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Midlife in the United States (MIDUS 2): Cognitive Project, 2004-2006

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Variable Naming

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MIDUS II PROJECT 3: Variable Naming
Cognitive Test Battery

Brief Test of Adult Cognition by Telephone (BTACT)
and Stop & Go Switch Task (SGST)

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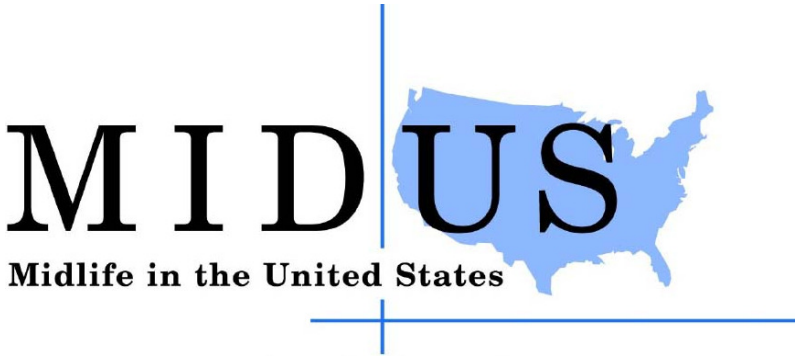

A. Coding conventions for data

a) YES = 1, NO = 2

b) INCORRECT: 95 (for Stop & Go Switch Task only)

c) DON'T KNOW (7's): 7, 97, 997

d) REFUSED/MISSING (8's): 8, 98, 998

e) INAPP/INVALID (9's): 9, 99, 999

B. Naming conventions for BTACT variables

a) 1st letter – "B," to indicate MIDUS II

b) 2nd letter – indicates project number 3

c) 3rd letter – indicates type of test: T= B**T**ACT cognitive tests

d) 4th, 5th, 6th, 7th, 8th letters – indicates either:

   i. The individual test:

      1. **WLI**: Word List Recall – Immediate

         (Note: Columns 7 & 8 indicate response number; 1-26 possible responses)

      2. **BD**: Backward Digit Span

      3. **CTFL**: Category Fluency (also **CTF**)

      4. **NS**: Number Series

         (Note: Column 6 indicates trial number 1-5)

      5. **BK**: Backward Counting

      6. **WLD**: Word List Recall – Delayed

         (Note: Columns 7 & 8 indicate response number; 1-26 possible responses)

ii. A composite measure:

1. **WLF**: Word List: Proportion Forgotten Between Immediate and Delayed
2. **COMP**: BTACT Composite Score

iii. A flag variable: Variables with "**FP**" as their 7th and 8th characters serve as flag variables for potentially problematic cases. This variable indicates, by test, which cases were identified at Brandeis by our screening as being problematic due to test disruption, interview equipment failures, or other problems. We recommend users deselect these tests for these specific cases.

Note: **Bold** variable names below indicate composite or total scale scores

Variable name	Variable label	Values
Word List Recall: Immediate		
B3TWLIFP	Word List Immediate flagged problematic?	1=YES 2=NO 8=REFUSED/MISSING
B3TWLI1 … B3TWLI26	Word List Immediate: Recalled #1 … #26 (allows for max 15 correct responses + up to 11 intrusions/repetitions)	1=DRUM 2=CURTAIN 3=BELL 4=COFFEE 5=SCHOOL 6=PARENT 7=MOON 8=GARDEN 9=HAT 10=FARMER 11=NOSE 12=TURKEY 13=COLOR 14=HOUSE 15=RIVER

		90=NON-LIST INTRUSION 98=REFUSED/MISSING 99=INAPP
B3TWLITU	Word List Immediate: Tot Unique Items	Range: 0 to 15; Sum of all correct, unique responses from B3TWLI1 to B3TWLI126 98=REFUSED/MISSING 99=INAPP
B3TWLITR	Word List Immediate: Tot # Repetitions	Sum of all repeated responses from B3TWLI1 to B3TWLI126 98=REFUSED/MISSING 99=INAPP
B3TWLITI	Word List Immediate: Tot # Intrusions	Sum of all non-list intrusions from B3TWLI1 to B3TWLI126 98=REFUSED/MISSING 99=INAPP
Digits Backward		
B3TDBFP	Digits Backward flagged problematic?	1=YES 2=NO 8=REFUSED/MISSING
B3TDBS	Digits Backward: highest # digits recall	0, 2 to 8 98=REFUSED/MISSING 99=INAPP
Category Fluency		
B3TCTFFP	Category Fluency flagged problematic?	1=YES 2=NO 8=REFUSED/MISSING
B3TCTFLU	Category Fluency: Tot Unique Items	Sum of all in-category, unique animals named 98=REFUSED/MISSING 99=INAPP
B3TCTFLR	Category Fluency: Tot # Repetitions	Sum of all in-category but repeated animals named 98=REFUSED/MISSING 99=INAPP
B3TCTFLI	Category Fluency: Total # Intrusions	Sum of all non-category intrusions 98=REFUSED/MISSING 99=INAPP

