingYesNo=0 then ask "Have you gone bicycling in the past year?" | (text)  Weekly  Monthly  N/A |
| BicyclingNumDaysWeekly | If Bicycling = Weekly, ask how many days per week? |  |
| BicyclingNumDaysMonthly | If Bicycling = Monthly, ask how many days per month? |  |
| BicyclingYears | If Bicycling = Weekly or Monthly, ask for how many years? |  |
| SwimmingYesNo | In the last 14 days, have you gone swimming or participated in water exercise? | 0=No  1=Yes |
| Swimming14Days | If SwimmingYesNo = 1, ask what is the avg number of times you did swimming in the past 14 days? |  |
| SwimmingMinutes | If SwimmingYesNo = 1, ask what is the avg number of minutes spent on swimming on each occasion? |  |
| SwimmingMonths | If SwimmingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Swimming | If SwimmingYesNo=0 then ask "Have you gone swimming or participated in water exercise in the past year?" | (text)  Weekly  Monthly  N/A |
| SwimmingNumDaysWeekly | If Swimming = Weekly, ask how many days per week? |  |
| SwimmingNumDaysMonthly | If Swimming = Monthly, ask how many days per month? |  |
| SwimmingYears | If Swimming = Weekly or Monthly, ask for how many years? |  |
| HorseBackRidingYesNo | In the last 14 days, have you gone horseback riding? | 0=No  1=Yes |
| HorseBackRiding14Days | If HorseBackRidingYesNo = 1, ask what is the avg number of times you went horseback riding in the past 14 days? |  |
| HorseBackRidingMinutes | If HorseBackRidingYesNo = 1, ask what is the avg number of minutes spent horseback riding on each occasion? |  |
| HorseBackRidingMonths | If HorseBackRidingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| HorseBackRiding | If HorseBackRidingYesNo=0 then ask "Have you gone horseback riding in the past year?" | (text)  Weekly  Monthly  N/A |
| HorseBackRidingNumDaysWeekly | If HorseBackRiding = Weekly, ask how many days per week? |  |
| HorseBackRidingNumDaysMonthly | If HorseBackRiding = Monthly, ask how many days per month? |  |
| HorseBackRidingYears | If HorseBackRiding = Weekly or Monthly, ask for how many years? |  |
| HandOrRacquetballYesNo | In the last 14 days, have you played handball or racquetball? | 0=No  1=Yes |
| HandOrRacquetball14Days | If HandOrRacquetballYesNo = 1, ask what is the avg number of times you played hand/racquetball in the past 14 days? |  |
| HandOrRacquetballMinutes | If HandOrRacquetballYesNo = 1, ask what is the avg number of minutes spent played hand/racquetball on each occasion? |  |
| HandOrRacquetballMonths | If HandOrRacquetballYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| HandOrRacquetball | If HandOrRacquetballYesNo=0 then ask "Have you handball or racquetball in the past year?" | (text)  Weekly  Monthly  N/A |
| HandOrRacquetballNumDaysWeekly | If HorseBackRiding = Weekly, ask how many days per week? |  |
| HandOrRacquetballNumDaysMonthly | If HorseBackRiding = Monthly, ask how many days per month? |  |
| HandOrRacquetballYears | If HorseBackRiding = Weekly or Monthly, ask for how many years? |  |
| TeamYesNo | In the last 14 days, have you played team sports or physical activities? | 0=No  1=Yes |
| TeamType | If TeamYesNo = 1, ask what type of team activities? | (text) |
| Team14Days | If TeamYesNo = 1, ask what is the average number of times you played in the past 14 days? |  |
| TeamMinutes | If TeamYesNo = 1, ask what is the average number of minutes spent playing on each occasion? |  |
| TeamMonths | If TeamYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Team | If TeamYesNo=0 then ask "Have you participated in any team sports, exercises or physical activities?" | (text)  Weekly  Monthly  N/A |
| TeamType | If Team = Weekly or Monthly, ask what type of team activities? |  |
| TeamNumDaysWeekly | If Team = Weekly, ask how many days per week? |  |
| TeamNumDaysMonthly | If Team = Monthly, ask how many days per month? |  |
| TeamYears | If Team = Weekly or Monthly, ask for how many years? |  |
| BabysittingYesNo | In the last 14 days, have you babysat? | 0=No  1=Yes |
| Babysitting14Days | If BabysittingYesNo = 1, ask what is the average number of times you babysat in the past 14 days? |  |
| BabysittingMinutes | If BabysittingYesNo = 1, ask what is the average number of minutes spent babysitting on each occasion? |  |
| BabysittingMonths | If BabysittingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| YogaYesNo | In the last 14 days, have you done yoga, Tai Chi or stretching? | 0=No  1=Yes |
| Yoga14Days | If YogaYesNo = 1, ask what is the average number of times you did yoga in the past 14 days? |  |
| YogaMinutes | If YogaYesNo = 1, ask what is the average number of minutes spent on yoga on each occasion? |  |
| YogaMonths | If YogaYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| WeightTrainingYesNo | In the last 14 days, have you done weight training? | 0=No  1=Yes |
| WeightTraining14Days | If WeightTrainingYesNo = 1, ask what is the avg number of times you did weight training in the past 14 days? |  |
| WeightTrainingMinutes | If WeightTrainingYesNo = 1, ask what is the avg number of minutes spent on weight training on each occasion? |  |
| WeightTrainingMonths | If WeightTrainingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| LightHouseworkYesNo | In the last 14 days, have you done light housework? | 0=No  1=Yes |
| LightHousework14Days | If LightHouseworkYesNo = 1, ask what is the avg number of times you did light housework in the past 14 days? |  |
| LightHouseworkMinutes | If LightHouseworkYesNo = 1, ask what is the avg number of minutes spent on light housework on each occasion? |  |
| LightHouseworkMonths | If LightHouseworkYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| HeavyHouseworkYesNo | In the last 14 days, have you done heavy housework? | 0=No  1=Yes |
| HeavyHousework14Days | If HeavyHouseworkYesNo = 1, ask what is the avg number of times you did heavy housework in the past 14 days? |  |
| HeavyHouseworkMinutes | If HeavyHouseworkYesNo = 1, ask what is the avg number of minutes spent on heavy housework on each occasion? |  |
| HeavyHouseworkMonths | If HeavyHouseworkYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| CookingYesNo | In the last 14 days, have you cooked food? | 0=No  1=Yes |
| Cooking14Days | If CookingYesNo = 1, ask what is the avg number of times you cooked in the past 14 days? |  |
| CookingMinutes | If CookingYesNo = 1, ask what is the avg number of minutes spent cooking on each occasion? |  |
| CookingMonths | If CookingYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| MeditationYesNo | In the last 14 days, have you meditated? | 0=No  1=Yes |
| Meditation14Days | If MeditationYesNo = 1, ask what is the avg number of times you meditated in the past 14 days? |  |
| MeditationMinutes | If MeditationYesNo = 1, ask what is the avg number of minutes spent meditating on each occasion? |  |
| MeditationMonths | If MeditationYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Other1PhysYesNo | In the last 14 days, have you participated in any other type of exercise, sports or physical activities? |  |
| Other1PhysType | If Other1PhysYesNo = 1, ask what type of physical activity? |  |
| Other1Phys14Days | If Other1PhysYesNo = 1, ask what is the avg number of times you participated in the past 14 days? |  |
| Other1PhysMinutes | If Other1PhysYesNo = 1, ask what is the avg number of minutes spent playing on each occasion? |  |
| Other1PhysMonths | If Other1PhysYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Other2PhysYesNo | In the last 14 days, have you participated in any other type of exercise, sports or physical activities? |  |
| Other2PhysType | If Other2PhysYesNo = 1, ask what type of physical activity? |  |
| Other2Phys14Days | If Other2PhysYesNo = 1, ask what is the avg number of times you participated in the past 14 days? |  |
| Other2PhysMinutes | If Other2PhysYesNo = 1, ask what is the avg number of minutes spent playing on each occasion? |  |
| Other2PhysMonths | If Other2PhysYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| Other3PhysYesNo | In the last 14 days, have you participated in any other type of exercise, sports or physical activities? |  |
| Other3PhysType | If Other3PhysYesNo = 1, ask what type of physical activity? |  |
| Other3Phys14Days | If Other3PhysYesNo = 1, ask what is the avg number of times you participated in the past 14 days? |  |
| Other3PhysMinutes | If Other3PhysYesNo = 1, ask what is the avg number of minutes spent playing on each occasion? |  |
| Other3PhysMonths | If Other3PhysYesNo = 1, ask over the past year, how many months did you do this activity? |  |
| SweatYesNo | At least once a week, do you engage in any regular activity long enough to work up a sweat? (e.g. brisk walking, jogging, bicycling, aerobics, etc.) | 0=No  1=Yes |
| SweatHoursPerWeek | How many hours a week do you engage in these activities? | (text) |
| SittingTV | On a typical day, how much time do you spend (from the time you wake up to when you go to bed) doing the following: Sitting while watching TV (including videos on VCR/DVD)? | 0=None  0.25=15 minutes  0.5=30 minutes  1=1 hour  2=2 hours  3=3 hours  4=4 hours  5=5 hours  6=6 hours or more |
| SittingComputer | Sitting while using the computer for non-work activities or playing video games | 0=None  0.25=15 minutes  0.5=30 minutes  1=1 hour  2=2 hours  3=3 hours  4=4 hours  5=5 hours  6=6 hours or more |
| SittingOfficeWork | Sitting while doing non-computer office work or paperwork not related to your job (paying bills, etc.) | 0=None  0.25=15 minutes  0.5=30 minutes  1=1 hour  2=2 hours  3=3 hours  4=4 hours  5=5 hours  6=6 hours or more |
| SittingReading | Sitting listening to music, reading a book or magazine, or doing arts and crafts | 0=None  0.25=15 minutes  0.5=30 minutes  1=1 hour  2=2 hours  3=3 hours  4=4 hours  5=5 hours  6=6 hours or more |
| SittingPhone | Sitting while talking on the phone or texting | 0=None  0.25=15 minutes  0.5=30 minutes  1=1 hour  2=2 hours  3=3 hours  4=4 hours  5=5 hours  6=6 hours or more |
| SittingTransportation | Sitting in a car, bus, train or other mode of transportation | 0=None  0.25=15 minutes  0.5=30 minutes  1=1 hour  2=2 hours  3=3 hours  4=4 hours  5=5 hours  6=6 hours or more |

**SCORING OF SCALE**

AerobicActivitiesTotal: Calculated variable that is not saved, only used determine if patient is Aerobic (see variable below)

AerobicActivitiesTotal = If [JogMinutes]>=20 Then [Jog14Days] Else 0

+If [HikeMinutes]>=20 Then [Hike14Days] Else 0

+If [AerobicsMinutes]>=20 Then [Aerobics14Days] Else 0

+If [TennisMinutes]>=20 Then [Tennis14Days] Else 0

+If [BicyclingMinutes]>=20 Then [Bicycling14Days] Else 0

+If [SwimmingMinutes]>=20 Then [Swimming14Days] Else 0

+If [HandOrRaquetballMinutes]>=20 Then [HandOrRaquetball14Days] Else 0

Aerobic: If AerobicActivitiesTotal >= 6 Then Aerobic = 1 Else Aerobic = 0

0. No

1. Yes

HrsFor2WeekLight: Calculated variable used to determine the average amount of hours of light work over a two week period

([Walk14Days] x [WalkMinutes] + [Gardening14Days] x [GardeningMinutes]

+ [Dancing14Days] x [DancingMinutes] + [Calisthenics14Days] x [CalisthenicsMinutes]

+ [Golf14Days] x [GolfMinutes] + [Bowling14Days] x [BowlingMinutes]

+ [HorseBackRiding14Days] x [HorseBackRidingMinutes]) / 60

HrsFor2WeekMedium: Calculated variable used to determine the average amount of hours of medium work over a two week period

([Hike14Days] x [HikeMinutes] + [Tennis14Days] x [TennisMinutes]

+ [Bicycling14Days] x [BicyclingMinutes] + [Swimming14Days] x [SwimmingMinutes]) / 60

HrsFor2WeekHeavy: Calculated variable used to determine the average amount of hours of heavy work over a two week period

([Jog14Days] x [JogMinutes] + [Aerobics14Days] x [AerobicsMinutes]

+ [HandOrRacquetball14Days] x [HandOrRacquetballMinutes] ) / 60

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*social activity\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\*\*note: social activities in the past two week--not sure which scale it is. It was provided from EAS old study;

**data** wk;

set wk;

\*\*\*\*\*\*\*\*\*\*\*\*social activity sum score\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

soc2wk\_sum = sum(of sa11-sa15);

\*\*\*\*\*\*\*\*\*\*\*\*social activity sum score--adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(sa11, sa12, sa13, sa14, sa15) ge **4** then soc2wk\_sumadj = sum(of sa11-sa15);

label soc2wk\_sum="social activities in the past two weeks";

label soc2wk\_sumadj="social activities in the past two weeks--adjust for missingness";

**run**;

# Medical History

**(289 items)**

**DESCRIPTION**

These questions give background information about a participant’s medical history.

