

## Cognition - Letter Fluency

01COGFLU Cognition - Letter Fluency Module

### OVERVIEW

The Cognition - Letter Fluency Module, which was first administered during the 2004 collection wave, tests cognitive ability by asking the participant to name as many items that fit specified parameters as they can within 60-second intervals. The "Letter Fluency," was administered to all participants and called for them to think of and say as many words as they could that began with a particular, randomly selected letter of the alphabet: "L" or "F". Prior to attempting the task, participants were instructed not to use proper names (of people or places), say the same word more than once, or to repeat variants of the same root word with different endings. For the Letter Fluency task, the number of acceptable responses given by the participant - as well as the frequency with which they violated the stated rules - was tallied by 15-second quartiles during our transcription process.

If the participant refused to grant their interviewer permission to record the entire CAPI interview at its beginning, they were asked for special permission to record just the Cognition - Letter Fluency Module. If such permission was denied, the module was skipped in its entirety, as it was not possible to properly transcribe and score the task mid-interview.

**IMPORTANT NOTE:** The ILIAD Letter Fluency module is transcribed and scored using the same process as both the 2004 and 2011 rounds of data collection.

### BRIEF VARIABLE DESCRIPTIONS

Variable ranges reference dataset/codebook order and are not necessarily alphabetical.

---

oli202rec-oli205rec:	Administrative and Error Codes for the Letter Fluency Task
oli206re:	Version of Letter Fluency Task Administered: "L" or "F"
oli210rec:	Total Letter Fluency Score as Sum of Scored Words Named
oli211rec-oli216rec:	Counts of the Disqualified Words Said for the Letter Fluency Task: Repeated Words, Same Root Word with Different Endings, Caught Repetitions, Proper Nouns, and Incorrect Responses
oli220rec-oli247rec:	Letter Fluency Scores and Counts of the Disqualified Words Said by 15-Second Quartiles

**o1i202rec: Detailed code for Letter Fluency not ascertained.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: x\_irecprm1, x\_i11b1, x\_i11bstrt

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-2	Inappropriate INAPPROPRIATE (NOT ASCERTAINED o1i211rec != -4)	677	849	1526
1	MISSING OR TOO POOR AUDIO RECORDING	18	7	25
8	MISHEARD LETTER, NOT PROPERLY CORRECTED	4	4	8

Note: Cases are assigned values of "-4" and coded as not ascertained on o1i210rec-o1i247rec for any of the detailed reasons contained within this variable. See "cor860FluencyCodingSupervisorInstructions.doc" in Appendix G for the specifics on what rules were followed to determine which detailed code was given.

**o1i203rec: Detailed code for Letter Fluency refused.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: x\_irecprm1, x\_i11b1, x\_i11bstrt

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-2	Inappropriate INAPPROPRIATE (Refused o1i211rec != -3)	682	843	1525
1	REFUSAL BEFORE TASK BEGAN	4	2	6
2	REFUSAL DURING ADMINISTRATION OF TASK	13	15	28

Note: Cases are assigned values of "-3" and coded as refusals on o1i210rec-o1i247rec for any of the detailed reasons contained within this variable. For more information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

**o1i204rec: Detailed code for Letter Fluency cautions.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: x\_irecprm1, x\_i11b1, x\_i11bstr

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-2	Inappropriate INAPPROPRIATE (No Cautions Applied)	699	860	1559

Note: See "cor860FluencyCodingSupervisorInstructions.doc" in Appendix G for the specifics on what rules were followed to determine which detailed code was given.