Number Series		
B3TNSFP	Number Series flagged problematic?	1=YES 2=NO 8=REFUSED/MISSING
B3TNS1 … B3TNS5	Number Series: #1…#5 (number reported)	997=DON'T KNOW 998=REFUSED/MISSING 999=INAPP
B3TNS1C… B3TNS5C	Number Series #1…#5: correct?	1=YES, CORRECT 2=NO, INCORRECT 8=REFUSED/MISSING 9=INAPP
B3TNSTOT	Number Series: Tot Correct	Range: 0 to 5; 8=REFUSED/MISSING 9=INAPP

Backward Counting		
B3TBKFP	Backward Counting flagged problematic?	1=YES 2=NO 8=REFUSED/MISSING
B3TBKCT	Backward Counting: last # reached	998=REFUSED/MISSING 999=INAPP
B3TBKERR	Backward Counting: # of errors	998=REFUSED/MISSING 999=INAPP

B3TBKTOT	BK: (100-(B3TBKCT + B3TBKERR))	Total correct #s produced
		998=REFUSED/MISSING
		999=INAPP

Word List Recall– Delayed		
B3TWLDFP	Word List Delayed flagged problematic?	1=YES 2=NO 8=REFUSED/MISSING
B3TWLD1… B3TWLD26	Word List Delayed: Recalled #1…#26 (allows for max 15 correct responses + up to 11 intrusions/repetitions)	1=DRUM 2=CURTAIN 3=BELL 4=COFFEE 5=SCHOOL 6=PARENT 7=MOON 8=GARDEN 9=HAT 10=FARMER 11=NOSE 12=TURKEY 13=COLOR 14=HOUSE 15=RIVER

		90=NON-LIST INTRUSION 98=REFUSED/MISSING 99=INAPP
B3TWLDTU	Word List Delayed: Tot Unique Items	Range: 0 to 15; Sum of all correct, unique responses from B3TWLD1 to B3TWLD126 98=REFUSED/MISSING 99=INAPP
B3TWLDTR	Word List Delayed: Tot # Repetitions	Sum of all repeated responses from B3TWLD1 to B3TWLD126 98=REFUSED/MISSING 99=INAPP
B3TWLDTI	Word List Delayed: Tot # Intrusions	Sum of all non-list intrusions from B3TWLD1 to B3TWLD126 98=REFUSED/MISSING 99=INAPP

Composite Measures		
B3TWLF	Word List: Proportion Forgotten Between Immediate and Delayed	(B3TWLITU-B3TWLDTU)/B3TWLITU 8=REFUSED/MISSING 9=INAPP
B3TCOMP	BTACT Composite Score	Standardized mean of z-scores for Word Lists (sum of Immediate and Delayed: B3TWLITU + B3TWLDTU), Digits Backward (B3TDBS), Category Fluency (B3TCTFLU), Number Series (B3TNSTOT), and Backward Counting (B3TBKTOT) 8=REFUSED/MISSING 9=INAPP
B3TEM	BTACT Episodic Memory Factor	Standardized mean of z-scores for Word List Immediate (B3TWLITU)and Word List Delayed (B3TWLDTU)

		8=REFUSED/MISSING 9=INAPP
B3TEF	BTACT Executive Functioning Factor	Standardized mean of z-scores for Digits Backward (B3TDBS), Category Fluency (B3TCTFLU), Number Series (B3TNSTOT), Backward Counting (B3TBKTOT), and mean of switch and nonswitch trials (B3TSMXBB multiplied by -1) in the Stop & Go Switch Task (SGST)[†] 8=REFUSED/MISSING 9=INAPP

[†] See description of SGST variables below. Also note the recommendation to use the B3TSFC filter described at the end of this document when working with SGST variables.