**ASSOCIATED PAPERS**

N/A

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| Mxdte | Date Baseline Medical History questions were asked | Date |
| BMH1 | Questions were answered by: | 1=Self  2=Spouse  3=Son  4=Daughter  5=Friend  6=Other |
| BMH11 | Have you ever had asthma? | 0=No  1=Yes  9=Don’t know |
| BMH111 | Do you presently have asthma? | 0=No  1=Yes  9=Don’t know |
| BMH12 | Have you ever had emphysema or COPD (chronic obstructive pulmonary disease? | 0=No  1=Yes  9=Don’t know |
| BMH121 | Do you presently have emphysema or COPD? | 0=No  1=Yes  9=Don’t know |
| BMH13 | Has a physician ever told you that you have obstructive sleep apnea? | 0=No  1=Yes  9=Don’t know |
| BMH131 | Do you presently have obstructive sleep apnea? | 0=No  1=Yes  9=Don’t know |
| BMH13a | Do you use a CPAP machine? | 0=No  1=Yes  9=Don’t know |
| BMH13b | Why was it prescribed? | 1=Sleep Apnea  2=Low oxygen levels  3=Snoring  4=Other |
| BMH13bOther | If BMH13b=4, then list other reason for CPAP being prescribed |  |
| BMH21 | Did a physician ever tell you that you had any form of liver disease? | 0=No  1=Yes  9=Don’t know |
| BMH211 | Do you presently have any form of liver disease? | 0=No  1=Yes  9=Don’t know |
| BMH31 | Have you ever had diabetes? | 0=No  1=Yes  9=Don’t know |
| BMH311 | Do you presently have diabetes? | 0=No  1=Yes  9=Don’t know |
| BMH312 | Do you treat the diabetes with diet? | 0=No  1=Yes  9=Don’t know |
| BMH313 | Do you treat the diabetes with insulin? | 0=No  1=Yes  9=Don’t know |
| BMH314 | Do you treat the diabetes with oral medication? | 0=No  1=Yes  9=Don’t know |
| BMH315 | Did a physician tell you that you had hypoglycemia (low blood sugar)? | 0=No  1=Yes  9=Don’t know |
| BMH316 | How many episodes of low blood sugar have you had in the last 5 years? |  |
| BMH317 | How many episodes of low blood sugar have you had in your lifetime? |  |
| BMH41 | Have you ever had leg pain when you walk? | 0=No  1=Yes  9=Don’t know |
| BMH411 | Do you presently have leg pain when you walk? | 0=No  1=Yes  9=Don’t know |
| BMH412 | Is/was the pain relieved by rest w/in 5-10 min? | 0=No  1=Yes  9=Don’t know |
| BMH42 | Have you ever had ankle swelling? | 0=No  1=Yes  9=Don’t know |
| BMH421 | Do you presently have ankle swelling? | 0=No  1=Yes  9=Don’t know |
| BMH43 | Have you ever had cardiac irregularities or arrhythmia? | 0=No  1=Yes  9=Don’t know |
| BMH431 | Do you presently have cardiac irreg./arrhythmia? | 0=No  1=Yes  9=Don’t know |
| BMH44 | Have you ever had chest pain with exertion? | 0=No  1=Yes  9=Don’t know |
| BMH441 | Do you presently have chest pain with exertion? | 0=No  1=Yes  9=Don’t know |
| BBH442 | Did a physician ever tell you that you had angina? | 0=No  1=Yes  9=Don’t know |
| BMH443 | Is/was the pain relieved by nitroglycerin? | 0=No  1=Yes  9=Don’t know |
| BMH45 | Did a physician ever tell you that you have a heart murmur? | 0=No  1=Yes  9=Don’t know |
| BMH451 | Do you presently have a heart murmur? | 0=No  1=Yes  9=Don’t know |
| BMH46 | Did a physician ever tell you that you had high bld. Pres? | 0=No  1=Yes  9=Don’t know |
| BMH461 | When was it first diagnosed? (year) |  |
| BMH462 | Do you presently have high blood pressure? | 0=No  1=Yes  9=Don’t know |
| BMH463 | Do/did you ever take meds for high blood press? | 0=No  1=Yes  9=Don’t know |
| BMH47 | Did a physician ever tell you that you had a heart attack (myocardial infarction)? | 0=No  1=Yes  9=Don’t know |
| BMH471 | How many heart attacks have you had? | (number) |
| BMH472 | In what year was the most recent heart attack? |  |
| BMH47Hosp | What was the name of the hospital? |  |
| BMH47City | In what city is the hospital? |  |
| BMH48 | Did a physician ever tell you that you had congestive heart failure? | 0=No  1=Yes  9=Don’t know |
| BMH481 | Do you presently have congestive heart failure? | 0=No  1=Yes  9=Don’t know |
| BMH48Month | When did this occur? | Month |
| BMH48Year | When did this occur? | Year |
| BMH48Hosp | What was the name of the hospital? |  |
| BMH48City | In what city is the hospital? |  |
| BMH49 | Did you ever have a heart procedure like coronary angioplasty or placement of a stent? | 0=No  1=Yes  9=Don’t know |
| BMH49Month | When did this occur? | Month |
| BMH49Year | When did this occur? | Year |
| BMH49Hosp | What was the name of the hospital? |  |
| BMH49City | In what city is the hospital? |  |
| Pcancer | Do you have or have you had any form of cancer? | 0=No  1=Yes  9=Don’t know |
| BMH511A | What types were you diagnosed with?: Type 1 | Basal cell  Bladder  Bone  Brain  Breast  Cervical  Colorectal  Esophageal  Kidney  Leukemia  Lung  Melanoma  Non-Hodgkin’s Lymphoma  Oral cavity  Other  Ovarian  Pancreatic  Prostate  Squamous cell  Stomach  Throat  Uterine |
| BMH511AOther | Text entry of “other” cancer (#1) |  |
| BMH511AD | What year were you diagnosed with this cancer (#1)? |  |
| BMH511B | What types were you diagnosed with?: Type 2 | Basal cell  Bladder  Bone  Brain  Breast  Cervical  Colorectal  Esophageal  Kidney  Leukemia  Lung  Melanoma  Non-Hodgkin’s Lymphoma  Oral cavity  Other  Ovarian  Pancreatic  Prostate  Squamous cell  Stomach  Throat  Uterine |
| BMH511BOther | Text entry of “other” cancer (#2) |  |
| BMH511BD | What year were you diagnosed with this cancer (#2)? |  |
| BMH511C | What types were you diagnosed with?: Type 3 | Basal cell  Bladder  Bone  Brain  Breast  Cervical  Colorectal  Esophageal  Kidney  Leukemia  Lung  Melanoma  Non-Hodgkin’s Lymphoma  Oral cavity  Other  Ovarian  Pancreatic  Prostate  Squamous cell  Stomach  Throat  Uterine |
| BMH511COther | Text entry of “other” cancer (#3) |  |
| BMH511CD | What year were you diagnosed with this cancer (#3)? |  |
| Pchemo | Have you ever received chemotherapy for the treatment of cancer? | 0=No  1=Yes  9=Don’t know |
| BMH5121 | What was the most recent year you received chemo? |  |
| Pradiat | Have you ever received radiation therapy for the treatment of cancer? | 0=No  1=Yes  9=Don’t know |
| BMH5131 | What was the most recent year you received radiation treatment? |  |
| BMH514 | Have you ever had surgery for the treatment of cancer? | 0=No  1=Yes  9=Don’t know |
| BMH5141 | What was the most recent year you had surgery for cancer? |  |
| BMH519 | Are you presently scheduled to have surgery for treatment of cancer? | 0=No  1=Yes  9=Don’t know |
| BMH5191 | Have you ever had anemia? | 0=No  1=Yes  9=Don’t know |
| BMH5192 | Have you been told by a physician you have migraine headaches? | 0=No  1=Yes  9=Don’t know |
| BMH52 | Have you ever had any blood transfusions? | 0=No  1=Yes  9=Don’t know |
| BMH53 | Have you ever had a blood test for AIDS or HIV? | 0=No  1=Yes  9=Don’t know |
| BMH531 | What was the result of the AIDS or HIV test? | 0=Negative  1=Positive  9=Don’t Know |
| BMH61 | Did a physician ever tell you that you had any form of thyroid disease? | 0=No  1=Yes  9=Don’t know |
| BMH611 | Did you ever take thyroid hormones (synthroid, levothyroxine, etc.) for the treatment of thyroid disease? | 0=No  1=Yes  9=Don’t know |
| BMH612 | Do you presently have any form of thyroid disease? | 0=No  1=Yes  9=Don’t know |
| BMH613 | Do you presently take thyroid hormones (synthroid, levothyroxine, etc.) for the treatment of thyroid disease? | 0=No  1=Yes  9=Don’t know |
| BMH71 | Did a physician ever tell you that you had Parkinson’s Disease? | 0=No  1=Yes  9=Don’t know |
| BMH72 | Have you ever had seizures, convulsions or epilepsy? | 0=No  1=Yes  9=Don’t know |
| BMH721 | Do you presently have seizures, convulsions or epilepsy? | 0=No  1=Yes  9=Don’t know |
| BMH73 | How often do you feel really confused or disoriented? | Answer in percentage |
| BMH74 | Have you ever had a skull fracture? | 0=No  1=Yes  9=Don’t know |
| BMH741 | Have you ever had a fractured, cracked or broken neck? | 0=No  1=Yes  9=Don’t know |
| BMH742 | Have you ever had any neck injury that required treatment by a doctor? | 0=No  1=Yes  9=Don’t know |
| BMH743A | The next set of questions is about any head injuries you may have had which resulted in bleeding, stitches, being dazed, or where you passed out or were knocked out. I am going to name some different causes of head injury. Tell me if you ever had a head injury from each cause.  Have you ever had a head injury from: An accident when you were a passenger or driver of a car? | 0=No  1=Yes  9=Don’t know |
| BMH743B | Being hit by a moving vehicle | 0=No  1=Yes  9=Don’t know |
| BMH743C | Falling down onto the floor or the ground | 0=No  1=Yes  9=Don’t know |
| BMH743D | Being hit in the head by a thrown or falling object | 0=No  1=Yes  9=Don’t know |
| BMH743E | Falling down steps or a staircase | 0=No  1=Yes  9=Don’t know |
| BMH743F | Other event | 0=No  1=Yes  9=Don’t know |
| BMH743FOther | Other (write in) |  |
| BMH744A | Complete the following set of questions for one of the head injuries reported: Situation | A=Head injury from being a passenger in a car  B=Head injury from being HIT BY moving vehicle  C=Head injury from falling down  D=Head injury from being hit in the head by an object  E=Head injury from falling down steps  F=Head injury from some other event |
| BMH744B | How old were you when this happened? |  |
| BMH744C | Did you faint or lose consciousness? | 0=No  1=Yes  9=Don’t know |
| BMH744Dhr | How long were you unconscious? | Number of hours |
| BMH744Dmin | How long were you unconscious? | Number of minutes |
| BMH744Dsec | How long were you unconscious? | Number of seconds |
| BMH744E | Did you have vomiting or nausea? | 0=No  1=Yes  9=Don’t know |
| BMH744F | Did you have dizziness? | 0=No  1=Yes  9=Don’t know |
| BMH744G | Did you have a skull fracture? | 0=No  1=Yes  9=Don’t know |
| BMH744H | Did you get stitches? | 0=No  1=Yes  9=Don’t know |
| BMH744I | Did you see a doctor for this injury? | 0=No  1=Yes  9=Don’t know |
| BMH745A | Select the letter and complete the following set of questions for that head injury you reported: | A=Head injury from being a passenger in a car  B=Head injury from being HIT BY moving vehicle  C=Head injury from falling down  D=Head injury from being hit in the head by an object  E=Head injury from falling down steps  F=Head injury from some other event |
| BMH745B | How old were you when this happened? |  |
| BMH745C | Did you faint or lose consciousness? | 0=No  1=Yes  9=Don’t know |
| BMH745Dhr | How long were you unconscious? | Number of hours |
| BMH745Dmin | How long were you unconscious? | Number of minutes |
| BMH745Dsec | How long were you unconscious? | Number of seconds |
| BMH745E | Did you have vomiting or nausea? | 0=No  1=Yes  9=Don’t know |
| BMH745F | Did you have dizziness? | 0=No  1=Yes  9=Don’t know |
| BMH745G | Did you have a skull fracture? | 0=No  1=Yes  9=Don’t know |
| BMH745H | Did you get stitches? | 0=No  1=Yes  9=Don’t know |
| BMH745I | Did you see a doctor for this injury? | 0=No  1=Yes  9=Don’t know |
| BMH746A | Select the letter and complete the following set of questions for that head injury you reported: | A=Head injury from being a passenger in a car  B=Head injury from being HIT BY moving vehicle  C=Head injury from falling down  D=Head injury from being hit in the head by an object  E=Head injury from falling down steps  F=Head injury from some other event |
| BMH746B | How old were you when this happened? |  |
| BMH746C | Did you faint or lose consciousness? | 0=No  1=Yes  9=Don’t know |
| BMH746Dhr | How long were you unconscious? | Number of hours |
| BMH746Dmin | How long were you unconscious? | Number of minutes |
| BMH746Dsec | How long were you unconscious? | Number of seconds |
| BMH746E | Did you have vomiting or nausea? | 0=No  1=Yes  9=Don’t know |
| BMH746F | Did you have dizziness? | 0=No  1=Yes  9=Don’t know |
| BMH746G | Did you have a skull fracture? | 0=No  1=Yes  9=Don’t know |
| BMH746H | Did you get stitches? | 0=No  1=Yes  9=Don’t know |
| BMH746I | Did you see a doctor for this injury? | 0=No  1=Yes  9=Don’t know |
| BMH747A | Select the letter and complete the following set of questions for that head injury you reported: | A=Head injury from being a passenger in a car  B=Head injury from being HIT BY moving vehicle  C=Head injury from falling down  D=Head injury from being hit in the head by an object  E=Head injury from falling down steps  F=Head injury from some other event |
| BMH747B | How old were you when this happened? |  |
| BMH747C | Did you faint or lose consciousness? | 0=No  1=Yes  9=Don’t know |
| BMH747Dhr | How long were you unconscious? | Hours |
| BMH747Dmin | How long were you unconscious? | minutes |
| BMH747Dsec | How long were you unconscious? | Seconds |
| BMH747E | Did you have vomiting or nausea? | 0=No  1=Yes  9=Don’t know |
| BMH747F | Did you have dizziness? | 0=No  1=Yes  9=Don’t know |
| BMH747G | Did you have a skull fracture? | 0=No  1=Yes  9=Don’t know |
| BMH747H | Did you get stitches? | 0=No  1=Yes  9=Don’t know |
| BMH747I | Did you see a doctor for this injury? | 0=No  1=Yes  9=Don’t know |
| BMH75 | Have you ever had episodes of fainting? | 0=No  1=Yes  9=Don’t know |
| BMH751 | How old were you when you had your first episode? |  |
| BMH752 | How many total episodes of fainting have you had? |  |
| BMH753 | When was your most recent episode of fainting? (year) |  |
| BMH754 | Do you presently have episodes of fainting? | 0=No  1=Yes  9=Don’t know |
| BMH755 | Have you ever had an MRI of your head? | 0=No  1=Yes  9=Don’t know |
| BMH756 | Why? |  |
| BMH757 | In what year did you have the MRI of your head? |  |
| BMH758 | Have you ever had a CT Scan of your head? | 0=No  1=Yes  9=Don’t know |
| BMH759 | Why? |  |
| BMH7591 | In what year did you have the CT Scan? |  |
| BMH7592 | Have you ever had neuropsychological testing? | 0=No  1=Yes  9=Don’t know |
| BMH7593 | Why? |  |
| BMH7594 | In what year did you have the neuropsychological testing? |  |
| BMH76 | Has a doctor ever told you that you had a stroke? | 0=No  1=Yes  9=Don’t know |
| BMH761 | What is the doctor’s name? |  |
| BMH761A | What is the doctor’s city? |  |
| BMH761State | What is the doctor’s state? |  |
| BMH762 | Have you ever been hospitalized for a stroke? | 0=No  1=Yes  9=Don’t know |
| BMH763 | What was the name of the hospital? |  |
| BMH763City | What was the hospital’s city? |  |
| BMH763State | What is the hospital’s state? |  |
| BMH764Month | When did this occur? | Month |
| BMH764Year | When did this occur? | Year |
| CogTreat1 | Have you ever consulted a health care professional about problems with your memory or thinking? | 0=No  1=Yes  9=Don’t know |
| CogTreat2GP | What type(s) of health care professional have you consulted for problems with your memory or thinking?: General practitioner (GP) | 0=No  1=Yes |
| CogTreat2Rehab | Rehabilitation specialist | 0=No  1=Yes |
| CogTreat2Neurologist | Neurologist or Psychiatrist | 0=No  1=Yes |
| CogTreat2Neuropsychologist | Neuropsychologist/psychologist | 0=No  1=Yes |
| CogTreat2Nutritionist | Nutritionist | 0=No  1=Yes |
| CogTreat2Other | Other | 0=No  1=Yes |
| CogTreat2OtherDesc | If CogTreat2Other=1, then list other type of health care professional |  |
| CogTreat3 | In what year did you seek treatment for memory or other thinking problems? Specify year |  |
| CogTreat4 | Approximate duration of treatment | (enter decimal)  0.083=1 Month  0.5=6 Months  1=1 Year  2=2-3 Years  3=More than 3 Years |
| CogTreat5PrescMed | Prescription medication | 0=No  1=Yes |
| CogTreat5OTCMed | OTC medication | 0=No  1=Yes |
| CogTreat5Herbal | Herbal supplement | 0=No  1=Yes |
| CogTreat5MemTrain | Memory training | 0=No  1=Yes |
| CogTreat5AttTrain | Attention training | 0=No  1=Yes |
| CogTreat5CompBrainTrain | Computerized brain training | 0=No  1=Yes |
| CogTreat5BehavTherapy | Behavior therapy | 0=No  1=Yes |
| CogTreat5Meditation | Meditation | 0=No  1=Yes |
| CogTreat5Exercise | Physical exercise | 0=No  1=Yes |
| CogTreat5OccTherapy | Occupational therapy | 0=No  1=Yes |
| CogTreat5Other | Other | 0=No  1=Yes |
| CogTreat5OtherDesc | If CogTreat5Other=1, then list other type of treatment: | text |
| CogTreat6 | Frequency of treatment: | 1=Daily  2=5-6 days/week  3=3-4 days/week  4=1-2 days/week  5=Less than once/week |
| BMH81 | Have you ever been hospitalized for a psychiatric problem? | 0=No  1=Yes  9=Don’t know |
| BMH811 | What type of psychiatric problem required hospitalization? |  |
| BMH812 | Have you ever taken medication(s) for this/these problem(s)? | 0=No  1=Yes  9=Don’t know |
| BMH813 | Are you presently taking medication(s) for psychiatric problems? | 0=No  1=Yes  9=Don’t know |
| BMH8131 | Which meds have you taken for psychiatric problems? |  |
| BMH82 | Have you ever been diagnosed with a psychiatric problem? | 0=No  1=Yes  9=Don’t know |
| BMH821 | What type(s) of psychiatric problem(s)? |  |
| BMH83 | Have you ever been treated for depression? | 0=No  1=Yes  9=Don’t know |
| BMH831 | How many episodes have required treatment? |  |
| BMH832 | What was the year of the first episode? |  |
| BMH833 | What was the year of the most recent episode? |  |
| BMH834 | Did you take medication for this condition? | 0=No  1=Yes  9=Don’t know |
| BMH8341 | In what year? |  |
| BMH835 | Did you receive electroshock therapy? | 0=No  1=Yes  9=Don’t know |
| BMH8351 | Were you hospitalized for depression? | 0=No  1=Yes  9=Don’t know |
| BMH91 | Have you ever had osteoarthritis or other degenerative orthopedic problems? | 0=No  1=Yes  9=Don’t know |
| BMH912 | Did this condition interfere with your daily activities? | 0=No  1=Yes  9=Don’t know |
| BMH913 | Do you presently have osteoarthritis or other degenerative orthopedic problems? | 0=No  1=Yes  9=Don’t know |
| BMH914 | Does this condition interfere with your daily activities? | 0=No  1=Yes  9=Don’t know |
| BMH92 | Do you have rheumatoid arthritis? | 0=No  1=Yes  9=Don’t know |
| BMH921 | Did this condition interfere with your daily activities? | 0=No  1=Yes  9=Don’t know |
| BMH93 | Have you ever fractured a hip, femur or pelvis? | 0=No  1=Yes  9=Don’t know |
| BMH931 | When was the most recent fracture? |  |
| BMH94 | Have you fallen in the past year? | 0=No  1=Yes  9=Don’t know |
| BMH941 | How many times have you fallen? |  |
| BMH942 | Were you injured as a result of the fall? | 0=No  1=Yes  9=Don’t know |
| BMH101 | Did you ever have difficulty urinating? | 0=No  1=Yes  9=Don’t know |
| BMH1011 | Do you presently have difficulty urinating? | 0=No  1=Yes  9=Don’t know |
| BMH102 | Did you ever have difficulty controlling your urine? | 0=No  1=Yes  9=Don’t know |
| BMH1021 | Do you presently have difficulty controlling your urine? | 0=No  1=Yes  9=Don’t know |
| BMH103 | Have you ever lost urine while laughing, coughing, or sneezing? | 0=No  1=Yes  9=Don’t know |
| BMH1031 | Do you presently lose urine while laughing, coughing, or sneezing? | 0=No  1=Yes  9=Don’t know |
| BMH104 | Do you presently have a catheter? | 0=No  1=Yes  9=Don’t know |
| BMH1041 | Which type: indwelling, intermittent, or both? | 1=Indwelling  2=Intermittent  3=Both  9=Don’t Know |
| BMH105 | Have you ever been incontinent of feces? | 0=No  1=Yes  9=Don’t know |
| BMH1051 | Are you presently incontinent of feces? | 0=No  1=Yes  9=Don’t know |
| BHM106 | Have you ever had prostate surgery? | 0=No  1=Yes  9=Don’t know |
| BMH1061 | Are you scheduled to have prostate surgery? | 0=No  1=Yes  9=Don’t know |
| BMH1062 | Have you ever had a hysterectomy? | 0=No  1=Yes  9=Don’t know |
| BMH10621 | In what year? |  |
| BMH1062a | What was the reason for the hysterectomy? |  |
| BMH1063 | Did you have an oophorectomy (removal of ovaries)? | 0=No  1=Yes  9=Don’t know |
| BMH10631 | In what year? |  |
| BMH1064 | Have you had hormone replacement therapy? | 0=No  1=Yes  9=Don’t know |
| BMH1065 | How old were you when you began menopause? |  |
| BMH1066 | How old were you when you began having periods? |  |
| BMH13 | Were you ever hospitalized for reasons other than surgery in the past? | 0=No  1=Yes  9=Don’t know |
| BMH131 | Why? |  |
| BMH132 | Were you hospitalized recently? | 0=No  1=Yes  9=Don’t know |
| BMH134 | Why? |  |
| BMH135 | Are you presently scheduled to have any type of surgery? | 0=No  1=Yes  9=Don’t know |
| BMH136 | Type? |  |
| BMH137Month | When are you scheduled for surgery? | Month |
| BMH137Year | When are you scheduled for surgery? | Year |
| BMH138 | Have you ever been implanted with a pacemaker? | 0=No  1=Yes  9=Don’t know |
| BMH139Month | Month? |  |
| BMH139Year | Year? |  |
| BMH138Hosp | What hospital? |  |
| BMH138City | What city? |  |
| BMH140 | Have you ever had coronary artery bypass surgery? | 0=No  1=Yes  9=Don’t know |
| BMH141Month | Month? |  |
| BMH141Year | Year? |  |
| BMH140Hosp | What hospital? |  |
| BMH140City | What city? |  |
| BMH142 | Have you ever had a hip replacement or pinning surgery? | 0=No  1=Yes  9=Don’t know |
| BMH143Month | Month? |  |
| BMH143Year | Year? |  |
| BMH144 | Have you had any other operations in the past? | 0=No  1=Yes  9=Don’t know |
| BMH145 | Operation 1 |  |
| BMH146Month | Month? |  |
| BMH146Year | Year? |  |
| BMH147 | Operation 2 |  |
| BMH148Month | Month? |  |
| BMH148Year | Year? |  |
| BMH149 | Operation 3 |  |
| BMH150Month | Month? |  |
| BMH150Year | Year? |  |
| BMH154 | Operation 4 |  |
| BMH155Month | Month? |  |
| BMH155Year | Year? |  |
| BMH156 | Operation 5 |  |
| BMH157Month | Month? |  |
| BMH157Year | Year? |  |
| BMH158 | Operation 6 |  |
| BMH159Month | Month? |  |
| BMH159Year | Year? |  |
| BMH160 | Operation 7 |  |
| BMH161Month | Month? |  |
| BMH161Year | Year? |  |
| BMH162 | Operation 8 |  |
| BMH163Month | Month? |  |
| BMH163Year | Year? |  |
| BMH164 | Operation 9 |  |
| BMH165Month | Month? |  |
| BMH165Year | Year? |  |
| BMH166 | Operation 10 |  |
| BMH167Month | Month? |  |
| BMH167Year | Year? |  |
| BMH151 | Have you ever had general anesthesia? | 0=No  1=Yes  9=Don’t know |
| BMH152Month | What is the date of the most recent time? (month) |  |
| BMH152Year | What is the date of the most recent time? (year) |  |
| BMH153 | How many times have you had general anesthesia? |  |
| Comments | List any relevant comments |  |

**SCORING OF SCALE**

N/A

# Medications

**(12 items)**

**DESCRIPTION**

This measure was selected in order to interpret biomarkers and to assess overall health.

**ASSOCIATED PAPERS**

N/A

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| DO1 | Relationship to subject of person providing the medication information: | 1=Self  2=Spouse  3=Son  4=Daughter  5=Friend  6=Other |
| DO1Other | If DO1 = 6, enter the "Other" relationship of person completing the form. |  |
| CurOnMeds | Are you currently taking any medications? | 0=No  1=Yes |
| OTCMedNotes | OTC Medication Notes |  |
|  | For every prescription and OTC medications named, the following questions are asked: |  |
| DrugName | Name of medication |  |
| Dosage | Dosage of medication |  |
| DosageUnits | Units of the dosage |  |
| TimesPerDay | Number of times per day medication is taken |  |
| Reason | Reason the medication is taken |  |
| DrugComments | Specific comments related to the subject's use of this medication |  |
| DrugType | Type of drug: Prescription or OTC | PRES= Prescription  OTC = Over the counter |
| Code | Drug code | 1 = antacid  2 = anti-PD  3 = anti-anxiety, Benzodiazepine  4 = anti-arrhythmic  6 = anti-seizure  7 = anticoagulants  8 = antidepressant, TCA and Sedating  9 = antiemetic  10 = antihypertensive  11 = antihypertensive/A blocker, A block  12 = antihypertensive/ACE inhibitor, ACE inhibitor  13 = antihypertensive/B blocker, B blocker  14 = antihypertensive/Ca channel bloc, Ca channel bloc  15 = antihypertensive/diuretic, diuretic  16 = antihypertensive/vasodilator, vasodilator  17 = antiplatelet  18 = antipsychotic  19 = antiulcer  20 = central nervous system stimulant  21 = cholesterol lower  22 = hormone/progesteron  23 = hormone/testeron  24 = hormone-thyroid  25 = hormone/estrogen  26 = hormone/insulin  27 = memory enhancer  28 = nsaid  29 = oral hypoglycem  30 = steroid-anti inflamatory  31 = vasodilator  32 = vitamins  33 = calcium supplement  34 = antigout  35 = caugh syrup  36 = laxative  37 = topical  38 = miscelllaneous  39 = anti-anxiety, Non-Benzodiazepine  40 = Melatonin-Receptor Agonist  41 = antidepressant, SSRI  42 = antidepressant, SNRI/DRI  43 = antihistamine  44 = mood stabilizers  45 = Daily Analgesic  46 = Antihypertensive/ARB  47 = Anti-cholinergic  48 = Steroid Eye Drops  49 = Daily sleeping aid  50 = Non-steroidal eye drops |

**SCORING OF SCALE**

N/A

# Smoking and Alcoholic History

**(15 items)**

**DESCRIPTION**

These questions were selected to provide additional information in order to assess biomarkers.