**o1i205rec: Duration of Letter Fluency task for Participants who stopped before 60 seconds had elapsed.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-2	Inappropriate INAPPROPRIATE (o1i202rec > 0   o1i203rec > 0   Task Attempted for Full 60 Seconds)	613	762	1375
4 - 45		16	24	40
46 - 48		17	20	37
49 - 51		21	18	39
52 - 55		21	23	44
56 - 59		11	13	24

Note: Some participants who did not refuse assessment and to whom the Letter Fluency task was appropriately administered decided to stop or quit before the full 60 seconds allotted to them had elapsed; all such participants should have valid data on variables o1i210rec-o1i247rec. Participants to whom the Letter Fluency task was not appropriately administered (see o1i202rec) or who refused to be assessed (see o1i203rec) have been assigned values of "-3" or "-4" on variables o1i210rec-o1i247rec. For more information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

**o1i206re: Version of Letter Fluency task, 'F' or 'L'.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: p\_ForL

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
1	F	333	421	754
2	L	366	439	805

Note: Unlike during the 2005 collection wave, when the Letter Fluency task was only administered to a randomly selected 80% sub-sample, all participants were asked to complete it in 2011. Participants who attempted the task in 2005 were asked to complete it in 2011 using the same letter ("L" or "F") that was randomly assigned to them last wave. Participants attempting the task for the first time in 2011 had either "L" or "F" randomly assigned to them. The Letter Fluency task was not administered to participants who did not permit audio recording of the Cognition - Letter/Category Fluency Module (see o1i202rec); in such cases, no letter was randomly assigned.

**o1i210rec: Letter Fluency: Total number of scored words named.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0 - 8		183	157	340
9 - 11		180	222	402
12 - 14		147	222	369
15 - 19		122	182	304
20 - 29		28	49	77

Note: This variable provides a sum of the scored words said by the participant after all Letter Fluency coding rules were implemented and any disqualified words were removed from consideration (see o1i211rec). For more detail on participants to whom the Letter Fluency task was not appropriately administered (codes of "-4") or who refused to be assessed (codes of "-3"), please see o1i202rec and o1i203rec respectively. For information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

**o1i211rec: Letter Fluency: Total raw number of words said, both those that were scored and those that were disqualified.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec x

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0 - 9		191	171	362
10 - 12		166	198	364
13 - 15		141	219	360
16 - 20		127	191	318
21 - 31		35	53	88

Note: See cor860 in Appendix G for information on how the Letter Fluency task was transcribed and scored. For more detail on participants to whom the Letter Fluency task was not appropriately administered (codes of "-4") or who refused to be assessed (codes of "-3"), please see o1i202rec and o1i203rec respectively.

**o1i212rec: Letter Fluency: Total number of exactly repeated words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		363	454	817
1		179	227	406
2		65	96	161
3		36	33	69
4		8	10	18
5		4	5	9
6		3	5	8
7		1	2	3
8		1	0	1

Note: Participants were instructed not to repeat words when attempting the Letter Fluency task. For more detail on participants to whom the Letter Fluency task was not appropriately administered (codes of "-4") or who refused to be assessed (codes of "-3"), please see o1i202rec and o1i203rec respectively. For information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

### **o1i213rec: Letter Fluency: Total number of repeated root words with different endings.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		594	721	1315
1		60	94	154
2		3	15	18
3		2	1	3
4		0	1	1
5		1	0	1

Note: Participants were instructed not to say any of the same words with a different ending when attempting the Letter Fluency task; an example of the same root word with a different ending would be "love" and "loving". For more detail on participants to whom the Letter Fluency task was not appropriately administered (codes of "-4") or who refused to be assessed (codes of "-3"), please see o1i202rec and o1i203rec respectively. For information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

### **o1i214rec: Letter Fluency: Total number of repeated words caught by Participant.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		621	762	1383
1		37	65	102
2		2	5	7



Note: A participant was considered to have caught an exactly repeated word (see o1i212rec), or a repetition of the same root word with a different ending (see o1i213rec), if they said something to the effect of, "oh, I already said that" during their timed attempt of the Letter Fluency task. For more detail on participants to whom the Letter Fluency task was not appropriately administered (codes of "-4") or who refused to be assessed (codes of "-3"), please see o1i202rec and o1i203rec respectively. For information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

### **o1i215rec: Letter Fluency: Total number of proper nouns.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		524	711	1235
1		97	99	196
2		30	20	50
3		4	1	5
4		3	1	4
5		1	0	1
6		1	0	1