C. Naming conventions for Stop and Go Switch Task (SGST) variables

a) Naming convention for individual trials (raw scores)

i. 1st, 2nd, and 3rd character: by default is the **B3T** code that indicates MIDUS II, Project 3, BTACT Cognitive Battery

ii. 4th character indicates the **S**top & Go Switch Task

iii. 5th character: W=Ra**W** scores

iv. 6th character indicates the subtest

1. N=**N**ormal single-task
2. R=**R**everse single-task
3. X=mi**X**ed-task

v. 7th and 8th character indicate trial number (**1**-**20** for single-task, **1**-**32** for mixed-task)

b) Naming convention for composite scores

i. 1st, 2nd, and 3rd character, by default, is the **B3T** code that indicates MIDUS II, Project 3, BTACT Cognitive Battery

ii. 4th character indicates the **S**top & Go Switch Task

iii. 5th character indicates measure

1. For accuracy scores

a. T=**T**otal correct

b. V=invalid

c. P=**P**ercent correct

2. For latency scores

a. M=**M**edian (or mean of medians)

iv. 6th character indicates the subtest

1. N=**N**ormal single-task
2. R=**R**everse single-task
3. X=mi**X**ed-task

v. ***For mixed-task composites only**:

1. 7th character indicates the condition

a. N=**N**ormal

b. R=**R**everse

c. B=com**B**ined

2. 8th character indicates the trial type

a. S=**S**witch

b. O=n**O**nswitch

c. B=combined

*The last two characters apply only to the mixed-task subtest, and are omitted for the normal and reverse single-tasks. Thus, normal and reverse single-task composite measures will use only six characters rather than the full eight characters.

c) Composite scores: variable names

i. Accuracy

1. **B3TSPN**: normal single-task % correct
2. **B3TSPR**: reverse single-task % correct
3. **B3TSPXNO**: mixed-task normal nonswitch % correct
4. **B3TSPXRO**: mixed-task reverse nonswitch % correct
5. **B3TSPXBO**: mixed-task nonswitch % correct
6. **B3TSPXNS**: mixed-task normal switch % correct
7. **B3TSPXRS**: mixed-task reverse switch % correct
8. **B3TSPXBS**: mixed-task switch % correct
9. **B3TSPXBB**: all mixed-task trials % correct

ii. Latencies

1. **B3TSMN**: normal single-task median RT (reaction time)
2. **B3TSMR**: reverse single-task median RT (reaction time)
3. **B3TSMB**: mean(B3TSMN, B3TSMR) (normal and reverse)
4. **B3TSMXNO**: mixed-task normal nonswitch median RT
5. **B3TSMXRO**: mixed-task reverse nonswitch median RT
6. **B3TSMXBO**: median RT of all mixed-task nonswitch
7. **B3TSMXNS**: mixed-task normal switch median RT

8. **B3TSMXRS**: mixed-task reverse switch median RT
9. **B3TSMXBS**: median RT of all mixed-task switch
10. **B3TSMXBB**: mean(B3TSMXBO, B3TSMXBS) (nonswitch and switch trials)

d) Naming convention for cost variables

i. 1st, 2nd, 3rd, 4th characters: as above: **B3TS**, for MIDUS II, Project 3 BTACT Cognitive Battery, Stop & Go Switch Task

ii. 5thcharacter: C=**C**ost

iii. 6th character: indicates G=**G**eneral, L=**L**ocal

iv. 7th character indicates the condition

1. N= **N**ormal
2. R= **R**everse
3. B=com**B**ined

v. 8th character: A=**A**bsolute cost, R= **R**elative cost

e) Switch Costs: variable names

i. General switch costs compare latencies on mixed-task trials to single-task trials (mean of normal single-task and reverse single-task). Although there are several ways of calculating general switch costs, we selected this version as the most basic. We give both *absolute* and *relative* general switch costs. *Absolute costs* represent a simple difference score between the easier and more difficult condition (e.g. A – B). *Relative costs* give the proportion decline in performance

from the easier to the harder condition, and thus control for differences in baseline performance (e.g. (A-B)/A).)

1. **B3TSCGNA**: General Switch Cost (normal), absolute [mean(B3TSMXNO, B3TSMXNS) – B3TSMN]
2. **B3TSCGNR**: General Switch Cost (normal), relative (B3TSCGNA/B3TSMN)
3. **B3TSCGRA**: General Switch Cost (reverse), absolute [mean(B3TSMXRO, B3TSMXRS) – B3TSMR]
4. **B3TSCGRR**: General Switch Cost (reverse), relative (B3TSCGRA/B3TSMR)
5. **B3TSCGBA**: General Switch Cost (combined), absolute (B3TSMXBB-B3TSMB)
6. **B3TSCGBR**: General Switch Cost (combined), relative (B3TSCGBA/B3TSMB)

ii. Local switch costs compare mixed-task switch trials to mixed-task nonswitch trials. We give both *absolute* local switch costs and *relative* local switch costs.