**ASSOCIATED PAPERS**

N/A

**SUBJECT INSTRUCTIONS:**

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| SAB11 | Have you smoked at least 100 cigarettes in your lifetime? | 0=No  1=Yes |
| SAB12 | Do you smoke cigarettes now? | 0=No  1=Yes |
| SAB13 | About how many cigarettes do you now smoke per day? |  |
| SAB14 | How many years have you smoked cigarettes? |  |
| SAB15 | When did you stop smoking cigarettes? |  |
| SAB16 | During the years when you were smoking, about how many cigarettes per day did you smoke? |  |
| SAB17 | For how many years did you smoke? |  |
| SAB21 | Have you had at least one drink of beer, wine or liquor during the past year? | 0=No  1=Yes |
| SAB22a-b | During the year, on the average, how often did you drink alcoholic beverages, that is, beer, wine or liquor? | SAB22A: (write in for number) SAB22B: per  Day  Week  Month  Year |
| SAB23a-b | During the year, on the average, how many cans or bottles of beer did you drink? | SAB23A: (write in for number) SAB23B: per  Day  Week  Month  Year |
| SAB24a-b | During the year, on the average, how many glasses of wine do you drink? | (SAB24A: (write in for number) SAB24B: per  Day  Week  Month  Year |
| SAB25a-b | During the year, on the average, how many shots or drinks of hard liquor, either straight or in a mixed drink, did you drink? | SAB25A: (write in for number) SAB25B: per  Day  Week  Month  Year |
| SAB261 | During each of the following age intervals, what was the usual number of drinks of alcohol you had per week? Less than 20 years of age? | 1=None  2=Less than 3 per week  3=3 to 6 per week  4= 7 to 13 per week  5=More than 14 per week |
| SAB262 | 20 to 50 years of age? | 1=None  2=Less than 3 per week  3=3 to 6 per week  4= 7 to 13 per week  5=More than 14 per week |
| SAB263 | Over 50 years of age? | 1=None  2=Less than 3 per week  3=3 to 6 per week  4= 7 to 13 per week  5=More than 14 per week |

**SCORING OF SCALE**

For Alcohol:

The questions can be used as is – that is individual analyses might combine across beverage type etc. as needed. These questions can also be used is to estimate the number of grams of alcohol per unit time using a conversion (Grams of alcohol per serving: beer=13.2, wine 10.8, liquor 15.1).  The number of grams of alcohol in a standard serving of each beverage type multiplied by the reported number of drinks per serving

Consider for each the number of servings the person indicated:(beer (SAB23a), wine (SAB24a) or liquor (SAB25a), and also the time unit (month, week, day), as indicated in the variables : Beer (SAB23b) Wine (SAB24b) liquor SAB25b) so that you can compute the total number of drinks/unit time and then multiply by the grams of alcohol per serving as noted above.

Individual investigators can choose how to score these. Because there are different timescales that individuals can report on (days, months, years), it would be overly complicated to calculate them here.

if SAB11 eq **.** then SmokeStatus=**.**;

else if SAB11 eq **0** then SmokeStatus = **0**;

else if SAB11 eq **1** and SAB12 = **0** then SmokeStatus = **1**;

else if SAB11 eq **1** and SAB12 = **1** then SmokeStatus = **2**;

if SmokeStatus eq **.** then EverSmoked = **.**;

else if SmokeStatus eq **0** then EverSmoked = **0**;

else if SmokeStatus eq **1** or SmokeStatus eq **2** then EverSmoked = **1**;

if SmokeStatus eq **.** or SmokeStatus eq **1** or SmokeStatus eq **2** then TimeSinceQuit = **.**;

else if SmokeStatus eq **1** then TimeSinceQuit = YEAR(Day1InitialDate) - SAB15;

if SmokeStatus eq **.** then PackYears = **.**;

else if SmokeStatus eq **0** then PackYears = **0**;

else if SmokeStatus eq **1** or SmokeStatus eq **2** then PackYears = (SAB16/**20**)\*SAB17;

**proc** **format**;

value SmokeStatus **0** = 'Nonsmoker'

**1** = 'Prior smoker'

**2** = 'Current smoker';

value EverSmoked **0** = 'No'

**1** = 'Yes';

**run**;

# Social Network: Social and Caregiver Strain

**(98 items)**

**DESCRIPTION**

These questions were chosen to capture participants’ relationships with their spouses/partners, children, family, and friends. These questions also assessed whether participants have a caregiving role in those relationships and whether this role is strained.

**ASSOCIATED PAPERS**

Sabourin, Stéphane; Valois, Pierre; Lussier, Yvan (2005). Development and validation of a brief version of

the Dyadic Adjustment Scale with a nonparametric item analysis model. Psychological Assessment,

17(1), 15-27. doi: 10.1037/1040-3590.17.1.15

Schuster, T. L., Kessler, R. C., & Aseltine, R. H. Jr. (1990). Supportive interactions, negative interactions,

and depressed mood. American Journal of Community Psychology, 18, 423-438.

Turner, R. J., Frankel, G., & Levin, D. M. (1983). Social support: Conceptualization, measurement, and

implications for mental health. In J. R. Greenley & R. G. Simmons (Eds.), Research in Community and

Mental Health (pp. 67-111). Greenwich: JAI Press.

Whalen, H.R., & Lachman, M.E. (2000). Social support and strain from partner, family and friends: Costs and benefits for men and women in adulthood. Journal of Social and Personal Relationships, 17, 5-30.

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| SNdate | Date social network form was completed |  |
| SN10 | Do you have a spouse or partner with whom you live? | 0=No  1=Yes |
| SN11 | How close is your relationship with your spouse or partner? | 1=Very Close  2=Quite Close  3=Not Very Close  4=Not Close At All |
| SN11a | How often do you talk to your spouse/partner? | 1=Every Day  2=Several times a week  3=Once a week  4=Once every two weeks  5=Once a month  6=A couple of times a year  7=Once a year  8=Less than once a year |
| SN12 | How often does your spouse/partner make too many demands on you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN13 | How often does your spouse/partner criticize you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN14 | How often does your spouse/partner let you down when you are counting on them? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN15 | How often does your spouse/partner get on your nerves? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN15a | How often do you discuss or have you considered divorce, separation or terminating your relationship? | 0=All the time  1=Most of the time  2=More often than not  3=Occasionally  4=Rarely  5=Never |
| SN15b | In general, how often do you think that things between you and your spouse/partner are going well? | 0=All the time  1=Most of the time  2=More often than not  3=Occasionally  4=Rarely  5=Never |
| SN15c | Do you confide in your spouse/partner? | 0=All the time  1=Most of the time  2=More often than not  3=Occasionally  4=Rarely  5=Never |
| SN15d | Please click the number that best describes the degree of happiness, all things considered, of your relationship. | 0=Extremely Unhappy  1=Fairly Unhappy  2=A Little Unhappy  3=Happy  4=Very Happy  5=Extremely Happy  6=Perfect |
| SN16a1 | Because of health or physical problems, does your spouse/partner have difficulty or is he or she unable to: Walk? | 0=No  1=Yes |
| SN16a2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16b1 | Get out of bed/chair? | 0=No  1=Yes |
| SN16b2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16c1 | Eat? | 0=No  1=Yes |
| SN16c2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16d1 | Dress? | 0=No  1=Yes |
| SN16d2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16e1 | Bathe? | 0=No  1=Yes |
| SN16e2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16f1 | Use the toilet? | 0=No  1=Yes |
| SN16f2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16g1 | Heavy housework? | 0=No  1=Yes |
| SN16g2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16h1 | Light housework? | 0=No  1=Yes |
| SN16h2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16i1 | Shop? | 0=No  1=Yes |
| SN16i2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16j1 | Prepare meals? | 0=No  1=Yes |
| SN16j2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16k1 | Manage money? | 0=No  1=Yes |
| SN16k2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN16l1 | Use the telephone? | 0=No  1=Yes |
| SN16l2 | Do you help your spouse/partner with this task? | 0=No  1=Yes |
| SN171 | How much emotional strain do you experience associated with helping or arranging help for your spouse/partner for this/these tasks? | 0=No strain  1=Some strain  2=A lot of strain |
| SN172 | How physically demanding is helping or arranging help for your spouse/partner on this/these tasks? | 0=No strain  1=Some strain  2=A lot of strain |
| SN173 | How rewarding for you is helping or arranging help for your spouse/partner on this/these tasks? | 0=No reward  1=Some reward  2=A lot of reward |
| SN2 | Do you have any living children? | 0=No  1=Yes |
| SN21 | How many of your children would you say you have a close relationship with? |  |
| SN22 | On average, how often do you meet up with these children (arranged and chance meetings)? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN23 | On average, how often do you speak on the phone with these children? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN24 | On average, how often do you write to or email these children? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN25 | How often do your children make too many demands on you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN26 | How often do your children criticize you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN27 | How often do your children let you down when you are counting on them? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN28 | How often do your children get on your nerves? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN29 | Do you regularly provide care for a child? (This may include being the primary provider or just helping out, e.g., watching them after school or while their parents are at work.) | 0=No  1=Yes |
| SN291a | What is the age of child A? |  |
| SN291b | What is the age of child B? |  |
| SN291c | What is the age of child C? |  |
| SN292 | What is child A’s relation to you? | 1=Biological son/daughter  2=Adopted son/daughter  3=Foster child  4=Grandchild  5=Other family member  6=Other non-family member |
| SN292Other | If SN292=6, then specify "Other" relationship |  |
| SN293 | What is child B's relation to you? | 1=Biological son/daughter  2=Adopted son/daughter  3=Foster child  4=Grandchild  5=Other family member  6=Other non-family member |
| SN293Other | If SN293=6, then specify "Other" relationship |  |
| SN294 | What is child C's relation to you? | 1=Biological son/daughter  2=Adopted son/daughter  3=Foster child  4=Grandchild  5=Other family member  6=Other non-family member |
| SN294Other | If SN294=6, then specify "Other" relationship |  |
| SN295 | Do any of these children whom you provide care for have a disability or any special needs? | 0=No  1=Yes |
| SN296a | Does Child A have special needs? | 0=No  1=Yes |
| SN296b | Does Child B have special needs? | 0=No  1=Yes |
| SN296c | Does Child C have special needs? | 0=No  1=Yes |
| SN297 | About how many hours per week do you typically provide care? |  |
| SN298 | How much emotional strain do you experience associated with caring for this child/children? | 0=No strain  1=Some strain  2=A lot of strain |
| SN299 | How physically demanding is caring for this child/children? | 0=No strain  1=Some strain  2=A lot of strain |
| SN2991 | How rewarding for you is caring for this child/children? | 0=No reward  1=Some reward  2=A lot of reward |
| SN3 | Do you have any other immediate family, for example, any brothers or sisters, parents, cousins, or grandchildren? | 0=No  1=Yes |
| SN31 | How many of these family members would you say you have a close relationship with? |  |
| SN32 | On average, how often do you meet up with these family members (arranged and chance meetings)? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN33 | On average, how often do you speak on the phone with these family members? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN34 | On average, how often do you write to or email these family members? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN35 | How often do your family members make too many demands on you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN36 | How often do your family members criticize you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN37 | How often do your family members let you down when you are counting on them? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN38 | How often do your family members get on your nerves? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN39 | Do you regularly provide care for other family members? (This may include being the primary provider or just helping out.) | 0=No  1=Yes |
| SN391a | What is the age of family member A? |  |
| SN391b | What is the age of family member B? |  |
| SN392 | What is family member A’s relation to you? | 1=Parent  2=Sibling  3=Other family member |
| SN392Other | If SN392=3, then specify "Other" relationship |  |
| SN393 | What is family member B's relation to you? | 1=Parent  2=Sibling  3=Other family member |
| SN393Other | If SN392=3, then specify "Other" relationship |  |
| SN394 | Do any of these family members whom you provide care for have a disability or any special needs? | 0=No  1=Yes |
| SN395a | Does family member A have special needs? | 0=No  1=Yes |
| SN395b | Does family member B have special needs? | 0=No  1=Yes |
| SN396 | About how many hours per week do you typically provide care? |  |
| SN397 | How much emotional strain do you experience associated with caring for this family member? | 0=No strain  1=Some strain  2=A lot of strain |
| SN398 | How physically demanding is caring for this family member? | 0=No strain  1=Some strain  2=A lot of strain |
| SN399 | How rewarding for you is caring for this family member? | 0=No reward  1=Some reward  2=A lot of reward |
| SN4 | Do you have any other friends? | 0=No  1=Yes |
| SN41 | How many of these friends would you say you have a close relationship with? |  |
| SN42 | On average, how often do you meet up with these friends (arranged and chance meetings)? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN43 | On average, how often do you speak on the phone with these friends? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN44 | On average, how often do you write to or email these friends? | 1=Three or more times a week  2=Once or twice a week  3=Once or twice a month  4=Every few months  5=Once or twice a year  6=Less than once or twice a year |
| SN45 | How often do your friends make too many demands on you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN46 | How often do your friends criticize you? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN47 | How often do your friends let you down when you are counting on them? | 1=Often  2=Sometimes  3=Rarely  4=Never |
| SN48 | How often do your friends get on your nerves? | 1=Often  2=Sometimes  3=Rarely  4=Never |

**SCORING OF SCALE**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*social networks\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

**data** wk;

set wk;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Number of family members and friends in social network;

Network\_div=sum(sn10, sn2, sn3, sn4);

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Closeness with family members and friends in social network;

close\_sp=sn11;

if close\_sp<**3** then close\_spYN=**1**;

if close\_sp>**2** then close\_spYN=**0**;

confidant\_sp=sn15c;

close\_kid=sn21;

close\_family=sn31;

close\_friend=sn41;

Closetie\_num=sum(close\_spYN,close\_kid,close\_family,close\_friend);

label Network\_div="diversity of network with spouse, kids, other family member and friend";

label Closetie\_num="number of close spouse, kids, other family members and friends in network";

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Contact frequency with family members and friends in social network;

contact\_sp=**9**-sn11a;

meet\_kid=**7**-sn22;

phone\_kid=**7**-sn23;

email\_kid=**7**-sn24;

meet\_family=**7**-sn32;

phone\_family=**7**-sn33;

email\_family=**7**-sn34;

meet\_friend=**7**-sn42;

phone\_friend=**7**-sn43;

email\_friend=**7**-sn44;

meet\_freqM=mean(meet\_kid, meet\_family, meet\_friend);

phone\_freqM=mean(phone\_kid, phone\_family, phone\_friend);

email\_freqM=mean(email\_kid, email\_family, email\_friend);

AllcontactfreqM=mean(meet\_kid, meet\_family, meet\_friend,phone\_kid, phone\_family, phone\_friend,email\_kid, email\_family, email\_friend);

\*\*\*adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(meet\_kid, meet\_family, meet\_friend) ge **2** then meet\_freqMadj=mean(meet\_kid, meet\_family, meet\_friend);

if n(phone\_kid, phone\_family, phone\_friend) ge **2** then phone\_freqMadj=mean(phone\_kid, phone\_family, phone\_friend);

if n(email\_kid, email\_family, email\_friend) ge **2** then email\_freqMadj=mean(email\_kid, email\_family, email\_friend);

if n(meet\_kid, meet\_family, meet\_friend,phone\_kid, phone\_family, phone\_friend,email\_kid, email\_family, email\_friend) ge **7** then

AllcontactfreqMadj=mean(meet\_kid, meet\_family, meet\_friend,phone\_kid, phone\_family, phone\_friend,email\_kid, email\_family, email\_friend);

label contact\_sp="frequency of interaction with spouse";

label meet\_freqM="frequency of meeting with kids, other family member and friend";

label phone\_freqM="frequency of speaking on the phone with kids, other family member and friend";

label email\_freqM="frequency of writing to kids, other family member and friend";

label AllcontactfreqM="frequency of contact kids, other family member and friend in person, over phone or via email";

label meet\_freqMadj="frequency of meeting with kids, other family member and friend--adjust for missingness";

label phone\_freqMadj="frequency of speaking on the phone with kids, other family member and friend--adjust for missingness";

label email\_freqMadj="frequency of writing to kids, other family member and friend--adjust for missingness";

label AllcontactfreqMadj="frequency of contact kids, other family member and friend in person, over phone or via email--adjust for missingness";

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Strains from spouse, family, friends;

\*\*spouse;

sp\_demand=**5**-sn12;

sp\_critic=**5**-sn13;

sp\_down=**5**-sn14;

sp\_nerve=**5**-sn15;

sp\_StrainM=mean(sp\_demand,sp\_critic,sp\_down,sp\_nerve);

\*\*\*adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(sp\_demand,sp\_critic,sp\_down,sp\_nerve) ge **3** then sp\_StrainMadj=mean(sp\_demand,sp\_critic,sp\_down,sp\_nerve);

\*\*kids;

kid\_demand=**5**-sn25;

kid\_critic=**5**-sn26;

kid\_down=**5**-sn27;

kid\_nerve=**5**-sn28;

kid\_StrainM=mean(kid\_demand,kid\_critic,kid\_down,kid\_nerve);

\*\*\*adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(kid\_demand,kid\_critic,kid\_down,kid\_nerve) ge **3** then kid\_StrainMadj=mean(kid\_demand,kid\_critic,kid\_down,kid\_nerve);

\*\*family;

family\_demand=**5**-sn35;

family\_critic=**5**-sn36;

family\_down=**5**-sn37;

family\_nerve=**5**-sn38;

family\_StrainM=mean(family\_demand,family\_critic,family\_down,family\_nerve);

\*\*\*adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(family\_demand,family\_critic,family\_down,family\_nerve) ge **3** then family\_StrainMadj=mean(family\_demand,family\_critic,family\_down,family\_nerve);

\*\*friend;

friend\_demand=**5**-sn45;

friend\_critic=**5**-sn46;

friend\_down=**5**-sn47;

friend\_nerve=**5**-sn48;

friend\_StrainM=mean(friend\_demand,friend\_critic,friend\_down,friend\_nerve);

\*\*\*adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(friend\_demand,friend\_critic,friend\_down,friend\_nerve) ge **3** then friend\_StrainMadj=mean(friend\_demand,friend\_critic,friend\_down,friend\_nerve);

\*\*overall;

All\_strainM=mean(friend\_StrainM,family\_StrainM,kid\_StrainM,sp\_StrainM);

All\_strainMadj=mean(friend\_StrainMadj,family\_StrainMadj,kid\_StrainMadj,sp\_StrainMadj);

label sp\_StrainM="strain or conflict with spouse";

label kid\_StrainM="strain or conflict with kids";

label family\_StrainM="strain or conflict with family";

label friend\_StrainM="strain or conflict with friends";

label All\_strainM="strain or conflict with spouse, kids, family and friends";

label sp\_StrainMadj="strain or conflict with spouse--adjust for missingness";

label kid\_StrainMadj="strain or conflict with kids--adjust for missingness";

label family\_StrainMadj="strain or conflict with family--adjust for missingness";

label friend\_StrainMadj="strain or conflict with friends--adjust for missingness";

label All\_strainMadj="strain or conflict with spouse, kids, family and friends--adjust for missingness";

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*relationship satisfaction scale\*\*\*\*\*\*\*\*\*\*\*\*;

/\*\*\*Sabourin, Stéphane; Valois, Pierre; Lussier, Yvan (2005). Development and validation of a brief version of the Dyadic Adjustment Scale with a nonparametric item analysis model.

Psychological Assessment, 17(1), 15-27. doi: 10.1037/1040-3590.17.1.15\*\*/

sn15br=**5**-sn15b;

sn15cr=**5**-sn15c;

DAS\_RQ=sum(sn15a, sn15br, sn15cr, sn15d);

\*\*\*adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(sn15a, sn15br, sn15cr, sn15d) ge **3** then DAS\_RQadj=sum(sn15a, sn15br, sn15cr, sn15d);

label DAS\_RQ="marital relationship quality\_sum score";

label DAS\_RQadj="marital relationship quality\_sum score--adjust for missingness";

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*spousal caregiving;

if sn172>**2** then sn172=**.**; /\*coding the out of range values\*/

spousal\_difficuty=sum(SN16a1,SN16b1,SN16c1,SN16d1,SN16e1,SN16f1,SN16g1,SN16h1,SN16i1,SN16j1,SN16k1,SN16l1);

spousal\_caregiving=sum(SN16a2,SN16b2,SN16c2,SN16d2,SN16e2,SN16f2,SN16g2,SN16h2,SN16i2,SN16j2,SN16k2,SN16l2);

spcare\_emostrain=sn171;

spcare\_phydemand=sn172;

spcare\_reward=sn173;

label spousal\_difficuty="spouse difficulties in daily activities";

label spousal\_caregiving="caregiving to spouse due to his or her difficulty in daily activities";

label spcare\_emostrain="spousal caregiving--emotional strain";

label spcare\_phydemand="spousal caregiving--physical demand";

label spcare\_reward="spousal caregiving--rewarding";

**run**;

# Family Medical History

**(16 items)**

**DESCRIPTION**

These questions were included to capture the medical history of participants’ closest family members.

**ASSOCIATED PAPERS**

N/A

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| NumBrothers | Subject's total number of brothers |  |
| NumSisters | Subject's total number of sisters |  |
| NumSons | Subject's total number of sons |  |
| NumDaughters | Subject's total number of daughters |  |
| Relationship | Determines to which family member the next eleven questions apply | 1 = Father  2 = Mother  3 = Brother 1  4 = Brother 2  5 = Brother 3  6 = Brother 4  7 = Brother 5  8 = Brother 6  9 = Sister 1  10 = Sister 2  11 = Sister 3  12 = Sister 4  13 = Sister 5  14 = Sister 6  15 = Son 1  16 = Son 2  17 = Son 3  18 = Son 4  19 = Son 5  20 = Son 6  21 = Daughter 1  22 = Daughter 2  23 = Daughter 3  24 = Daughter 4  25 = Daughter 5  26 = Daughter 6 |
| Alive | Subject is asked if this relative is currently alive. | 0=Not currently alive  1=Currently alive  9=It is unknown if currently alive or deceased  Null=Question was not asked |
| HowOldIfAlive | If currently alive, how old |  |
| AgeAtDeath | If deceased, how old when he/she passed away |  |
| CauseOfDeath | If deceased, what was the cause of death? |  |
| MemImp | Subject is asked if their relative has/had severe memory impairment? | 0=No  1=Yes  9=Unknown  Null=Question was not asked |
| AgeOfOnset | If relative has/had memory impairment, subject was asked what was the age of onset. |  |
| HeartDisease | Did relative ever have heart disease (angina, heart attack, bypass surgery or angioplasty)? | 0=No  1=Yes  9=Unknown  Null=Question was not asked |
| Stroke | Did relative ever have a stroke, mini-stroke TIA? | 0=No  1=Yes  9=Unknown  Null=Question was not asked |
| Diabetes | Did relative ever have diabetes? | 0=No  1=Yes  9=Unknown  Null=Question was not asked |
| Cancer | Did relative ever have cancer? | 0=No  1=Yes  9=Unknown  Null=Question was not asked |
| CancerType | If relative had cancer, ask what type of cancer. | Basal cell  Bladder  Bone  Brain  Breast  Cervical  Colorectal  Esophageal  Kidney  Leukemia  Lung  Melanoma  Non-Hodgkin's Lymphoma  Oral cavity  Other  Ovarian  Pancreatic  Prostrate  Squamous cell  Stomach  Throat  Uterine |

**SCORING OF SCALE**

N/A

# GDS

**(17 items)**

**DESCRIPTION**

This measure was chosen to measure depression in participants. It has been tested and used extensively with an older adult population.

**ASSOCIATED PAPERS**

Brink, T.L., Yesavage, J.A., Lum, O., Heersema, P., Adey, M.B., & Rose, T.L. (1982). Screening tests for geriatric depression. *Clinical Gerontologist, 1,* 37-44.

Sheikh, J.I., & Yesavage, J.A. (1986). Geriatric Depression Scale (GDS): Recent evidence and development of a shorter version. *Clinical Gerontology: A Guide to Assessment and Intervention, 5,* 165-173.

Sheikh, J.I., Yesavage, J.A., Brooks, J.O., Friedman, L.F., Gratzinger, P., Hill, R.D., Zadeik, A., & Crook, T. (1991). Proposed factor structure of the Geriatric Depression Scale. International Psychogeriatrics, 3, 23-28.

Yesavage, J.A., Brink, T.L., Rose, T.L., Lum, O., Huang, V., Adey, M.B., & Leirer, V.O. (1983). Development and validation of a geriatric depression screening scale: A preliminary report. *Journal of Psychiatric Research, 17,* 37-49.

**SUBJECT INSTRUCTIONS:**

For each question, please choose the best answer for how you have felt over the past week. Please click YES or NO.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| GDSDate | Date questionnaire was completed |  |
| GDS1 | Are you basically satisfied with your life? | Yes=0  **No=1** |
| GDS2 | Have you dropped many of your activities and interests? | **Yes=1**  No=0 |
| GDS3 | Do you feel that your life is empty? | **Yes=1**  No=0 |
| GDS4 | Do you get bored? | **Yes=1**  No=0 |
| GDS5 | Are you in good spirits most of the time? | Yes=0  **No=1** |
| GDS6 | Are you afraid that something bad is going to happen to you? | **Yes=1**  No=0 |
| GDS7 | Do you feel happy most of the time? | Yes=0  **No=1** |
| GDS8 | Do you often feel helpless? | **Yes=1**  No=0 |
| GDS9 | Do you prefer to stay home at night rather than go out and do new things? | **Yes=1**  No=0 |
| GDS10 | Do you feel that you have more problems with memory than most? | **Yes=1**  No=0 |
| GDS11 | Do you think that it is wonderful to be alive now? | Yes=0  **No=1** |
| GDS12 | Do you feel pretty worthless right now? | **Yes=1**  No=0 |
| GDS13 | Do you feel full of energy? | Yes=0  **No=1** |
| GDS14 | Do you feel that your situation is hopeless? | **Yes=1**  No=0 |
| GDS15 | Do you think that most people are better off than you are? | **Yes=1**  No=0 |
| GDSComments | Explanatory Comments |  |

**SCORING OF SCALE**

GDSScore=GDS Score (**composite score not validated)**

A score > 5 points is suggestive of depression; a score of >= 10 points is almost always indicative of depression

# Lawton Brody

**(15 items)**

**DESCRIPTION**

This measure was selected to assess the functioning and autonomy of the participants.

**ASSOCIATED PAPERS**

Lawton, M. P., & Brody, E. M. (1969). Assessment of older people: Self-maintaining and instrumental activities of daily living. *The Gerontologist, 9,* 179-186.

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| ADL01 | Relationship of person completing the form to the subject | 1=Self  2=Spouse  3=Son  4=Daughter  5=Friend  6=Other |
| ADL01Other | If ADL01=6, then ask "Other relationship" | (text) |
| ADL1 | Ability to use telephone | 0=Not Applicable  1=Operates telephone on own initiative-looks up and dials numbers, etc.  2=Dials a few well-known numbers  3=Answers telephone but does not dial  4=Does not use telephone at all |
| ADL2 | Shopping | 0=Not Applicable  1=Takes care of all shopping needs independently  2=Shops independently for small purchases  3=Needs to be accompanied on any shopping trip  4=Completely unable to shop |
| ADL5 | Food preparation | 0=Not Applicable  1=Plans, prepares and serves adequate meals independently  2=Prepares adequate meals if supplied with ingredients  3=Heats, serves and prepares meals, but does not maintain adequate diet  4=Needs to have meals prepared and served |
| ADL7 | Housekeeping | 0=Not Applicable  1=Maintains house alone or with occasional assistance  2=Performs light daily tasks such as dishwashing, bedmaking  3=Performs light daily tasks, but cannot maintain acceptance level of cleanliness  4=Needs help with all home maintenance tasks  5=Does not participate in any housekeeping tasks |
| ADL8 | Laundry | 0=Not Applicable  1=Does personal laundry completely  2=Launders small items, rinses stockings, etc.  3=All laundry must be done by others |
| ADL9 | Mode of transportation | 0=Not Applicable  1=Travels independently on public transportation or drives own car  2=Arranges own travel via taxi, but does not otherwise use public transportation  3=Travels on public transportation when accompanied by another  4=Travel limited to taxi or automobile- with assistance of another  5=Does not travel at all |
| ADL10 | Responsibility for own medications | 0=Not Applicable  1=Is responsible for taking own medication in correct dosages at correct time  2=Takes responsibility if medication is prepared in advance in separate dosage  3=Is not capable of dispensing own medication |
| ADL11 | Ability to handle finances | 0=Not Applicable  1=Manages financial matters independently (budgets, writes checks, pays rent, etc.) collects and keeps track of income  2=Manages day-to-day purchases, but needs help with banking, major purchases, etc.  3=Incapable of handling money |
| ADL13 | Toilet | 1=Cares for self at toilet completely  2=Needs to be reminded, or needs help in cleaning self, or has rare (weekly at most) accidents  3=Soiling or wetting while asleep more than once a week  4=Soiling or wetting awake more than once a week  5=No control of bowels or bladder |
| ADL15 | Bathing | 1=Bathes self (tub, shower, sponge bath) without help  2=Bathes self with help in getting in and out of tub  3=Washes face and hands only, but cannot bathe rest of body  4=Does not wash self but is cooperative with those who bathe him/her  5=Does not try to wash self and/or resists efforts to keep him or her clean |
| ADL16 | Feeding | 1=Eats without assistance  2=Eats with minor assistance at meal time and/or with special preparation of food, or help in cleaning up after meals  3=Feeds self with moderate assistance and is untidy  4=Requires extensive assistance for all meals  5=Does not feed self at all and resists efforts of others to feed him |
| ADL18 | Dressing | 1=Dresses, undresses and selects clothes from own wardrobe  2=Dresses and undresses self with minor assistance  3=Needs moderate assistance in dressing or selection of clothes  4=Needs major assistance in dressing, but cooperates with efforts of others to help  5=Completely unable to dress self and resist efforts of others to help |
| ADL20 | Grooming (neatness, hair, etc.) | 1=Always neatly dressed, well-groomed, without assistance  2=Grooms self adequately with occasional minor assistance, e.g. shaving  3=Needs moderate and regular assistance or supervision in grooming  4=Needs total grooming care, but can remain well-groomed after help from others  5=Actively negates all efforts of others to maintain grooming |
| ADL21 | Physical Ambulation | 1=Goes about grounds or city  2=Ambulates within residence or about one block distance  3=Ambulates with the assistance of: (see next five variables) |
| ADL21Person | If ADL21=3 then ask if subject ambulates with the assistance of another person | 0=Does not receive assistance from another person  1=Does receive assistance from another person |
| ADL21Railing | If ADL21=3 then ask if subject ambulates with the assistance of a railing | 0=Does not use a railing when walking  1=Does use a railing when walking |
| ADL21Cane | If ADL21=3 then ask if subject ambulates with the assistance of a cane | 0=Does not use a cane  1=Does use a cane |
| ADL21Walker | If ADL21=3 then ask if subject ambulates with the assistance of a walker | 0=Does not use a walker  1=Does use a walker |
| ADL21Wheelchair | If ADL21=3 then ask if subject ambulates with the assistance of a wheelchair | 0=Does not use a wheelchair  1=Does use a wheelchair |
| ADL21WheelchairDescrip | If ADL21Wheelchair=1 then select one of the following: | 1=Sits unsupported and propels self  2=Cannot propel self without help  3=Bedridden more than half the time |

**SCORING OF SCALE**

IADL=Instrumental Activities of Daily Living Scale

IADLA: If [ADL1] =1 Or [ADL1] =2 Or [ADL1] =3 then 1, else 0

IADLB: If [ADL2] =1 then 1, else 0

IADLC: If [ADL5] =1 And [Sex] ="F" then 1, else 0

IADLD: If [ADL7] Not Equal To 5 And [Sex] ="F" then 1, else 0

IADLE: If [ADL8] Not Equal To 3 And [Sex] ="F" then 1, else 0

IADLF: If [ADL9] =1 And [Sex] ="F" then 1, else

If [ADL9] =2 And [Sex] ="F" then 1, else

If [ADL9] =3 And [Sex] ="F" then 1, else

If [ADL9] =1 And [Sex] ="M" then 1, else

If [ADL9] =2 And [Sex] ="M" then 1, else 0

IADLG: If [ADL10] =1 then 1, else 0

IADLH: If [ADL11] =3 then 0, else 1

IADL: [IADLA]+[IADLB]+[IADLC]+[IADLD]+[IADLE]+[IADLF]+[IADLG]+[IADLH]

PSMS=Physical Self-Maintenance Scale

PSMSA: If [ADL13] =1 then 1, else 0

PSMSB: If [ADL16] =1 then 1, else 0

PSMSC: If [ADL18] =1 then 1, else 0

PSMSD: If [ADL20] =1 then 1, else 0

PSMSE: If [ADL21] =1 then 1, else 0

PSMSF: If [ADL15] =1 then 1, else 0

PSMS: [PSMSA]+[PSMSB]+[PSMSC]+[PSMSD]+[PSMSE]+[PSMSF]

**data** wk;

set wk;

\*\*rescaling the IADL variables;

if adl1 = **.** then iadlA = **.**;

else if adl1 = **1** or adl1 = **2** or adl1 = **3** then iadlA=**1**;

else iadlA=**0**;

if adl2 = **.** then iadlB = **.**;

else if adl2 = **1** then iadlB=**1** ;

else iadlB=**0**;

if adl5 = **.** then iadlC = **.**;

else if adl5 = **1** and sex = "F" then iadlC=**1**;

else iadlC=**0**;

if adl7 = **.** then iadlD = **.**;

else if adl7 ne **5** and sex = "F" then iadlD=**1**;

else iadlD=**0**;

if adl8 = **.** then iadlE = **.**;

else if adl8 ne **3** and sex = "F" then iadlE=**1**;

else iadlE=**0**;

if adl9 = **.** then iadlF = **.**;

else if adl9 = **1** and sex = "F" then iadlF=**1**;

else if adl9 = **2** and sex = "F" then iadlF=**1**;

else if adl9 = **3** and sex = "F" then iadlF=**1**;

else if adl9 = **1** and sex = "M" then iadlF=**1**;

else if adl9 = **2** and sex = "M" then iadlF=**1**;

else iadlF=**0**;

**run**;

**data** wk;

set wk;

if adl10 = **.** then iadlG = **.**;

else if adl10 = **1** then iadlG=**1**;

else iadlG=**0**;

if adl11 = **.** then iadlH = **.**;

else if adl11 = **3** then iadlH=**0**;

else iadlH=**1**;

\*\*\*\*\*\*\*\*\*\*\*\*IADL sum score\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

iadl\_sum = sum(of iadlA iadlB iadlC iadlD iadlE iadlF iadlG iadlH);

\*\*\*\*\*\*\*\*\*\*\*\*IADL sum score--adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(iadlA, iadlB, iadlC, iadlD, iadlE, iadlF, iadlG, iadlH) ge **6** then iadl\_adjsum = sum(of iadlA iadlB iadlC iadlD iadlE iadlF iadlG iadlH);

\*\*rescaling the PSMS variables;

if adl13 = **.** then psmsA = **.**;

else if adl13 = **1** then psmsA = **1**;

else psmsA = **0**;

if adl16 = **.** then psmsB = **.**;

else if adl16 = **1** then psmsB = **1**;

else psmsB = **0**;

if adl18 = **.** then psmsC = **.**;

if adl18 = **1** then psmsC = **1**;

else psmsC = **0**;

if adl20 = **.** then psmsD = **.**;

else if adl20 = **1** then psmsD = **1**;

else psmsD = **0**;

if adl21 = **.** then psmsE = **.**;

else if adl21 = **1** then psmsE = **1**;

else psmsE = **0**;

if adl15 = **.** then psmsF = **.**;

else if adl15 = **1** then psmsF = **1**;

else psmsF = **0**;

\*\*\*\*\*\*\*\*\*\*\*\*PSMS (Physical Self-Maintenance Scale) sum score\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

psms\_sum = sum(of psmsA psmsB psmsC psmsD psmsE psmsF);

\*\*\*\*\*\*\*\*\*\*\*\*PSMS (Physical Self-Maintenance Scale) sum score--adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(psmsA, psmsB, psmsC, psmsD, psmsE, psmsF) ge **5** then psms\_adjsum = sum(of psmsA psmsB psmsC psmsD psmsE psmsF);

**run**;

label iadl\_sum="iadl sum score";

label iadl\_adjsum="iadl sum score -- adjust for missingness";

label psms\_sum="psms sum score";

label psms\_adjsum="psms sum score -- adjust for missingness";

\*\*NOTE: ADL13 IS MISSING. HOW DOES THIS IMPACT OUR SUM SCORES FOR THE PSMS? SHOULD CHECK THIS BEFORE FINAL DATA PROCESSING;

\*\*NOTE: iadlH has no variability

# FAST

**(19 items)**

**DESCRIPTION**

This measure was selected to assess functional performance and deterioration as well as activities of daily living in participants.

**ASSOCIATED PAPERS**

Reisberg, B. (1988). Functional assessment staging (fast). *Psychopharmacology Bulletin, 24,* 653-659.

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| FASTINFR | Respondent’s relationship to subject | 1=Self  2=Spouse  3=Son  4=Daughter  5=Friend  6=Other (specify) |
| FAST1 | No difficulties either subjectively or objectively | 0=No  1=Yes |
| FAST2 | Complains of forgetting location of objects, subjective work difficulties | 0=No  1=Yes |
| FAST3 | Decreased functioning evident to family (coworkers); difficulty e.g. in traveling to new locations | 0=No  1=Yes |
| FAST4 | Decreased ability to perform complex tasks (e.g. planning dinner for guests, handling finances, marketing). | 0=No  1=Yes |
| FAST5 | Requires assistance in choosing proper clothing | 0=No  1=Yes |
| FAST6A | Difficulty putting on clothing properly | 0=No  1=Yes |
| FAST6B | Unable to bathe properly | 0=No  1=Yes |
| FAST6C | Inability to handle mechanics of toileting (i.e. forgets to flush, doesn’t wipe properly) | 0=No  1=Yes |
| FAST6D | Urinary incontinence | 0=No  1=Yes |
| FAST6E | Fecal incontinence | 0=No  1=Yes |
| FAST7A | Ability to speak limited (1 to 5 words a day) | 0=No  1=Yes |
| FAST7B | All intelligible vocabulary lost | 0=No  1=Yes |
| FAST7C | Nonambulatory | 0=No  1=Yes |
| FAST7D | Unable to sit up independently | 0=No  1=Yes |
| FAST7E | Unable to smile | 0=No  1=Yes |
| FAST7F | Unable to hold head up | 0=No  1=Yes |
| FAST | Score |  |
| Tester | n/a |  |

**SCORING OF SCALE**

Add up total number of “yes” responses to calculate FAST score

# Free and Cued Selective Reminding Test- Delay

**(32 items)**

**DESCRIPTION**

This test is a descendant of the original Buschke (1973) selective reminding test, which presented a new way of investigating item storage and recall memory. On the first trial, all the items are presented. Over subsequent recall trials, the Subject is presented with only the items he/she did not recall on the prior trial.

**ASSOCIATED PAPERS**

Grober, E., Sanders, A. E., Hall, C., & Lipton, R. B. (2010). Free and cued selective reminding identifies very mild dementia in primary care. *Alzheimer Disease and Associated Disorders, 24,* 284-290.

**SUBJECT INSTRUCTIONS:**

Please see descriptions below:

Delayed Free Recall Administration: *“Do you remember the series of pictures on the computer that I had you learn earlier? Now I would like you to try to recall as many of those pictures as you can, in any order.”* Participant will have 90 seconds for delayed recall of items. If participant says that they can’t recall any more items before time is up, say, *“Relax and take a few more seconds. See if you can think of any other objects.”*

Delayed Cued Recall Administration: After free recall, give cues for missing items: *“Now I’m going to give you the categories that go with the objects that you did not recall.”*

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| Word1Run4 | When a picture of Item 1 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W1FreeOrder4 | If Item 1 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word2Run4 | When a picture of Item 2 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W2FreeOrder4 | If Item 2 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word3Run4 | When a picture of Item 3 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W3FreeOrder4 | If Item 3 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word4Run4 | When a picture of Item 4 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W4FreeOrder4 | If Item 4 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word5Run4 | When a picture of Item 5 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W5FreeOrder4 | If Item 5 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word6Run4 | When a picture of Item 6 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W6FreeOrder4 | If Item 6 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word7Run4 | When a picture of Item 7 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W7FreeOrder4 | If Item 7 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word8Run4 | When a picture of Item 8 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W8FreeOrder4 | If Item 8 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word9Run4 | When a picture of Item 9 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W9FreeOrder4 | If Item 9 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word10Run4 | When a picture of Item 10 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W10FreeOrder4 | If Item 10 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word11Run4 | When a picture of Item 11 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W11FreeOrder4 | If Item 11 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word12Run4 | When a picture of Item 12 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W12FreeOrder4 | If Item 12 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word13Run4 | When a picture of Item 13 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W13FreeOrder4 | If Item 13 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word14Run4 | When a picture of Item 14 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W14FreeOrder4 | If Item 14 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word15Run4 | When a picture of Item 15 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W15FreeOrder4 | If Item 15 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |
| Word16Run4 | When a picture of Item 16 was shown to the subject, how they named it. | 1=Freely named  2=A semantic cue had to be given  3=A phonemic cue had to be given  4=Failed to name item even with semantic and phonemic cues |
| W16FreeOrder4 | If Item 16 was freely record, the order number of the recall | 1=1st item freely recalled  2=2nd item freely recalled  3=3rd item freely recalled  4=4th item freely recalled  5=5th item freely recalled  6=6th item freely recalled  7=7th item freely recalled  8=8th item freely recalled  9=9th item freely recalled  10=10th item freely recalled  11=11th item freely recalled  12=12th item freely recalled  13=13th item freely recalled  14=14th item freely recalled  15=15th item freely recalled  16=16th item freely recalled |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

DelFreeRecall=Delayed Free Recall score (Range 0 to 16)

DelCuedRecall=Delayed Cued Recall score (Range 0 to 16)

DelTotRecall=Delayed Total Recall score = DelFreeRecall + DelCuedRecall (Range 0 to 16)

# Craft Story 21 Recall (Immediate)

**(73 items)**

**DESCRIPTION**

This test assesses memory by looking at the ability to recall a short story.