1. **B3TSCLNA**: Local Switch Cost (normal), absolute (B3TSMXNS – B3TSMXNO)
2. **B3TSCLNR**: Local Switch Cost (normal), relative (B3TSCLNA/B3TSMXNO)
3. **B3TSCLRA**: Local Switch Cost (reverse), absolute (B3TSMXRS – B3TSMXRO)

4. **B3TSCLRR**: Local Switch Cost (reverse), relative (B3TSCLRA/B3TSMXRO)
5. **B3TSCLBA**: Local Switch Cost (combined), absolute (B3TSMXBS- B3TSMXBO)
6. **B3TSCLBR**: Local Switch Cost (combined), relative (B3TSCLBA/B3TSMXBO)

f) Filters: We provide two levels of filters. Researchers who wish to use all valid files can choose to select the Valid filter (B3TSFV below). In our analyses we have used a criterion of 75% accuracy to ensure that participants were performing the task correctly; researchers who wish to use this approach can select cases based on the Clean filter (B3TSFC below).

i. B3TSFV (**V**alid): filters cases that were invalid due to missing sound files, technical problems, or failure to carry out the task as instructed.

ii. B3TSFC (**C**lean): To further insure that participants were performing the task as directed, we required a valid file with accuracy of at least 75% on all conditions (normal single-task, reverse single-task, mixed-task switch and nonswitch). In addition, to eliminate extreme latencies (i.e., outliers), we required median values of <2 sec for single-task and <4 sec for mixed-task trials.

Note: **Bold** variable names below indicate composite or total scale scores

Variable name	Variable label	Values

Individual Trials: Raw Scores		
B3TSWN1… B3TSWN20	SGST: normal single-task trial #1…#20	Latencies (s) 95=INCORRECT 98=REFUSED/MISSING 99=INVALID
B3TSWR1… B3TSWR20	SGST: reverse single-task trial #1…#20	Latencies (s) 95=INCORRECT 98=REFUSED/MISSING 99=INVALID
B3TSWX1… B3TSWX32	SGST: mixed-task trial #1 "normal…green"…trial #32 "green"	Latencies (s) 95=INCORRECT 98=REFUSED/MISSING 99=INVALID

Normal Single-task Trials: Composite Scores		
Composite Accuracy Scores		
B3TSTN	SGST: normal single-task #correct	0-20 98=REFUSED/MISSING
B3TSVN	SGST: normal single-task #invalid	0-20 98=REFUSED/MISSING
B3TSPN	SGST: normal single-task %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Composite Latency Score		
B3TSMN	SGST: normal single-task median RT (reaction time)	Latency (s) 98=REFUSED/MISSING

Reverse Single-task Trials: Composite Scores		
Composite Accuracy Scores		
B3TSTR	SGST: reverse single-task #correct	0-20 98=REFUSED/MISSING
B3TSVR	SGST: reverse single-task #invalid	0-20 98=REFUSED/MISSING
B3TSPR	SGST: reverse single-task %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Composite Latency Score		
B3TSMR	SGST: reverse single-task median RT (reaction time)	Latency (s) 98=REFUSED/MISSING
Composite of Normal and Reverse Single-task		
B3TSMB	SGST: mean(B3TSMN, B3TSMR)	Latency (s) 98=REFUSED/MISSING

Mixed-task Trials: Composite Accuracy Scores		
Accuracy composite across normal nonswitch trials		
B3TSTXNO	SGST: mixed-task normal nonswitch trials #correct	0-12

		98=REFUSED/MISSING
B3TSVXNO	SGST: mixed-task normal nonswitch trials #invalid	0-12 98=REFUSED/MISSING
B3TSPXNO	SGST: mixed-task normal nonswitch trials %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Accuracy composite across reverse nonswitch trials		
B3TSTXRO	SGST: mixed-task reverse nonswitch trials #correct	0-11 98=REFUSED/MISSING
B3TSVXRO	SGST: mixed-task reverse nonswitch trials #invalid	0-11 98=REFUSED/MISSING
B3TSPXRO	SGST: mixed-task reverse nonswitch trials %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Accuracy composites across all nonswitch trials		
B3TSTXBO	SGST: mixed-task nonswitch trials #correct	0-23 98=REFUSED/MISSING
B3TSVXBO	SGST: mixed-task nonswitch trials #invalid	0-23 98=REFUSED/MISSING
B3TSPXBO	SGST: mixed-task nonswitch trials %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Accuracy composite across normal switch trials		
B3TSTXNS	SGST: mixed-task normal switch trials #correct	0-3 8=REFUSED/MISSING
B3TSVXNS	SGST: mixed-task normal switch trials #invalid	0-3 8=REFUSED/MISSING
B3TSPXNS	SGST: mixed-task normal switch trials %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Accuracy composite across reverse switch trials		
B3TSTXRS	SGST: mixed-task reverse switch trials #correct	0-3 8=REFUSED/MISSING
B3TSVXRS	SGST: mixed-task reverse switch trials #invalid	0-3 8=REFUSED/MISSING
B3TSPXRS	SGST: mixed-task reverse switch trials %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Accuracy composite across all switch trials		
B3TSTXBS	SGST: mixed-task switch trials #correct	0-6 8=REFUSED/MISSING
B3TSVXBS	SGST: mixed-task switch trials #invalid	0-6 8=REFUSED/MISSING
B3TSPXBS	SGST: mixed-task switch trials %correct (ratio form)	0-1.00 8=REFUSED/MISSING
Accuracy composites across all mixed-task trials		
B3TSTXBB	SGST: all mixed-task #correct	0-29 98=REFUSED/MISSING
B3TSVXBB	SGST: all mixed-task #invalid	0-29 98=REFUSED/MISSING