**ASSOCIATED PAPERS**

Craft, S., Newcomer, J., Kanne, S., Dagogo-Jack, S., Cryer, P., Sheline, Y.,…Alderson, A. (1996). Memory improvement following induced hyperinsulinemia in Alzheimer’s disease. *Neurobiology of Aging, 17,* 123-130.

**SUBJECT INSTRUCTIONS:**

Making sure you have the participant’s attention, read the following instructions aloud. Then read the story slowly, articulating clearly and with normal inflection. Say: “I am going to read you a story. Listen carefully, and when I am through, I want you to tell me everything you can remember. Try to use the same words I use but you may also use your own words. The story is:”

“Maria’s child Ricky placed soccer every Monday at 3:30. He liked going to the field behind their house and joining the game. One day, he kicked the ball so hard that it went over the neighbor’s fence where three large dogs lived. The dogs’ owner heard loud barking, came out, and helped them retrieve the ball.”

As soon as the story is over, give the recall instruction: “Now tell me the story I just told you. Try to remember as much as you can.”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| MariasI | Craft 21 Verbatim Immediate: Subject must say "Maria's" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ChildI | Craft 21 Verbatim Immediate: Subject must say "child" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| RickyI | Craft 21 Verbatim Immediate: Subject must say "Ricky" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| PlayedI | Craft 21 Verbatim Immediate: Subject must say "played" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| SoccerI | Craft 21 Verbatim Immediate: Subject must say "soccer" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| EveryI | Craft 21 Verbatim Immediate: Subject must say "every" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| MondayI | Craft 21 Verbatim Immediate: Subject must say "Monday" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ThreeThirtyI | Craft 21 Verbatim Immediate: Subject must say "3:30" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HeI | Craft 21 Verbatim Immediate: Subject must say "he" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LikedI | Craft 21 Verbatim Immediate: Subject must say "liked" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| GoingI | Craft 21 Verbatim Immediate: Subject must say "going" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| FieldI | Craft 21 Verbatim Immediate: Subject must say "field" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| BehindI | Craft 21 Verbatim Immediate: Subject must say "behind" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| TheirI | Craft 21 Verbatim Immediate: Subject must say "their" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HouseI | Craft 21 Verbatim Immediate: Subject must say "house" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| JoiningI | Craft 21 Verbatim Immediate: Subject must say "joining" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| GameI | Craft 21 Verbatim Immediate: Subject must say "game" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OneI | Craft 21 Verbatim Immediate: Subject must say "one" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| DayI | Craft 21 Verbatim Immediate: Subject must say "day" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| He2I | Craft 21 Verbatim Immediate: Subject must say "he" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| KickedI | Craft 21 Verbatim Immediate: Subject must say "kicked" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| BallI | Craft 21 Verbatim Immediate: Subject must say "ball" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| SoI | Craft 21 Verbatim Immediate: Subject must say "so" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HardI | Craft 21 Verbatim Immediate: Subject must say "hard" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ItI | Craft 21 Verbatim Immediate: Subject must say "it" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| WentI | Craft 21 Verbatim Immediate: Subject must say "went" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OverI | Craft 21 Verbatim Immediate: Subject must say "over" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| NeighborsI | Craft 21 Verbatim Immediate: Subject must say "neighbor's" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| FenceI | Craft 21 Verbatim Immediate: Subject must say "fence" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ThreeI | Craft 21 Verbatim Immediate: Subject must say "three" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LargeI | Craft 21 Verbatim Immediate: Subject must say "large" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| DogsI | Craft 21 Verbatim Immediate: Subject must say "dogs" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LivedI | Craft 21 Verbatim Immediate: Subject must say "lived" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| Dogs2I | Craft 21 Verbatim Immediate: Subject must say "dogs'" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OwnerI | Craft 21 Verbatim Immediate: Subject must say "owner" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HeardI | Craft 21 Verbatim Immediate: Subject must say "heard" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LoudI | Craft 21 Verbatim Immediate: Subject must say "loud" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| BarkingI | Craft 21 Verbatim Immediate: Subject must say "barking" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| CameI | Craft 21 Verbatim Immediate: Subject must say "came" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OutI | Craft 21 Verbatim Immediate: Subject must say "out" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HelpedI | Craft 21 Verbatim Immediate: Subject must say "helped" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ThemI | Craft 21 Verbatim Immediate: Subject must say "them" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| RetrieveI | Craft 21 Verbatim Immediate: Subject must say "retrieve" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| Ball2I | Craft 21 Verbatim Immediate: Subject must say "ball" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| VerbatimI | Craft 21 Verbatim Immediate Score |  |
| ZScoreCraft21VerbatimImm | Craft21 Verbatim Immediate Z Score |  |
| MariasIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "Maria's" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| ChildIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "child" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| RickyIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "Ricky" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| PlayedIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "played" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| SoccerIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "soccer" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| EveryMondayIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "every Monday" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| AtThreeThirtyIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "at 3:30" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| HeLikedGoingToTheFieldIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "he liked going to the field" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| BehindTheirHouseIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "behind their house" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| AndJoiningIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "and joining" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheGameIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "the game" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| OneDayIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "one day" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| HeKickedIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "he kicked" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheBallIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "the ball" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| SoHardIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "so hard" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| ThatItWentOverIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "that it went over" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheNeighborsIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "the neighbor's" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| FenceIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "fence" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| WhereThreeIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "where three" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| LargeDogsLivedIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "large dogs lived" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheDogsOwnerIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "the dogs' owner" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| HeardLoudbarkingIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "heard loud barking" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| CameOutIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "came out" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| AndHelpedThemIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "and helped them" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| RetrieveTheBallIP | Craft 21 Paraphrase Immediate: Subject must paraphrase "retrieve the ball" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| ParaphraseI | Craft 21 Paraphrase Immediate |  |
| ZScoreCraft21ParaphraseImm | Craft21 Paraphrase Immediate Z Score |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

VerbatimI=Craft 21 Verbatim Immediate

ZScoreCraft21VerbatimImm=Craft 21 Verbatim Immediate Z Score

ParaphraseI=Craft 21 Paraphrase Immediate

ZScoreCraft21ParaphraseImm=Craft 21 Paraphrase immediate z score

# Benson Complex Figure

**(10 items)**

**DESCRIPTION**

This measure was selected to assess visuoconstructional and visual memory functioning in older adults.

**ASSOCIATED PAPERS**

Possin, K. L., Laluz, V. R., Alcantar, O. Z., Miller, B. L., & Kramer, J. H. (2011). Distinct neuroanatomical substrates and cognitive mechanisms of figure copy performance in Alzheimer’s disease and behavioral variant frontotemporal dementia. Neuropsychologia, 49, 43-48.

**SUBJECT INSTRUCTIONS:**

Give subject a pen, place sheet with figure in front of subject. Say: “*Please copy this design as best you can*.” Please do not use colored pencils for each element because this can be disruptive and will not be consistent with other ADCs. Instead, please write notes to track progress. Have subject make his or her copy in the lower half of the page below the figure. When design is completed, leave the figure in front of the subject for 5 seconds and say, “*Be sure to remember this design, because I’ll ask you to draw it again later from memory*.”

Subjects should be given as much time as needed to complete the tests. Do not administer other figure-copy tests during the delay, and do not administer the Rey-Osterrieth before the Benson on the same day.

Allow approximately 10-15 minutes before administering the delayed recall portion of the test.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| Benson1I | Four-sided 90° angles, width > height, any gaps or overlaps < 8mm | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson2I | Reasonably straight lines; any gaps or overlaps < 8mm | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson3I | Connects at middle third, no overlap with diagonals | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson4I | Reasonably round, doesn’t touch sides | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson5I | Vertical lines > ½ distance to diagonals, width > height, 90° angles | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson6I | Connects below #3, top of square above bottom | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson7I | Vertex corresponds to middle third; any gaps or overlaps < 8mm | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson8I | Gap b/w #7 < 5mm, angle at end of stem = 90° | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| BensonScoreI | Benson Complex Figure Immediate Total Score |  |
| ZScoreBensonImm | Benson Complex Figure Immediate Z Score |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

ZScoreBensonImm=Benson Complex Figure Immediate Z Score

Total score: 1-17 (sum of all elements)

Each figural element is scored as 2 points if the element is drawn accurately and placed correctly in the figure (1 point for accuracy, 1 point for placement). Score 1 point if the element is poorly drawn but placed correctly or is or is correctly drawn but misplaced, and 0 points if the element is neither accurately drawn nor correctly placed.

# Number Span Test: Forward

**(16 items)**

**DESCRIPTION**

This measure was chosen to assess working memory.

**ASSOCIATED PAPERS**

Weintraub, S., Besser, L., Dodge, H. H., Teylan, M., Ferris, S., Goldstein, F. C., …Morris, J. C. (2018). Version 3 of the alzheimer disease centers’ neuropsychological test battery in the uniform data set (uds). Alzheimer Disease and Associated Disorders, 32, 10-17.

**SUBJECT INSTRUCTIONS:**

Say, “*I am going to ask you to repeat some numbers for me. Wait until I finish saying the numbers and then repeat them in the same order. For example, if I say 1-8-7, you would say 1-8-7. If I saw 2-9-8, what would you say?*” If the subject gives the wrong answer, say, “*Actually, you would say 2-9-8*.”

Say, “*Repeat only the numbers I say each time*.” Then start with the test items. Before each item, say, “*Ready?*”

Stop testing after two consecutive failures of the same span length.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| NumSpanF3a | 1-8-4 | 0=incorrect  1=correct |
| NumSpanF3b | 2-7-9 | 0=incorrect  1=correct |
| NumSpanF4a | 4-1-6-2 | 0=incorrect  1=correct |
| NumSpanF4b | 8-1-9-5 | 0=incorrect  1=correct |
| NumSpanF5a | 6-4-9-2-8 | 0=incorrect  1=correct |
| NumSpanF5b | 7-3-8-6-1 | 0=incorrect  1=correct |
| NumSpanF6a | 3-9-2-4-7-5 | 0=incorrect  1=correct |
| NumSpanF6b | 6-2-8-3-1-9 | 0=incorrect  1=correct |
| NumSpanF7a | 9-6-4-7-1-5-3 | 0=incorrect  1=correct |
| NumSpanF7b | 7-4-9-2-6-8-1 | 0=incorrect  1=correct |
| NumSpanF8a | 4-7-2-5-8-1-3-9 | 0=incorrect  1=correct |
| NumSpanF8b | 2-9-5-7-3-6-1-8 | 0=incorrect  1=correct |
| NumSpanF9a | 6-8-4-1-9-3-5-2-7 | 0=incorrect  1=correct |
| NumSpanF9b | 1-3-9-2-7-5-8-6-4 | 0=incorrect  1=correct |
| NumSpanCorF | Total correct |  |
| NumSpanLongF | Length of longest correct series |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

NumSpanCorF=Number span raw forward

NumSpanLongF=Length of longest correct forward series – must get both a and b right

ZScoreNumSpanF=Number span forward Z score

NumSpanCorF = NumSpanF3a +NumSpanF3b + NumSpanF4a +NumSpanF4b + NumSpanF5a

+NumSpanF5b + NumSpanF6a +NumSpanF6b + NumSpanF7a +NumSpanF7b + NumSpanF8a

+NumSpanF8b + NumSpanF9a +NumSpanF9b

# Number Span Test: Backward

**(16 items)**

**DESCRIPTION**

This measure was chosen to assess working memory.

**ASSOCIATED PAPERS**

Weintraub, S., Besser, L., Dodge, H. H., Teylan, M., Ferris, S., Goldstein, F. C., …Morris, J. C. (2018). Version 3 of the alzheimer disease centers’ neuropsychological test battery in the uniform data set (uds). Alzheimer Disease and Associated Disorders, 32, 10-17.

**SUBJECT INSTRUCTIONS:**

Say, “*I am now going to ask you to repeat some numbers for me but to reverse them from the way I say them. Wait until I finish saying the numbers and then repeat them in reverse order, or backward. For example, if I say 3-7-4, you would say 4-7-3. If I say 7-3-6, what would you say?*” If the subject gives the wrong answer, say, “*Actually, you would say 6-3-7*.”

Say, “*Repeat only the numbers I say each time, backward, in reverse order*.” Then start with the test items. Before each item, say, “*Ready?*”

Stop testing after two consecutive failures of the same span length.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| NumSpanB2a | 2-5 | 0=incorrect  1=correct |
| NumSpanB2b | 4-7 | 0=incorrect  1=correct |
| NumSpanB3a | 2-9-6 | 0=incorrect  1=correct |
| NumSpanB3b | 3-7-4 | 0=incorrect  1=correct |
| NumSpanB4a | 7-1-8-6 | 0=incorrect  1=correct |
| NumSpanB4b | 5-1-6-3 | 0=incorrect  1=correct |
| NumSpanB5a | 5-2-4-9-1 | 0=incorrect  1=correct |
| NumSpanB5b | 9-1-7-3-6 | 0=incorrect  1=correct |
| NumSpanB6a | 6-8-5-7-9-2 | 0=incorrect  1=correct |
| NumSpanB6b | 8-1-6-3-5-9 | 0=incorrect  1=correct |
| NumSpanB7a | 1-5-2-9-7-3-8 | 0=incorrect  1=correct |
| NumSpanB7b | 7-3-1-6-8-5-2 | 0=incorrect  1=correct |
| NumSpanB8a | 3-6-4-9-5-2-7-1 | 0=incorrect  1=correct |
| NumSpanB8b | 6-3-5-7-1-8-2-9 | 0=incorrect  1=correct |
| NumSpanCorB | Total correct |  |
| NumSpanLongB | Length of longest correct backward series |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

NumSpanCorB=Number span raw backward

ZScoreNumSpanB=Number span backward Z score

AvgZScoreNumSpan=Average Z score of ZScoreNumSpanF and ZScoreNumSpanB

NumSpanCorB = NumSpanB2a +NumSpanB2b + NumSpanB3a +NumSpanB3b + NumSpanB4a +

NumSpanB4b + NumSpanB5a +NumSpanB5b + NumSpanB6a +NumSpanB6b + NumSpanB7a +

NumSpanB7b + NumSpanB8a + NumSpanB8b

# Trail Making Test

**(9 items)**

**DESCRIPTION**

This measure was selected to screen for participants’ brain damage.

**ASSOCIATED PAPERS**

Corrigan, J.D., & Hinkeldey, M.S. (1987). Relationships between parts a and b of the trail making test. *Journal of Clinical Psychology, 43,* 402-409.

Reitan, R. M. (1958). Validity of the trail making test as an indicator of organic brain damage. Perceptual and Motor Skills, 8, 271-276.

**SUBJECT INSTRUCTIONS:**

PART A:

Place the form for Sample A in front of the subject. Read aloud the instructions: “There are numbers in circles on this page. Please take the pencil and draw a line from one number to the next, in order. Start at 1 [point to the number], then go to 2 [point to the number], then go to 3 [point to the number] and so on. Please try not to life the pencil as you move from one number to the next. Work as quickly as you can. Begin here [point to “Begin” number] and end here [point to “End” number].”

If the subject makes an error, mark through the line and go back to the point at which the error was made and say, for example, “You were at number 2. What is the next number?” Wait for the subject’s response. If the subject indicates 3, say “Please start here [point to the 2] and continue.” If the subject indicates any other number, say “The next number would be 3.” Then point to 2 and say “Please start here and continue.” If the subject cannot complete the sample and clearly does not comprehend the task, do not administer Test A. In that event, on the recording form enter the appropriate code (996=cognitive/behavioral problem).

If the subject completes the sample, go to Test A. Say: “On this page there are more numbers in circles. Please take the pencil and draw a line from one circle to the next, in order. Start at 1 [point to “Begin” number] and end here [point to “End” number]. Please try not to lift the pencil as you move from one circle to the next. Work as quickly as you can.” Start timing as soon as the instruction is given to begin. Note: In giving the instructions for the test form (as opposed to the sample), the examiner tells the subject to move from one *circle* to the next and does not use the word “number”.

If the subject makes an error, mark through the line and say “That one was not correct.” Point to the last correct number and say “Please start here and continue.” This is done for each error. The examiner should attempt to provide corrections as quickly as possible. Stop timing when the Trail is completed, or stop subject when the maximum time is reached. Allow a maximum of 150 seconds for the test.

PART B:

Place the form for Sample B in front of the subject. Present the sample for Part B even if the subject failed the sample for Part A. Read aloud the instructions: “There are numbers and letters in circles on this page. Please take the pencil and draw a line, alternating in order between the numbers and letters. Start at number 1 [point to the number], then go to the first letter, A [point to the letter], then go to the next number, 2 [point to the number], and then the next letter, B [point to the letter], and so on. Please try not to lift the pencil as you move from one number or letter to the next. Work as quickly as you can.”

If the subject makes an error, mark through the line and go back to the point at which the error was made and say, for example, “You were at number 2. What is the next letter?” Wait for the subject’s response. If it is correct, say “Please start here [point to the 2] and continue.” If the subject picks the wrong item, say “The next letter would be B [point to the B].” Then point to the 2 and say “Please start here and continue.” If the subject cannot complete the sample and clearly does not comprehend the task, do not administer the test. Enter the appropriate code (996=cognitive/behavioral problem).

If the subject completes the sample correctly, go to Test B. Say: “on this page, there are more numbers and letters in circles. Please take the pencil and draw a line from one circle to the next, alternating in order between the numbers and letters. Start at 1 [point to the “Begin” number] and end here [point to the “End” number]. Please try not to lift the pencil as you move from one circle to the next. Work as quickly as you can.” Start timing as soon as the instruction is given to begin. Note: In giving the instructions for the test form (as opposed to the sample), the examiner tells the subject to move from one *circle* to the next and does not use the words “number” or letter”.

If the subject makes an error, mark through the line and say, “That one was not correct.” Point to the last correct item and say, “Please start here and continue.” This is done for each error. Do not indicate whether the next item should be a number or a letter. The examiner should attempt to provide corrections as quickly as possible. Stop timing when the Trail is completed, or stop subject when the maximum time is reached. Allow a maximum of 300 seconds for the test.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| Tr-A1 | Trails time for test A (seconds) |  |
| TrlAZScore | Trails A Z Score |  |
| Tr-A2 | Trails errors for test A |  |
| Tr-AStatus | Status of Trails A | 1 = Test Completed  2 = Administered but Subject could not complete  3 = Not administered |
| Tr-B1 | Trails time for test B (seconds) |  |
| TrlBZScore | TrailsB Z Score |  |
| Tr-B2 | Trails errors for test B |  |
| Tr-BStatus | Status of Trails B | 1 = Test Completed  2 = Administered but Subject could not complete  3 = Not administered |
| TrailNotes | Any Trails related notes recorded by the tester |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

The score is obtained as the number of seconds needed to finish each part. Errors are pointed out immediately by the examiner and contribute to the score only insofar as additional time is needed for corrections. Raw scores (in seconds) are converted to a 10-point scale with 10 as the best possible score.

# Craft Story 21 Recall (Delayed)

**(73 items)**

**DESCRIPTION**

This test assesses memory by looking at the ability to recall a short story.

**ASSOCIATED PAPERS**

Craft, S., Newcomer, J., Kanne, S., Dagogo-Jack, S., Cryer, P., Sheline, Y.,…Alderson, A. (1996). Memory improvement following induced hyperinsulinemia in Alzheimer’s disease. *Neurobiology of Aging, 17,* 123-130.

**SUBJECT INSTRUCTIONS:**

Administer this test approximately 20 minutes after Craft Story 21 Recall (Immediate), making note of the time administration of Craft Story 21 Recall (Delayed) began. Note: If 20 minutes have not elapsed, do not add other tests to fill the interval. You may obtain other data, such as blood pressure, weight, etc. Administer Craft Story 21 Recall (Delayed) and record the actual time elapsed.

Say: “I read you a story a few minutes ago. Can you tell me what you remember about that story now?

If the subject does not recall the story or having been told a story, make a note as indicated below and say: “It was a story about a boy. Can you tell it to me now?”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| MariasD | Craft 21 Verbatim Delayed: Subject must say "Maria's" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ChildD | Craft 21 Verbatim Delayed: Subject must say "child" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| RickyD | Craft 21 Verbatim Delayed: Subject must say "Ricky" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| PlayedD | Craft 21 Verbatim Delayed: Subject must say "played" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| SoccerD | Craft 21 Verbatim Delayed: Subject must say "soccer" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| EveryD | Craft 21 Verbatim Delayed: Subject must say "every" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| MondayD | Craft 21 Verbatim Delayed: Subject must say "Monday" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ThreeThirtyD | Craft 21 Verbatim Delayed: Subject must say "3:30" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HeD | Craft 21 Verbatim Delayed: Subject must say "he" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LikedD | Craft 21 Verbatim Delayed: Subject must say "liked" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| GoingD | Craft 21 Verbatim Delayed: Subject must say "going" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| FieldD | Craft 21 Verbatim Delayed: Subject must say "field" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| BehindD | Craft 21 Verbatim Delayed: Subject must say "behind" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| TheirD | Craft 21 Verbatim Delayed: Subject must say "their" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HouseD | Craft 21 Verbatim Delayed: Subject must say "house" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| JoiningD | Craft 21 Verbatim Delayed: Subject must say "joining" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| GameD | Craft 21 Verbatim Delayed: Subject must say "game" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OneD | Craft 21 Verbatim Delayed: Subject must say "one" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| DayD | Craft 21 Verbatim Delayed: Subject must say "day" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| He2D | Craft 21 Verbatim Delayed: Subject must say "he" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| KickedD | Craft 21 Verbatim Delayed: Subject must say "kicked" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| BallD | Craft 21 Verbatim Delayed: Subject must say "ball" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| SoD | Craft 21 Verbatim Delayed: Subject must say "so" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HardD | Craft 21 Verbatim Delayed: Subject must say "hard" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| DtD | Craft 21 Verbatim Delayed: Subject must say "it" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| WentD | Craft 21 Verbatim Delayed: Subject must say "went" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OverD | Craft 21 Verbatim Delayed: Subject must say "over" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| NeighborsD | Craft 21 Verbatim Delayed: Subject must say "neighbor's" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| FenceD | Craft 21 Verbatim Delayed: Subject must say "fence" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ThreeD | Craft 21 Verbatim Delayed: Subject must say "three" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LargeD | Craft 21 Verbatim Delayed: Subject must say "large" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| DogsD | Craft 21 Verbatim Delayed: Subject must say "dogs" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LivedD | Craft 21 Verbatim Delayed: Subject must say "lived" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| Dogs2D | Craft 21 Verbatim Delayed: Subject must say "dogs'" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OwnerD | Craft 21 Verbatim Delayed: Subject must say "owner" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HeardD | Craft 21 Verbatim Delayed: Subject must say "heard" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| LoudD | Craft 21 Verbatim Delayed: Subject must say "loud" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| BarkingD | Craft 21 Verbatim Delayed: Subject must say "barking" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| CameD | Craft 21 Verbatim Delayed: Subject must say "came" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| OutD | Craft 21 Verbatim Delayed: Subject must say "out" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| HelpedD | Craft 21 Verbatim Delayed: Subject must say "helped" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| ThemD | Craft 21 Verbatim Delayed: Subject must say "them" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| RetrieveD | Craft 21 Verbatim Delayed: Subject must say "retrieve" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| Ball2D | Craft 21 Verbatim Delayed: Subject must say "ball" | 0 = False (Word was not said verbatim)  1 = True (Word was said verbatim) |
| VerbatimD | Craft 21 Verbatim Delayed |  |
| ZScoreCraft21VerbatimDel | Craft21 Verbatim Delayed Z Score |  |
| MariasDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "Maria's" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| ChildDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "child" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| RickyDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "Ricky" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| PlayedDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "played" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| SoccerDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "soccer" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| EveryMondayDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "every Monday" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| AtThreeThirtyDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "at 3:30" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| HeLikedGoingToTheFieldDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "he liked going to the field" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| BehindTheirHouseDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "behind their house" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| AndJoiningDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "and joining" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheGameDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "the game" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| OneDayDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "one day" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| HeKickedDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "he kicked" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheBallDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "the ball" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| SoHardDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "so hard" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| ThatItWentOverDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "that it went over" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheNeighborsDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "the neighbor's" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| FenceDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "fence" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| WhereThreeDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "where three" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| LargeDogsLivedDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "large dogs lived" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| TheDogsOwnerDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "the dogs' owner" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| HeardLoudbarkingDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "heard loud barking" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| CameOutDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "came out" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| AndHelpedThemDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "and helped them" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| RetrieveTheBallDP | Craft 21 Paraphrase Delayed: Subject must paraphrase "retrieve the ball" | 0 = False (Word was not, or, words were not paraphrased)  1 = True (Word was, or, words were paraphrased) |
| ParaphraseD | Craft 21 Paraphrase Delayed |  |
| ZScoreCraft21ParaphraseDel | Craft21 Paraphrase Delayed Z Score |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

VerbatimD=Craft 21 Verbatim Delayed

ZScoreCraft21VerbatimDel=Craft 21 Verbatim delayed z score

ParaphraseD=Craft 21 paraphrase delayed

ZScoreCraft21ParaphraseDel=Craft 21 paraphrase delayed z score

Total story units recalled (Verbatim scoring) is out of a possible 44 points. Total story units recalled (paraphrase scoring) is out of a possible 25 points.

# Wechsler Memory Scale: Revised Logical Memory I Story A- Immediate

**(1 item)**

**DESCRIPTION**

This measure was chosen to assess participants’ short-term verbal memory.

**ASSOCIATED PAPERS**

Butters, N., Salmon, D. P., Cullum, C. M., Cairns, P., Troster, A. I., Jacobs, D., Moss, M., & Cermak, L.S. (1988). Differentiation of amnesic and demented patients with the Wechsler memory scale-revised. Clinical Neuropsychologist, 2, 133-148.

**SUBJECT INSTRUCTIONS:**

For Story A, say, “I am going to read you a little story of just a few lines. Listen carefully and try to remember it just the way I say it, as close to the same words as you can remember. When I am through, I want you to tell me everything I read to you. You should tell me all that you can remember, even if you are not sure. Are you ready?”

Say: “Anna Thompson of South Boston, employed as a cook in a school cafeteria, reported at the City Hall Station that she had been held up on State Street the night before and robbed of fifty-six dollars. She had four small children, the rent was due and they had not eaten for two days. The police, touched by the woman’s story, took up a collection for her.

When you have finished reading the story, say, “Now, what did I read to you? Tell me everything and begin at the beginning.”

After Story A is completed, say, “Now I am going to read you another little story and I want to see how much of it you can remember. As with the first story, try to remember it just the way that I say it. Ready?”

Say: “Robert Miller was driving a ten ton truck down a highway at night in the Mississippi Delta, carrying eggs to Nashville, when his axle broke. His truck skidded off the road, into a ditch. He was thrown against the dashboard and was badly shaken. There was no traffic and he doubted that help would come. Just then his two-way radio buzzed. He quickly answered, ‘This is grasshopper’.”

When you have finished reading the story, say, “Now, what did I read to you? Tell me everything and begin at the beginning.”

Administration: Read Story A and Story B in a clear voice in a slow, yet normal, tone. You should not read the story too slow, or too fast.

If the subject produces a very general summary of the story on recall, you may prompt them by saying, “You should tell me all that you can remember, even if you are not sure.”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| LMStoryAImm | Logical memory story A immediate recall |  |

**SCORING OF SCALE**

Record the subject’s responses by marking his or her words between the lines of the story that is printed on the Record Form. To simplify the recording, make a check mark by any words of the story that the subject repeats unchanged. In general, record the subject’s words verbatim if they differ from the Record Form. The phrases and words separated by diagonal lines in the passages are treated as items, and each item correctly repeated is worth one point. Maximum score for each story=25; total for both =50.

# Benson Complex Figure- Recall (Delayed)

**(10 items)**

**DESCRIPTION**

This measure was selected to assess visuoconstructional and visual memory functioning in older adults.

**ASSOCIATED PAPERS**

Possin, K. L., Laluz, V. R., Alcantar, O. Z., Miller, B. L., & Kramer, J. H. (2011). Distinct neuroanatomical substrates and cognitive mechanisms of figure copy performance in Alzheimer’s disease and behavioral variant frontotemporal dementia. Neuropsychologia, 49, 43-48.

**SUBJECT INSTRUCTIONS:**

The interval between copy and recall of the Benson figure should be 10-15 minutes. Say: “Remember that figure that I asked you to copy a while ago? I want you to draw as much of it as you can remember.” Note the order of completion.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| Benson1D | Four-sided, 90° angles, width > height, any gaps or overlaps < 8mm | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson2D | Reasonably straight lines; any gaps or overlaps < 8mm | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson3D | Connects at middle third, no overlap with diagonals | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson4D | Reasonably round, doesn’t touch sides | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson5D | Vertical lines > ½ distance to diagonals, width > height, 90° angles | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson6D | Connects below #3, top of square above bottom | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson7D | Vertex corresponds to middle third; any gaps or overlaps < 8mm | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| Benson8D | Gap b/w #7 < 5mm, angle at end of stem = 90° | 0 = Completely incorrect  1 = Partially correct  2 = Completely correct |
| BensonScoreD | Benson Complex Figure Delayed Total Score |  |
| ZScoreBensonDel | Benson Complex Figure Delayed Z Score |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

BensonScoreD=Benson Complex Figure Delayed Total Score

ZScoreBensonDel=Benson Complex Figure Delayed Z Score

Total score: 1-17; each figural element is scored as 2 points if the element is drawn accurately and placed correctly in the figure (1 point for accuracy, 1 point for placement). Score 1 point if the element is poorly drawn but placed correctly or is correctly drawn but misplaced, and 0 points if the element is neither accurately drawn nor correctly placed.

# Benson Complex Figure- Recognition (Delayed)

**(1 items)**

**DESCRIPTION**

This measure was selected to assess visuoconstructional and visual memory functioning in older adults.

**ASSOCIATED PAPERS**

Possin, K. L., Laluz, V. R., Alcantar, O. Z., Miller, B. L., & Kramer, J. H. (2011). Distinct neuroanatomical substrates and cognitive mechanisms of figure copy performance in Alzheimer’s disease and behavioral variant frontotemporal dementia. Neuropsychologia, 49, 43-48.

**SUBJECT INSTRUCTIONS:**

Say: “Which of the figures was the one you copied before?”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| BensonRecognition | Benson Complex Figure Recognition: Did subject recognize original stimulus from among four options? | 0=No  1=Yes |

**SCORING OF SCALE**

N/A

# WAIS-III Digit Symbol

**(3 items)**

**DESCRIPTION**

This measure was selected to assess neuropsychological dysfunction, especially in processing speed and memory.

**ASSOCIATED PAPERS**

Davis, A. S., & Pierson, E. E. (2012). The relationship between the WAIS-III digit symbol coding and executive functioning. *Applied Neuropsychology: Adult, 19,* 192-197.

Joy, S., Kaplan, E., & Fein, D. (2004). Speed and memory in the WAIS-III digit symbol-coding subtest across the adult lifespan. *Archives of Clinical Neuropsychology, 19,* 759-767.

**SUBJECT INSTRUCTIONS:**

Say, “When we started today I said that you will be doing all sorts of things. In this section, I’m going to ask you to copy some symbols.”

“Look at these boxes. Notice that each has a number in the upper part and a special mark in the lower part. Each number has its own mark (point to 1 and its mark in the key, then 2 and so on…)”

“Now look down here where the squares have numbers in the top part but the squares at the bottom are empty. In each of the empty squares put the mark that should go there. Like this.”

“Here is the 2; the 2 has this mark (pointing). So I put it in this empty square, like this (write the symbol).”

“Here is the 1; the 1 has this mark so I put it in this empty square, like this (write the symbol).”

“This number is a 3; the 3 has this mark. So I put it in the square.”

“Now you fill in the squares up to this heavy line.”

“Now you know how to do them. When I tell you to start, you do the rest of them.”

“Begin here (point to 1st square after bold line) and fill in as many squares as you can, one after the other without skipping any. Keep working until I tell you to stop. Work as quickly as you can without making any mistakes. When you finish this line, go on to this one (point across the first row and then the 2nd row).”

“Go ahead.”

If the examinee omits any items or skips any say, “Do them in order. Don’t skip any. Do this one next.”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| DSym120 | WAISIII Digit Symbol Raw |  |
| DSymAgeScaledScore | WAISIII Digit Symbol age scaled score |  |
| 90SecDSym | WAIS Digit Symbol score at 90 seconds |  |

**SCORING OF SCALE**

Record 1 point for each correctly drawn symbol completed within the 120-second time limit. Maximum score=133.

# WAIS-III Block Design

**(17 items)**

**DESCRIPTION**

This measure was chosen to assess intelligence and neuropsychological functioning.

**ASSOCIATED PAPERS**

Joy, S., Fein, D., Kaplan, E., & Freedman, M. (2001). Quantifying qualitative features of block design performance among healthy older adults. *Archives of Clinical Neuropsychology, 16,* 157-170.

Wilde, M. C., & Boake, C., & Sherer, M. (2000). Wechsler adult intelligence scale- revised block design broken configuration errors in nonpenetrating traumatic brain injury. *Applied Neuropsychology, 7,* 208-214.

**SUBJECT INSTRUCTIONS:**

Put four blocks in front of the examinee. Say: “Now I am going to ask you to make some designs. You see these blocks? They are all alike. On some sides they are all red; on some all white; and on some, half red and half white.”

Take out four more blocks. Say: “I am going to put some blocks together to make a design. Watch me.”

Construct the model of Design 5 using the four blocks. Do not explain the design. Leave the model intact. Place the remaining four blocks in front of the examinee and say: “Now make one just like this. Tell me when you have finished.”

Begin Timing. If successful proceed to design 6. If incorrect proceed to trial 2 and say: “watch me again”.

Leaving your model intact and using the examinee’s blocks, demonstrate the correct construction of the design for a second time. Then scramble the examinee’s blocks and say: “Now you try it again and be sure to make it just like mine (point to the model). Tell me when you are finished.”

If not correct on trial one for design five, administer designs 1-4 in reverse sequence until the examinee obtains a perfect score on two consecutive items.

Scramble four blocks in front of the examinee. Turn to Design 6 in the Stimulus booklet and place it in front of the examinee. Be sure the unbound edge is closest to the examinee. Say: “This time we are going to put the blocks together to make them look like this picture (point to picture). Watch me first.”

After completing design, say: “You see, the tops of the blocks look the same as this picture.”

Scramble the blocks used in the demonstration and say: “Now look at the picture and make one just like it with these blocks. Tell me when you are finished. Go ahead.”

If not correct, proceed with trial 2: “Watch me again.”

Now you try it again and be sure to make it just like this one on this page.”

For Designs 7-9 say: “Now make one just like this (point to picture). Try to work as quickly as you can. Tell me when you have finished.”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| Block1 | Block Design 1 | 0 = Incorrect  1 = Correct on Trial 2  2 = Correct on Trial 1 |
| Block2 | Block Design 2 | 0 = Incorrect  1 = Correct on Trial 2  2 = Correct on Trial 1 |
| Block3 | Block Design 3 | 0 = Incorrect  1 = Correct on Trial 2  2 = Correct on Trial 1 |
| Block4 | Block Design 4 | 0 = Incorrect  1 = Correct on Trial 2  2 = Correct on Trial 1 |
| Block5 | Block Design 5 | 0 = Incorrect  1 = Correct on Trial 2  2 = Correct on Trial 1  98 = Not performed |
| Block6 | Block Design 6 | 0 = Incorrect  1 = Correct on Trial 2  2 = Correct on Trial 1  98 = Not performed |
| Block7 | Block Design 7 | 0 = Incorrect  4 = Correct in 16 to 60 seconds  5 = Correct in 11 to 15 seconds  6 = Correct in 6 to 10 seconds  7 = Correct in 1 to 5 seconds  98 = Not performed |
| Block8 | Block Design 8 | 0 = Incorrect  4 = Correct in 16 to 60 seconds  5 = Correct in 11 to 15 seconds  6 = Correct in 6 to 10 seconds  7 = Correct in 1 to 5 seconds  98 = Not performed |
| Block9 | Block Design 9 | 0 = Incorrect  4 = Correct in 21 to 60 seconds  5 = Correct in 16 to 20 seconds  6 = Correct in 11 to 15 seconds  7 = Correct in 1 to 10 seconds  98 = Not performed |
| Block10 | Block Design 10 | 0 = Incorrect  4 = Correct in 36 to 120 seconds  5 = Correct in 26 to 35 seconds  6 = Correct in 21 to 25 seconds  7 = Correct in 1 to 20 seconds  98 = Not performed |
| Block11 | Block Design 11 | 0 = Incorrect  4 = Correct in 66 to 120 seconds  5 = Correct in 46 to 65 seconds  6 = Correct in 31 to 45 seconds  7 = Correct in 1 to 30 seconds  98 = Not performed |
| Block12 | Block Design 12 | 0 = Incorrect  4 = Correct in 76 to 120 seconds  5 = Correct in 56 to 75 seconds  6 = Correct in 41 to 55 seconds  7 = Correct in 1 to 40 seconds  98 = Not performed |
| Block13 | Block Design 13 | 0 = Incorrect  4 = Correct in 76 to 120 seconds  5 = Correct in 56 to 75 seconds  6 = Correct in 41 to 55 seconds  7 = Correct in 1 to 40 seconds  98 = Not performed |
| Block14 | Block Design 14 | 0 = Incorrect  4 = Correct in 66 to 120 seconds  5 = Correct in 46 to 65 seconds  6 = Correct in 36 to 45 seconds  7 = Correct in 1 to 35 seconds  98 = Not performed |
| BlockNotes | Tester notes/comments concerning the Block Design Test |  |
| Blockraw | WAISIII Block Design raw score |  |
| BDAgeScaledScore | WAISIII Block Design age scaled score |  |

**SCORING OF SCALE**

Record the score by circling the number of points obtained on the record sheet. Discontinue after 2 consecutive scores of zero. 1-6 are considered failed only if the examinee fails both trials. Maximum score = 68.

# Wechsler Memory Scale: Revised Logical Memory (Delayed Recall)

**(1 item)**

**DESCRIPTION**

This measure was chosen to assess logical memory.

**ASSOCIATED PAPERS**

Gass, C. S., & Russell, E. W. (1986). Differential impact of brain damage and depression on memory test performance. *Journal of Consulting and Clinical Psychology, 54,* 261-263.

**SUBJECT INSTRUCTIONS:**

For Delayed Recall of Story A, say, “Do you remember the short stories that I read to you earlier? I want you to tell me everything I read to you from the first story. You should tell me all that you can remember, even if you are not sure. Are you ready?”

For Delayed Recall of Story B, say, “Now I want you to tell me everything I read to you from the second story. You should tell me all that you can remember, even if you are not sure. Are you ready?”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| LMStoryADel | Logical Memory Story A delayed recall |  |

**SCORING OF SCALE**

Record the subject’s responses by marking his or her words between the lines of the story that is printed on the Record Form. To simplify the recording, make a check mark by any words of the story that the subject repeats unchanged. In general, record the subject’s words verbatim if they differ from the Record Form. The phrases and words separated by diagonal lines in the passages are treated as items, and each item correctly repeated is worth one point. Maximum score for each story = 25.

# Verbal Fluency: Phonemic Test

**(18 items)**

**DESCRIPTION**

This measure was selected to assess word finding ability.

**ASSOCIATED PAPERS**

Shao, Z., Janse, E., Visser, K., & Meyer, A. S. (2014). What do verbal fluency tasks measure? Predictors of verbal fluency performance in older adults. Frontiers in Psychology, 5, 772-781.

Weintraub, S., Besser, L., Dodge, H. H., Teylan, M., Ferris, S., Goldstein, F. C., …Morris, J. C. (2018). Version 3 of the alzheimer disease centers’ neuropsychological test battery in the uniform data set (uds). Alzheimer Disease and Associated Disorders, 32, 10-17.

**SUBJECT INSTRUCTIONS:**

Say, “I’m going to say a letter of the alphabet. When I ask you to start, tell me as many words as you can that begin with that letter. You will have 1 minute before I tell you to stop. None of the words can be numbers, or names of people, or places.”

“For example, if I gave you the letter B, you could say brown, bottle, or bake, but you wouldn’t say Barbara, Boston, or billion. Also, please try not to give me the same word with different endings. So if you said bake, you wouldn’t also say baked or bakes. And if you said big, you wouldn’t also say bigger and biggest.”

“Let’s begin. Tell me all the words you can, as quickly as you can, that begin with the letter F. Ready? Begin.”

Start timer after completing instructions. Write actual responses as legibly as possible. Stop the procedure at 60 seconds.

Prompts:

1. If the participant pauses for 15 seconds: say “Keep going”, “what other words beginning with F can you think of?”

2. If the participant gives three consecutive words that do not start with the designated letter (provide this prompt only once during this condition): say “We are now using the letter F.”

Say: “Now I want you to do the same for another letter. The next letter is L. Ready? Begin.”

Start timer after completing instructions. Write actual responses as legibly as possible. Stop the procedure at 60 seconds.

Prompts:

1. If the participant pauses for 15 seconds: say “Keep going”, “what other words beginning with L can you think of?”

2. If the participant gives three consecutive words that do not start with the designated letter (provide this prompt only once during this condition): say “We are now using the letter L.”

Say: “Now I want you to do the same for another letter. The next letter is S. Ready? Begin.”

Start timer after completing instructions. Write actual responses as legibly as possible. Stop the procedure at 60 seconds.

Prompts:

1. If the participant pauses for 15 seconds: say “Keep going”, “what other words beginning with S can you think of?”

2. If the participant gives three consecutive words that do not start with the designated letter (provide this prompt only once during this condition): say “We are now using the letter S.”