B3TSPXBB	SGST: all mixed-task %correct (ratio form)	0-1.00 98=REFUSED/MISSING

Mixed-task Trials: Composite Latency Scores		
Latency composite across normal nonswitch trials		
B3TSMXNO	SGST: mixed-task normal nonswitch median RT	Latency (s) 98=REFUSED/MISSING
Latency composite across reverse nonswitch trials		
B3TSMXRO	SGST: mixed-task reverse nonswitch median RT	Latency (s) 98=REFUSED/MISSING
Latency composite across all nonswitch trials		
B3TSMXBO	SGST: mixed-task nonswitch trials median RT	Latency (s) 98=REFUSED/MISSING
Latency composite across normal switch trials		
B3TSMXNS	SGST: mixed-task normal switch median RT	Latency (s) 98=REFUSED/MISSING
Latency composite across reverse switch trials		
B3TSMXRS	SGST: mixed-task reverse switch median RT	Latency (s) 98=REFUSED/MISSING
Latency composite across all switch trials		
B3TSMXBS	SGST: mixed-task switch trials median RT	Latency (s) 98=REFUSED/MISSING
Latency composite across all mixed-task trials		
B3TSMXBB	SGST: mean(B3TSMXBO, B3TSMXBS)	Latency (s) 98=REFUSED/MISSING

Mixed-Task Trials: Switch Cost Scores		
B3TSCGBA	SGST: General Switch Cost, absolute (B3TSMXBB-B3TSMB)	Latency (s) 98=REFUSED/MISSING
B3TSCGBR	SGST: General Switch Cost, relative (B3TSCGBA/B3TSMB)	Latency (s) 98=REFUSED/MISSING
B3TSCGNA	SGST: General Switch Cost (normal), absolute [mean(B3TSMXNO, B3TSMXNS) – B3TSMN]	Latency (s) 98=REFUSED/MISSING
B3TSCGNR	SGST: General Switch Cost (normal), relative (B3TSCGNA/B3TSMN)	Latency (s) 98=REFUSED/MISSING
B3TSCGRA	SGST: General Switch Cost (reverse), absolute [mean(B3TSMXRO, B3TSMXRS) – B3TSMR]	Latency (s) 98=REFUSED/MISSING
B3TSCGRR	SGST: General Switch Cost (reverse), relative (B3TSCGRA/ B3TSMR)	Latency (s) 98=REFUSED/MISSING
B3TSCLBA	SGST: Local Switch Cost, absolute (B3TSMXBS-B3TSMXBO)	Latency (s) 98=REFUSED/MISSING
B3TSCLBR	SGST: Local Switch Cost, relative (B3TSCLBA/B3TSMXBO)	Latency (s) 98=REFUSED/MISSING
B3TSCLNA	SGST: Local Switch Cost (normal), absolute	Latency (s)

	(B3TSMXNS-B3TSMXNO)	98=REFUSED/MISSING
B3TSCLNR	SGST: Local Switch Cost, (normal), relative (B3TSCLNA/B3TSMXNO)	Latency (s) 98=REFUSED/MISSING
B3TSCLRA	SGST: Local Switch Cost (reverse), absolute (B3TSMXRS-B3TSMXRO)	Latency (s) 98=REFUSED/MISSING
B3TSCLRR	SGST: Local Switch Cost,(reverse), relative (B3TSCLRA/B3TSMXRO)	Latency (s) 98=REFUSED/MISSING

Filters		
B3TSFV	SGST: Filter invalid cases (VALID)	0=NOT SELECTED 1=SELECTED
B3TSFC	SGST: Filter cases with low accuracy or extreme latencies (CLEAN)	0=NOT SELECTED 1=SELECTED