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| FWords15Sec | Number of correct F-words generated in 15 seconds |  |
| FWords30Sec | Number of correct F-words generated in 30 seconds |  |
| FWords45Sec | Number of correct F-words generated in 45 seconds |  |
| FWords60Sec | Number of correct F-words generated in 60 seconds |  |
| FWordsRepeated60Sec | Number of F-words repeated in 1 minute | 0-15 |
| NonFWords60Sec | Number of non-F-words and rule violation errors in 1 minute | 0-15 |
| LWords15Sec | Number of correct L-words generated in 15 seconds |  |
| LWords30Sec | Number of correct L-words generated in 30 seconds |  |
| LWords45Sec | Number of correct L-words generated in 45 seconds |  |
| LWords60Sec | Number of correct L-words generated in 60 seconds |  |
| LWordsRepeated60Sec | Number of L-words repeated in 1 minute | 0-15 |
| NonLWords60Sec | Number of non-L-words and rule violation errors in 1 minute | 0-15 |
| SWords15Sec | Number of correct S-words generated in 15 seconds |  |
| SWords30Sec | Number of correct S-words generated in 30 seconds |  |
| SWords45Sec | Number of correct S-words generated in 45 seconds |  |
| SWords60Sec | Number of correct S-words generated in 60 seconds |  |
| SWordsRepeated60Sec | Number of S-words repeated in 1 minute | 0-15 |
| NonSWords60Sec | Number of non-S-words and rule violation errors in 1 minute | 0-15 |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

ZScoreFWords= F Words Z Score

ZScoreLWords=L Words Z Score

FSLTotal=Sum of FWords60Sec, Swords60Sec, and LWords60Sec

AvgZScoreFwordsLWords=Average Z score of ZScoreFWords and ZScoreLWords

# Category Fluency

**(12 items)**

**DESCRIPTION**

This measure was selected to assess word finding ability in specific categories, namely animals and vegetables.

**ASSOCIATED PAPERS**

Luo, L., Luk, G., & Bialystock, E. (2010). Effect of language proficiency and executive control on verbal fluency performance in bilinguals. *Cognition, 114,* 29-41.

**SUBJECT INSTRUCTIONS:**

Say: “I am going to give you a category and I want you to name, as fast as you can, all of the things that belong in that category. For example, if I say ‘articles of clothing’, you could say ‘shirt’, ‘tie’, or ‘hat’. Can you think of other articles of clothing?

Allow up to 20 seconds for the subject to produce two responses. Circle the number corresponding to the subject’s responses, and read the associated instruction.

|  |  |
| --- | --- |
| **Response Code** | **Instruction** |
| 0 (No response) | “You could have said ‘shoes’ or ‘coat’ since they are articles of clothing.” |
| 1 (One or more incorrect responses, no correct response) | “No, \_\_\_\_ is (are) not an article(s) of clothing. You could have said ‘shoes’ or ‘coat’ since they are articles of clothing.” |
| 2 (One or more correct response, no incorrect responses) | “That’s right. You also could have said ‘shoes’ or ‘coat’.” |
| 3 (One or more correct responses, one or more incorrect responses) | “\_\_\_ is (are) correct, but \_\_\_ is (are) not an article of clothing. You also could have said ‘shoes’ or ‘coat’.” |
| 4 (Two or more correct responses) | “That’s right.” |

Next, read the instructions for the Animals category. Say: “Now I want you to name things that belong to another category: Animals. You will have one minute. I want you to tell me all the animals you can think of in one minute. Ready? Begin.”

Start timer as you say “Begin”. Write actual responses as legibly as possible on the Worksheet for Category Fluency- Animals. Stop the procedure at 60 seconds. One prompt (“Tell me all the animals you can think of”) is permitted if the participant makes no response for 15 seconds or expresses incapacity (e.g., “I can’t think of any more”). It is also permissible to repeat the instruction or category if the subject specifically requests it.

Next, read the instructions for the Vegetables category. Say: “Now I want you to name things that belong to another category: Vegetables. You will have one minute. I want you to tell me all the vegetables you can think of in one minute. Ready? Begin.”

Start timer as you say “Begin”. Write actual responses as legibly as possible on the Worksheet for Category Fluency- Vegetables. Stop the procedure at 60 seconds. One prompt (“Tell me all the vegetables you can think of”) is permitted if the participant makes no response for 15 seconds or expresses incapacity (e.g., “I can’t think of any more”). It is also permissible to repeat the instruction or category if the subject specifically requests it.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| Animals15Sec | Total number of animals in 15 seconds |  |
| Animals30Sec | Total number of animals in 30 seconds |  |
| Animals45Sec | Total number of animals in 45 seconds |  |
| Animals60Sec | Total number of animals in 60 seconds |  |
| ZScoreAnimals | Animals Z Score |  |
| Vegetables15Sec | Total number of vegetables in 15 seconds |  |
| Vegetables30Sec | Total number of vegetables in 30 seconds |  |
| Vegetables45Sec | Total number of vegetables in 45 seconds |  |
| Vegetables60Sec | Total number of vegetables in 60 seconds |  |
| ZScoreVegetables | Vegetables Z Score |  |
| CATTotal | Sum of Animals60Sec and Vegetables60Sec |  |
| AvgZScoreCAT | Average Z Score of ZScoreAnimals and ZScoreVegetables |  |

**SCORING OF SCALE**

ZScoreAnimals= Animals Z Score

ZScoreVegetables=Vegetables Z Score

CATTotal=Sum of Animals60Sec and Vegetables60Sec

AvgZScoreCAT=Average Z Score of ZScoreAnimals and ZScoreVegetables

# MINT (Multilingual Naming Test)

**(41 items)**

**DESCRIPTION**

This measure assesses naming skills in speakers of multiple languages and detects naming impairments in monolingual Alzheimer’s disease as well as amnestic mild cognitive impairment (MCI).

**ASSOCIATED PAPERS**

Gollan, T. H., Weissberger, G., Runnqvist, E., Montoya, R. I., & Cera, C. M. (2012). Self-ratings of spoken language dominance: A multi-lingual naming test (MINT) and preliminary norms for young and aging Spanish-English bilinguals. *Bilingualism: Language and Cognition, 15,* 594-615.

Ivanova, I., Salmon, D. P., & Gollan, T. H. (2013). The multilingual naming test in Alzheimer’s disease: Clues to the origin of naming impairments. *The Journal of the International Neuropsychological Society, 19,* 272-283.

**SUBJECT INSTRUCTIONS:**

Say: “I am going to show you some pictures of objects, one at a time. Please tell me the name of each object, that is, tell me what it is called. If you cannot think of the name try to make your best guess. If you don’t know what the object is, I will try to help you. Do you have any questions?”

Stop testing after six consecutive failures.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| MintDate | Date Mint was completed |  |
| Item1 | Mint Item 1 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item2 | Mint Item 2 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item3 | Mint Item 3 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item4 | Mint Item 4 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item5 | Mint Item 5 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item6 | Mint Item 6 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item7 | Mint Item 7 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item8 | Mint Item 8 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item9 | Mint Item 9 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item10 | Mint Item 10 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item11 | Mint Item 11 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item12 | Mint Item 12 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item13 | Mint Item 13 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item14 | Mint Item 14 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item15 | Mint Item 15 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item16 | Mint Item 16 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item17 | Mint Item 17 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item18 | Mint Item 18 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item19 | Mint Item 19 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item20 | Mint Item 20 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item21 | Mint Item 21 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item22 | Mint Item 22 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item23 | Mint Item 23 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item24 | Mint Item 24 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item25 | Mint Item 25 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item26 | Mint Item 26 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item27 | Mint Item 27 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item28 | Mint Item 28 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item29 | Mint Item 29 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item30 | Mint Item 30 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item31 | Mint Item 31 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| Item32 | Mint Item 32 | 1=Free  2=Semantic  3=Phonemic  4=Fail |
| MintFree | Mint Free Recall score |  |
| MintSem | Mint Sematic score |  |
| MintPh | Mint Phonemic score |  |
| MintFail | Mint No response score |  |
| FreePercent | Percentage of items freely recognized |  |
| SemPercent | Percentage of items recognized after the semantic cue was given |  |
| PhPercent | Percentage of items recognized after the phonemic cue was given |  |
| FailPercent | Percent of items that could not be recognized after the semantic and phonemic cues were given |  |

**SCORING OF SCALE** (**NOTE: composite score not validated)**

MintPh=Mint phonemic score

MintFail=Mint no response score

1 point for each correct answer under Uncued or Semantic columns, 0 points for correct answer under Phonemic column

Total correct = sum of uncued + semantic

# WRAT-4 (Wide Range Achievement Test) Reading Subtest

**(2 items)**

**DESCRIPTION**

This measure was selected to assess a participant’s ability to read words, comprehend sentences, spell, and compute solutions to math problems.

**ASSOCIATED PAPERS**

Himsl, K., Burchett, D., Tarescavage, A. M., & Glassmire, D. M. (2017). Assessing reading ability for psychological testing in forensic assessments: An investigation with the wrat-4 and mmpi-2-rf. *International Journal of Forensic Mental Health, 16,* 239-248.

Robertson, G. J. (2010). Wide-Range Achievement Test. In I. B. Weiner & W. E. Craighead (Eds.), *The corsini encyclopedia of psychology* (pp. 1858-1859). Hoboken, NJ: John Wiley & Sons, Inc.

**SUBJECT INSTRUCTIONS:**

Say: “Look at each of these words carefully (point). Read the words across the page so I can hear you. When you finish the first line, go to the next line and so on.”

Discontinue after the individual has missed 10 consecutive words. Allow 10 seconds for the individual to respond. If the individual is in the middle of a response, allow him/her to continue. If there is no response after 10 seconds move on to the next by simply saying: “Try the next one please”.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| WratIIIBlue | WRAT score | Maximum of 57 |
| Grade | Subject’s equivalent grade level as determined by the Wrat |  |

**SCORING OF SCALE**

One point is given for each correct word. A maximum of 57 points can be earned on either the BLUE or TAN form. For EAS, the BLUE form is administered at the baseline assessment only.

Calculate the raw score on the bottom of the Word Reading section and then transfer the raw score to the first page of the test form.

# Life Events

**(# items)**

**DESCRIPTION**

This measure was selected to identify participants’ stressful life events and to evaluate the perceptions of those events on their lives.

**ASSOCIATED PAPERS**

Hardy, S. E., Concato, J., & Gill, T. M. (2002). Stressful life events among community-living older persons. *Journal of General Internal Medicine, 17,* 841-847.

**SUBJECT INSTRUCTIONS:**

N/A

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** | **Reverse-coded** | **Subscale** |
| LE1 | Thinking back over the last year, what has been the most stressful event in your life? |  |  |  |
| LE2 | Please tell me how stressful that event was for you? | 0=Not particularly stressful  1  2  3  4  5=Fairly  6  7  8  9  10=Extremely |  |  |
| LE3 | Tell me how discouraged you were by this event. | 1=Not at all  2=A little bit  3=Quite a bit  4=Extremely |  |  |
| LE4 | How much harder was it to get everyday things done? | 1=Not at all  2=A little bit  3=Quite a bit  4=Extremely |  |  |
| LE5 | How often do you think about this event? | 1=Not at all  2=A little bit  3=Quite a bit  4=Extremely |  |  |
| LE6 | As a result of this event, have you stopped doing some activities that were important to you? | 1=No  2=Yes |  |  |
| LE7 | As a result of this event, have you started doing some activities that have become important to you? | 1=No  2=Yes |  |  |
| LE8 | Has this event made a permanent change in how you feel about your life? (If No, skip to LE10) | 1=No  2=Yes |  |  |
| LE9 | Is that change for the better, or for the worse? | 1=Better  2=Worse |  |  |
| LE10 | Thinking back **over the last year**, what has been the most rewarding event in your life? |  |  |  |
| LE11 | Please tell me how rewarding that event was for you? | 0=Not particularly  1  2  3  4  5=Fairly  6  7  8  9  10=Extremely |  |  |

**SCORING OF SCALE**

N/A

# Cognitive Change Index (CCI)

**(41 items)**

**DESCRIPTION**

This measure was selected to assess self-report cognitive decline.

**ASSOCIATED PAPERS**

Contreras, J. A., Goñi, J., Risacher, S. L., Amico, E., Yoder, K., Dzemidzic, M., ... & Saykin, A. J. (2017). Cognitive complaints in older adults at risk for Alzheimer's disease are associated with altered resting-state networks. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, *6*, 40-49.

Rattanabannakit, C., Risacher, S. L., Sujuan, G., Lane, K. A., Brown, S. A., McDonald, B. C., …Farlow, M. R. (2016). The cognitive change index as a measure of self and informant perception of cognitive decline: Relation to neuropsychological tests. *Journal of Alzheimer’s Disease, 51,* 1145-1155.

Risacher, S. L., Kim, S., Nho, K., Foroud, T., Shen, L., Petersen, R. C., ... & Jagust, W. J. (2015). APOE effect on Alzheimer's disease biomarkers in older adults with significant memory concern. *Alzheimer's & Dementia*, *11*(12), 1417-1429.

Risacher, S. L., West, J. D., McDonald, B. C., Tallman, E. F., Glazier, B. S., Gao, S., ... & Unverzagt, F. W. (2017). OPTIMIZING COGNITIVE CHANGE INDEX CUTOFFS BASED ON COGNITIVE DECLINE AND BIOMARKER POSITIVITY IN COGNITIVELY NORMAL OLDER ADULTS. *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*, *13*(7), P154.

**SUBJECT INSTRUCTIONS:**

For questions (CCI1-CCI40)

This self-rating scale asks about your abilities, problem areas, daily functioning and activities. Please rate your current level of ability compared to 5 years ago and the severity of any current problems. Remember, you are describing how you are functioning now (meaning during the past month including today) compared to 5 years ago. Please rate any changes in your ability on the following 5-point scale, choosing the best fitting rating for each item describing a cognitive function or ability. Compared to 5 years ago…

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| CCIDate | Date CCI was completed |  |
| Tester | Tester's initials who completed the Feedback entry |  |
| CCI0 | Do you feel like your memory is becoming worse? | 0 = No  1 = Yes, but this does not worry me  2 = Yes, and this worries me |
| *For the next forty questions, begin with the phrase, "Compared to 5 years ago..."* | | |
| CCI1 | Recalling information when I really try | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI2 | Remembering names and faces of new people I meet | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI3 | Remembering things that have happened recently | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI4 | Recalling conversations a few days later | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI5 | Remembering where things are usually kept | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI6 | Remembering new information told to me | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI7 | Remembering where I placed familiar objects | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI8 | Remembering what I intended to do | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI9 | Remembering names of family members and friends | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI10 | Remembering without notes and reminders | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI11 | People who know me would find that my memory is | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI12 | Remembering things compared to my age group | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI13 | Making decisions about everyday matters | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI14 | Reasoning through a complicated problem | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI15 | Focusing on goals and carrying out a plan | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI16 | Shifting easily from one activity to the next | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI17 | Organizing my daily activities | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI18 | Understanding conversations | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI19 | Expressing myself when speaking | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI20 | Following a story in a book, movie or TV | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI21 | Remembering to be some place at a certain time | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI22 | Coming up with the word I want to use | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI23 | Finding my way around familiar places (house, neighborhood) | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI24 | Navigating to locations (grocery store, pharmacy, doctor) | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI25 | Remembering that I have already told someone something | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI26 | Remembering to take my medication on time | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI27 | Remembering to bring something I meant to take with me | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI28 | Remembering what I want to buy at a store | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI29 | Remembering things from a long time ago (e.g., events, trips) | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI30 | Remembering to return phone calls | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI31 | Remembering to pay a bill on time | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI32 | Remembering to lock the door when I leave the house | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI33 | Concentrating on what I am doing | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI34 | Focusing on more than one thing at once | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI35 | Spelling familiar words | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI36 | Solving everyday math problems (calculating change, tips) | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI37 | Thinking quickly | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI38 | Thinking clearly | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI39 | Paying attention to what is going on around me | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |
| CCI40 | Recalling the date (day, month, year) without looking it up | 1=Normal ability (no change)  2= Slight/occasional problem (minimal change)  3=Mild problem (some change)  4=Moderate problem (clearly noticeable change)  5=Severe problem (much worse) |

**SCORING OF SCALE**

\*\*\*\*\*\*\*\*\*\*\*Cognitive Change Index (CCI)\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

**data** wk;

set wk;

\*\*\*\*\*\*\*\*\*\*\*\*CCI sum score\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

cci\_sum40 = sum(of CCI1 - CCI40);

cci\_sum20 = sum(of CCI1-CCI20);

label cci\_sum40="cci sum of all 40 items";

label cci\_sum20="cci sum of first 20 items";

\*\*\*\*\*\*\*\*\*\*\*\*CCI sum score--adjust for missing: 80% non-missing\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

if n(CCI1, CCI2, CCI3, CCI4, CCI5, CCI6, CCI7, CCI8, CCI9, CCI10, CCI11, CCI12, CCI13, CCI14,CCI15,CCI16,CCI17,CCI18,CCI19,CCI20,

CCI21,CCI22,CCI23,CCI24,CCI25,CCI26,CCI27,CCI28,CCI29,CCI30,CCI31,CCI32,CCI33,CCI34,CCI35,CCI36,CCI37,CCI38,CCI39,CCI40) ge **32** then CCI\_adjsum40 = sum(of CCI1-CCI40);

if n(CCI1, CCI2, CCI3, CCI4, CCI5, CCI6, CCI7, CCI8, CCI9, CCI10, CCI11, CCI12, CCI13, CCI14,CCI15,CCI16,CCI17,CCI18,CCI19,CCI20) ge **16** then CCI\_adjsum20 = sum(of CCI1-CCI20);

label cci\_adjsum40="cci sum of all 40 items -- adjust for missingness";

label cci\_adjsum20="cci sum of first 20 items -- adjust for missingness";

\*\*\*\*\*\*\*\*\*\*\*\*CCI proportion score\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

\* first, let's create a count variable of how many of the CCI items each participant endorsed;

\*data wk;

\*set wk;

array col40 {**40**} cci1-cci40;

cci\_count40=**0**;

do i=**1** to dim(col40);

if cci\_sum40 = **.** then cci\_count40=**.**;

else if col40(i) ge **2** then cci\_count40=cci\_count40+**1**;

end;

drop i;

label cci\_count40="cci count of items endorsed -- all 40";

\* doing the same thing for just the first 20 items;

\*data wk;

\*set wk;

array col20 {**20**} cci1-cci20;

cci\_count20=**0**;

do j=**1** to dim(col20);

if cci\_sum20 = **.** then cci\_count20=**.**;

else if col20(j) ge **2** then cci\_count20=cci\_count20+**1**;

end;

drop j;

\*run;

label cci\_count20="cci count of items endorsed -- first 20";

\*\* creating a count variable adjusted for missingness;

\*data wk;

\*set wk;

\*array col40 {40} cci1-cci40;

if cci\_sum40 = **.** then cci\_count40adj=**.**;

else cci\_count40adj=**0**;

do i=**1** to dim(col40);

if n(CCI1, CCI2, CCI3, CCI4, CCI5, CCI6, CCI7, CCI8, CCI9, CCI10, CCI11, CCI12, CCI13, CCI14,CCI15,CCI16,CCI17,CCI18,CCI19,CCI20,

CCI21,CCI22,CCI23,CCI24,CCI25,CCI26,CCI27,CCI28,CCI29,CCI30,CCI31,CCI32,CCI33,CCI34,CCI35,CCI36,CCI37,CCI38,CCI39,CCI40) ge **32** and col40(i) ge **2** then cci\_count40adj=cci\_count40adj+**1**;

end;

drop i;

label cci\_count40="cci count of items endorsed -- all 40 adjust for missingness";

\* doing the same thing for just the first 20 items;

\*data wk;

\*set wk;

\*array col20 {20} cci1-cci20;

if cci\_sum20 = **.** then cci\_count20adj=**.**;

else cci\_count20adj=**0**;

do j=**1** to dim(col20);

if n(CCI1, CCI2, CCI3, CCI4, CCI5, CCI6, CCI7, CCI8, CCI9, CCI10, CCI11, CCI12, CCI13, CCI14,CCI15,CCI16,CCI17,CCI18,CCI19,CCI20) ge **16** and col20(j) ge **2** then cci\_count20adj=cci\_count20adj+**1**;

end;

drop j;

\*run;

label cci\_count20="cci count of items endorsed -- first 20 adjust for missingness";

\*data wk;

\*set wk;

\* using the count variables we calculated above, let's calculate a proportion of CCI items endorsed;

if cci\_count40=**.** then cci\_prop40=**.**;

else cci\_prop40 = cci\_count40/**40**;

if cci\_count20=**.** then cci\_prop20=**.**;

cci\_prop20 = cci\_count20/**20**;

\*proportions adjusted for missingness;

if cci\_count40=**.** then cci\_prop40adj=**.**;

else cci\_prop40adj = cci\_count40adj/**40**;

if cci\_count20=**.** then cci\_prop20adj=**.**;

else cci\_prop20adj = cci\_count20adj/**20**;

**run**;

label cci\_prop40="cci proportion of items endorsed -- all 40";

label cci\_prop20="cci proportion of items endorsed -- first 20";

label cci\_prop40adj="cci proportion of items endorsed -- all 40 adjust for missingness";

label cci\_prop20adj="cci proportion of items endorsed -- first 20 adjust for missingness";

# MOS Sleep Scale

**(22 items)**

**DESCRIPTION**

This measure was selected to assess participants’ sleep quality.

**ASSOCIATED PAPERS**

Hays, R. D., & Stewart, A. L. (1992). Sleep measures. In A. L. Stewart & J. E. Ware (eds.), Measuring functioning and well-being: The medical outcomes study approach (pp. 235-259). Durham, NC: Duke University Press.

Smith, M. T., & Wegener, S. T. (2003). Measures of sleep: The insomnia severity index, medical outcomes study (mos) sleep scale, Pittsburgh sleep diary (psd), and Pittsburgh sleep quality index (psqi). *Arthritis Care & Research, 49,* S184-S196.

Thurtell, M. J., Bruce, B. B., Rye, D. B., Newman, N. J., & Biousse, V. (2011). The Berlin questionnaire screens for obstructive sleep apnea in idiopathic intracranial hypertension. *Journal of neuro-ophthalmology : the official journal of the North American Neuro-Ophthalmology Society*, *31*(4), 316–319. doi:10.1097/WNO.0b013e31821a4d54

**SUBJECT INSTRUCTIONS:**

(before snoring questions): If you answered “None of the time” to question #10 on the previous page, **DO NOT** complete the following questions, please move on to the next page. If you gave any other answer to question #10, please answer the following questions.

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |
| SleepDate | Date Sleep was administered |  |
| Tester | Tester's initials who completed the Sleep entry |  |
| SL1 | How long did it usually take for you to fall asleep during the past 4 weeks? | 1=0-15 minutes  2=16-30 minutes  3=31-45 minutes  4=46-60 minutes  5=More than 60 minutes |
| SL2 | On the average, how many hours did you sleep each night during the past 4 weeks? |  |
| SL3 | How often during the past 4 weeks did you…feel that your sleep was not quiet (moving restlessly, feeling tense, speaking, etc.) while sleeping? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL4 | How often during the past 4 weeks did you…get enough sleep to feel rested upon waking in the morning? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL5 | How often during the past 4 weeks did you…awaken short of breath or with a headache? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL6 | How often during the past 4 weeks did you…feel drowsy or sleepy during the day? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL7 | How often during the past 4 weeks did you…have trouble falling asleep? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL8 | How often during the past 4 weeks did you…awaken during your sleep time and have trouble falling asleep again? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL9 | How often during the past 4 weeks did you…have trouble staying awake during the day? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL10 | How often during the past 4 weeks did you…snore during your sleep? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL11 | How often during the past 4 weeks did you…take naps (5 minutes or longer) during the day? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SL12 | How often during the past 4 weeks did you…get the amount of sleep you needed? | 1=All of the time  2=Most of the time  3=A good bit of the time  4=Some of the time  5=A little of the time  6=None of the time |
| SLComments | Comments related to the Sleep Questionnaire |  |
| *If SL10 = 1, 2, 3, 4,5 or 5, then ask the Berlin questions* | | |
| Berlin1 | Snoring loudness? | 1 = Loud as breathing  2 = Loud as speaking  3 = Louder than speaking  4 = Very loud (can be heard in adjacent rooms) |
| Berlin2 | Snoring frequency? | 1 = Almost every day  2 = Three to four times per week  3 = One to two times per week  4 = One to two times per month  5 = Never or almost never |
| Berlin3 | Does your snoring bother other people? | 1 = Yes  2 = No  3 = Don't know |
| Berlin4 | Has anyone noticed that you quit breathing during sleep? | 1 = Almost every day  2 = Three to four times per week  3 = One to two times per week  4 = One to two times per month  5 = Never or almost never |
| Berlin5 | How often do you feel fatigued or tired after sleeping? | 1 = Almost every day  2 = Three to four times per week  3 = One to two times per week  4 = One to two times per month  5 = Never or almost never |
| Berlin6 | Are you tired during wake time? | 1 = Almost every day  2 = Three to four times per week  3 = One to two times per week  4 = One to two times per month  5 = Never or almost never |
| Berlin7 | Have you ever fallen asleep while driving? | 1 = Almost every day  2 = Three to four times per week  3 = One to two times per week  4 = One to two times per month  5 = Never or almost never |
| Berlin8 | Do you have high blood pressure? | 1 = Yes  2 = No  3 = Don't know |
| Berlin9WtPounds | What is your weight? | (pounds) |
| Berlin9WtKG | Converion of Berlin9WtPounds to KGs |  |
| Berlin10HtFeet | What is your height? (feet) | (feet) |
| Berlin10HtInches | (inches) | (inches) |
| Berlin10HtCM | Conversion of Berlin10HtFeet and Berlin10HtInches to CMs |  |

**SCORING OF SCALE**

N/A

MOS: Scoring code taken directly from scoring document from RAND & modified to match variable names in dataset

<https://labs.dgsom.ucla.edu/hays/files/view/docs/surveys/sleep/sleepman-112603.pdf>

Berlin:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3433717/>

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*MOS Sleep Scale\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

**data** wk;

set wk;

\* recode out of range values for individual sleep items to missing;

IF SL1 NOT IN(**1**,**2**,**3**,**4**,**5**) THEN SL1=**.**;

ARRAY PT6 SL3-SL12;

DO OVER PT6;

IF PT6 NOT IN (**1**,**2**,**3**,**4**,**5**,**6**) THEN PT6=**.**;

END;

IF SL2 < **1** OR SL2 > **23** THEN SL2=**.**;

/\* COMPUTING NEW SLEEP SCALES \*/

\* REVERSE ITEMS WHEN NECESSARY AND PUT ON 0-100 SCALE;

array orig1 SL3 SL4 SL5 SL6 SL7 SL8 SL9 SL10 SL11 SL12 ;

array rev1 SL3r SL4r SL5r SL6r SL7r SL8r SL9r SL10r SL11r SL12r;

do over orig1;

rev1=(**7**-orig1-**1**)\***20**;

end;

SL1 =(SL1-**1**)\***25**;

SL4 =(SL4-**1**)\***20**;

SL12=(SL12-**1**)\***20**;

label

SL3r = "rev Feel that your sleep was not quiet"

SL4r = "rev Get enough sleep to feel rested up"

SL5r = "rev Awaken short of breath or with a h"

SL6r = "rev Feel drowsy or sleepy during the d"

SL7r = "rev Have trouble falling asleep - How "

SL8r = "rev Awaken during your sleep time and "

SL9r = "rev Have trouble staying awake during "

SL10r = "rev Snore during your sleep - How ofte"

SL11r = "rev Take naps of 5 minutes or longer d"

SL12r = "rev Get the amount of sleep you needed";

\* CREATE SCALES by averaging items;

\* Sleep Disturbance;

SLPD4 = mean(of SL1, rSL3, rSL7, rSL8);

label SLPD4 = "Sleep Disturbance Scale";

\* Snoring;

SLPSNR1 = SL10r;

label SLPSNR1 = "Snoring Scale";

\* Short of Breath;

SLPSOB1 = SL5r;

label SLPSOB1 = "Short of Breath Scale";

\* Sleep Adequacy;

SLPA2 = mean(of SL4r, SL12r);

label SLPA2 = "Sleep Adequacy";

\* Somnolence;

SLPS3 = mean(of SL6r, SL9r, SL11r);

label SLPS3 = "Somnolence Scale";

\* Sleep Problems Index I;

SLP6 = mean(of SL4, SL5r, SL7r, SL8r, SL9r, SL12);

label SLP6 = "Sleep Problems Index I";

\* Sleep Problems Index II;

SLP9 = mean(of SL1, SL3r, SL4, SL5r, SL6r, SL7r, SL8r, SL9r, SL12);

label SLP9 = "Sleep Problems Index II";

\* Sleep Quantity (raw score)";

SLPQRAW=SL2;

label SLPQRAW = "Sleep Quantity (raw score)";

\* Optimal Sleep;

if SL2>=**0** then do;

if (SL2 = **7** or SL2 = **8**) then SLPOP1=**1**; else

if (SL2 < **7** or SL2 > **8**) then SLPOP1=**0**;

end;

label SLPOP1 = "Optimal Sleep Scale";

**run**;

\*\*\*check1;

**proc** **summary** data=wk print n nmiss mean std min max skew;

var SL1-SL12 SL3r SL4r SL5r SL6r SL7r SL8r SL9r SL10r SL11r SL12r

SLPD4 SLPSNR1 SLPSOB1 SLPA2 SLPS3 SLP6 SLP9 SLPQRAW SLPOP1;

**run**;

\*\*\*check2 for : check the reliability and inter-item correlation. if too low, may suggest errors in scoring (e.g., forget to reverse code certain items);

**proc** **corr** data=wk alpha nomiss;

var SL1-SL12 SL3r SL4r SL5r SL6r SL7r SL8r SL9r SL10r SL11r SL12r

SLPD4 SLPSNR1 SLPSOB1 SLPA2 SLPS3 SLP6 SLP9 SLPQRAW SLPOP1;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL1 SL3r SL7r SL8r

SLPD4;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL10r

SLPSNR1;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL5r

SLPSOB1;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL4r SL12r

SLPA2;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL6r SL9r SL11r

SLPS3;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL4 SL5r SL7r SL8r SL9r SL12

SLP6;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL1 SL3r SL4 SL5r SL6r SL7r SL8r SL9r SL12

SLP9;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL2

SLPQRAW;

**run**;

**proc** **corr** data=wk alpha nomiss;

var SL2

SLPOP1;

**run**;

\*\*\*CODE FROM CUILING;

**data** wk;

set wk;

array SL{**11**} SL1 SL3-SL12;

array PSL{**11**} PSL1 PSL3-PSL12;

\*define indicator of no more than 3(1-3) in the grade of sleep questions 1, 3 to 12;

do i=**1** to **11**;

if SL[i] in (**1**,**2**,**3**,**4**,**5**,**6**) then PSL[i]=(SL[i]<=**3**); end;

drop i;

\*define indicator of severe (worse) sleep performance in each question (reverse direction for questions 1,4,12 (lower indicates better performance));

array SEVSL{**11**} SEVSL1 SEVSL3-SEVSL12;

do j=**1** to **11**;

if SL[j] in (**1**,**2**,**3**,**4**,**5**,**6**) then do;

SEVSL[j]=(SL[j]<=**3**);

if j in (**1**,**3**,**11**) then SEVSL[j]=(SL[j]>**3**);

end;

end;

drop j;

label PSL1="PSL1: taking no more than 45 minutes to fall asleep"

PSL3="PSL3: at least a good bit of the time feel that sleep was not quiet"

PSL4 = "PSL4:at least a good bit of the time get enough sleep to feel rested upon waking"

PSL5 = "PSL5:at least a good bit of the time awaken short of breath or with a headache"

PSL6 = "PSL6:at least a good bit of the time feel drowsy or sleepy during the day"

PSL7 = "PSL7:at least a good bit of the time have trouble falling asleep"

PSL8 = "PSL8:at least a good bit of the time awaken during sleep time and have trouble falling asleep again"

PSL9 = "PSL9:at least a good bit of the time have trouble staying awake during the day"

PSL10 = "PSL10:at least a good bit of the time snore during sleep"

PSL11 = "PSL11:at least a good bit of the time take naps during the day"

PSL12 = "PSL12:at least a good bit of the time get the amount of sleep needed"

SEVSL1 = "SEVSL1: taking more than 45 minutes to fall asleep"

SEVSL3 = "SEVSL3: at least a good bit of the time feel that sleep was not quiet"

SEVSL4 = "SEVSL4: at most some of the time get enough sleep to feel rested upon waking"

SEVSL5 = "SEVSL5:at least a good bit of the time awaken short of breath or with a headache"

SEVSL6 = "SEVSL6:at least a good bit of the time feel drowsy or sleepy during the day"

SEVSL7 = "SEVSL7:at least a good bit of the time have trouble falling asleep"

SEVSL8 = "SEVSL8:at least a good bit of the time awaken during sleep time and have trouble falling asleep again"

SEVSL9 = "SEVSL9:at least a good bit of the time have trouble staying awake during the day"

SEVSL10 = "SEVSL10:at least a good bit of the time snore during sleep"

SEVSL11 = "SEVSL11:at least a good bit of the time take naps during the day"

SEVSL12 = "SEVSL12: at most some of the time get the amount of sleep needed";

**run**;

\*Berlin Questions;

\* Category 1;

**data** wk;

set wk;

if SL10r eq **.** then Snore = **.**;

else if SL10r lt **6** then Snore = **1**;

else Snore=**0**;

if Berlin1 eq **.** then SnLoud = **.**;

else if Berlin1 ge **3** then SnLoud = **1**;

else SnLoud=**0**;

if Berlin2 eq **.** then SnFreq = **.**;

else if Berlin2 le **2** then SnFreq = **1**;

else SnFreq=**0**;

if Berlin3 eq **.** then SnBother = **.**;

else if Berlin3 eq **1** then SnBother = **1**;

else SnBother=**0**;

if Berlin4 eq **.** then SnQuit = **.**;

else if Berlin4 le **2** then SnQuit = **1**;

else SnQuit=**0**;

\*Category 2;

if Berlin5 eq **.** then SlFatig = **.**;

else if Berlin5 le **2** then SlFatig = **1**;

else SlFatig=**0**;

if Berlin6 eq **.** then TireWake = **.**;

else if Berlin6 le **2** then TireWake = **1**;

else TireWake=**0**;

if Berlin7 eq **.** then SlDrive = **.**;

else if Berlin7 le **4** then SlDrive = **1**;

else SlDrive=**0**;

\* Category 3;

BMI = Berlin9WtKG / ((Berlin10HtCM/**100**)\*\***2**);

if BMI eq **.** then HiBMI = **.**;

else if BMI ge **30** then HiBMI = **1**;

else BMI=**0**;

if Berlin8 eq **.** then HiBP = **.**;

else if Berlin8 eq **1** then HiBP = **1**;

else HiBP=**0**;

BerlinCat1\_sum = sum(of Snore, SnLoud, SnFreq, SnBother,SnQuit);

BerlinCat2\_sum = sum(of SlFatig, TireWake, SlDrive);

BerlinCat3\_sum = sum(of HiBMI, HiBP);

# Pain Questionnaires

**(34 items)**

**DESCRIPTION**

This measure was selected to assess participants’ pain.

**ASSOCIATED PAPERS**

Bigal, M. E., Ashina, S., Burstein, R., Reed, M. L., Buse, D., Serrano, D., & Lipton, R. B. (2008). Prevalence and characteristics of allodynia in headache sufferers: A population study. *Neurology, 70,* 1525-1533.

Lipton, R. B., Bigal, M. E., Ashina, S., Burstein, R., Silberstein, S., Reed, M. L., ... & American Migraine Prevalence Prevention Advisory Group. (2008). Cutaneous allodynia in the migraine population. *Annals of neurology*, *63*(2), 148-158.

Ray, L., Lipton, R. B., Zimmerman, M. E., Katz, M. J., & Derby, C. A. (2011). Mechanisms of association between obesity and chronic pain in the elderly. *PAIN®*, *152*(1), 53-59.

Stewart, W. F., Lipton, R. B., Dowson, A. J., & Sawyer, J. (2001). Development and testing of the Migraine Disability Assessment (MIDAS) Questionnaire to assess headache-related disability. *Neurology*, *56*(suppl 1), S20-S28.

**SUBJECT INSTRUCTIONS:**

A. Pain Activity Limitations: Please answer the following questions about pain you have had over the last 3 months. Write your answer in the box next to each question. Write zero (0) if you did not do the activity in the last 3 months.

B. The Allodynia Symptom Checklist: Over the last 3 months, when you have pain, how often do you experience increased pain or an unpleasant sensation on your skin when you engage in each of the following?

C. Total Pain Index: In the past 3 months, how often did you have pain in the following areas?

Thinking about the pain over the last 3 months, on a scale of 0 to 10, 0 being no pain and 10 being the worst imaginable pain, how would you rate your worst pain?

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable Name** | **Item Text** | **Item Values** |  |
| PainDate | Date Pain Questionnaire was completed |  |  |
| Tester | Tester's initials who completed the Pain entry |  |  |
| *Pain Activity Limitations: Please answer the following questions about pain you have had over the last 3 months. Enter the answer in the box next to each question. Write zero (0) if you did not do the activity in the last 3 months.* | | |  |
| Pain1 | On how many days in the last 3 months did you have pain of any intensity? (if 0, skip to section C) |  |  |
| *If Pain1 > 0, then asked Pain2 through Pain 6 questions, else skip to Pain7* | | |  |
| Pain2 | How many days in the last 3 months did you miss work, school, or volunteer work because of your pain? |  |  |
| Pain3 | How many days in the last 3 months was your productivity at work, school, or volunteer work reduced by half or more because of your pain? *(Do not include days you counted in question 2 where you missed work or school.)* |  |  |
| Pain4 | On how many days in the last 3 months did you **not** do household work or chores because of your pain? |  |  |
| Pain5 | How many days in the last 3 months was your productivity in household work or chores reduced by half or more because of your pain? *(Do not include days you counted in question 4 where you did not do household work.)* |  |  |
| Pain6 | On how many days in the last 3 months did you miss family, social, or leisure activities because of your pain? |  |  |
| *The Allodynia Symptom Checklist: Over the last 3 months, when you have pain, how often do you experience increased pain or an unpleasant sensation on your skin when you engage in each of the following:* | | |  |
| Pain7 | Combing your hair | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| Pain8 | Wearing eyeglasses | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| Pain9 | Rubbing the painful body part | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| Pain10 | Wearing clothing | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| Pain11 | Taking a shower (when water hits the area of pain) | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| Pain12 | Resting the painful body part on a pillow or sheets | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| Pain13 | Exposure to heat (e.g. cooking, washing your face with hot water) | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| Pain14 | Exposure to cold (e.g. using an ice pack, washing with cold water) | 0 = Does not apply to me  1 = Never  2 = Rarely  3 = Less than half the time  4 = Half the time or more |  |
| *Total Pain Index: In the past 3 months, how often did you have pain in the following areas?* | | |  |
| Pain15 | Head | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain16 | Face | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain17 | Neck or shoulders | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain18 | Back | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain19 | Arms or hands | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain20 | Legs or Feet | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain21 | Chest | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain22 | Abdomen or pelvis | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| Pain23Other | Any other location (type the name of the other body location) |  |  |
| Pain23 | Pain in other body location | 0=None of the time  1=A slight bit of the time  2=Some of the time  3=Most of the time  4=All of the time |  |
| *Thinking about the pain over the last 3 months, on a scale of 0 to 10, 0 being no pain and 10 being the worst imaginable pain, how would you rate your worst pain?* | | |  |
| Pain15Rate | Head | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain16Rate | Face | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain17Rate | Neck or shoulders | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain18Rate | Back | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain19Rate | Arms or hands | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain20Rate | Legs or feet | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain21Rate | Chest | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain22Rate | Abdomen or pelvis | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| Pain23Rate | Any other location | 0=No pain  1  2  3  4  5  6  7  8  9  10=Worst pain imaginable |  |
| PainComments | Enter any comments related to the Pain Questionnaire |  |  |

**SCORING OF SCALE**

N/A

<https://headaches.org/wp-content/uploads/2018/02/MIDAS.pdf>

In Bigal et al. (2008; citation above), the Allodynia Symptom Checklist had response options that were categorized as 0 (Never, Rarely, or Does not apply to me), 1 (less than half the time), and 2 (half the time or more). The scale typically has 12 items, but the version used to EAS has only 8, which would allow for sum scores ranging from 0 to 16.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Pain Questionnaires\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*;

**data** wk;

set wk;

\*\*\*\* pain activity limitations;

if pain1 ne **0** then PainActLimit = sum (of Pain2 - Pain6);

else if pain1=**0** then PainActLimit= **0**;

if n(Pain2, Pain3, Pain4, Pain5, Pain6) ge **4** and pain1 ne **0** then PainActLimit\_adj = sum(of Pain2-Pain6);

else if pain1=**0** then PainActLimit\_adj=**0**;

\*\*\*\* Allodynia symptom checklist;

if pain1 ne **0** then Allodynia = sum (of Pain7 - Pain14);

else if pain1 = **0** then Allodynia = **0**;

if n(Pain7, Pain8, Pain9, Pain10, Pain11, Pain12, Pain13, Pain14) ge **6** and pain1 ne **0** then Allodynia\_adj = sum(of Pain7-Pain14);

else if pain1 = **0** then Allodynia\_adj = **0**;

\*\*\*\* total pain index;

TotalPainIndex =

( pain15 \* pain15rate ) +

( pain16 \* pain16rate ) +

( pain17 \* pain17rate ) +

( pain18 \* pain18rate ) +

( pain19 \* pain19rate ) +

( pain20 \* pain20rate ) +

( pain21 \* pain21rate ) +

( pain22 \* pain22rate ) +

( pain23 \* pain23rate ) ;

**run**;