Note: Participants were instructed not to use proper names of people or places (e.g. "France" or "Fred") when attempting the Letter Fluency task. For more detail on participants to whom the Letter Fluency task was not appropriately administered (codes of "-4") or who refused to be assessed (codes of "-3"), please see o1i202rec and o1i203rec respectively. For information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

### **o1i216rec: Letter Fluency: Total number of incorrect words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		642	801	1443
1		15	25	40
2		1	4	5
3		1	0	1
4		1	0	1
8		0	1	1
10		0	1	1

Note: An "incorrect" word is one that falls outside of the specified parameters for the Letter Fluency task: to say words that begin with a particular letter of the alphabet, "L" or "F". For a participant asked to think of words that begin with the letter "F", the words "phoenix" and "mouse" would constitute incorrect responses. For more detail on participants to whom the Letter Fluency task was not appropriately administered (codes of "-4") or who refused to be assessed (codes of "-3"), please see o1i202rec and o1i203rec respectively. For information on how the Letter Fluency task was transcribed and scored, see cor860 in Appendix G.

### **o1i220rec: Letter Fluency, Quartile 1: Total number of scored words named.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		5	6	11
1		15	11	26
2		40	27	67
3		71	73	144
4		140	130	270
5		121	179	300
6		129	180	309
7		87	117	204
8		36	70	106
9		12	25	37
10		3	6	9
11		0	4	4
12		1	4	5

Note: Quartile #1 comprises the first 15 seconds of the Letter Fluency task's 60-second administration period; this variable, then, provides a sum of the scored words said by the participant during quartile #1 after all Letter Fluency coding rules were implemented and any disqualified words were removed from consideration (see o1i221rec). For more information on how the task was transcribed and scored, see cor860 in Appendix G.

**o1i221rec: Letter Fluency, Quartile 1: Total raw number of words said, both those that were scored and those that were disqualified.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		4	5	9
1		10	9	19
2		27	22	49
3		68	66	134
4		129	118	247
5		133	178	311
6		131	189	320
7		95	118	213
8		40	75	115
9		19	36	55
10		3	8	11
11		0	4	4
12		1	4	5

Note: Quartile #1 comprises the first 15 seconds of the Letter Fluency task's 60-second administration period. See cor860 in Appendix G for more information on how the task was transcribed and scored.

**o1i222rec: Letter Fluency, Quartile 1: Total number of exactly repeated words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		620	777	1397
1		37	49	86
2		3	6	9

Note: Quartile #1 comprises the first 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to repeat words when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i223rec: Letter Fluency, Quartile 1: Total number of repeated root words with different endings.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		646	801	1447
1		13	30	43
2		1	1	2

Note: Quartile #1 comprises the first 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to say any of the same words with a different ending when attempting it; an example of the same root word with a different ending would be "love" and "loving". For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i224rec: Letter Fluency, Quartile 1: Total number of repeated words caught by Participant.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		658	829	1487
1		2	3	5

Note: Quartile #1 comprises the first 15 seconds of the Letter Fluency task's 60-second administration period. A participant was considered to have caught an exactly repeated word (see o1i222rec), or a repetition of the same root word with a different ending (see o1i223rec), if they said something to the effect of, "oh, I already said that" during their timed attempt of the task. For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i225rec: Letter Fluency, Quartile 1: Total number of proper nouns.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		586	773	1359
1		60	54	114
2		13	4	17
3		1	1	2

Note: Quartile #1 comprises the first 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to use proper names of people or places (e.g. "France" or "Fred") when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i226rec: Letter Fluency, Quartile 1: Total number of incorrect words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		655	826	1481
1		4	5	9
2		1	1	2

Note: Quartile #1 comprises the first 15 seconds of the Letter Fluency task's 60-second administration period. An "incorrect" word is one that falls outside of the specified parameters for the task: to say words that begin with a particular letter of the alphabet, "L" or "F". For a participant asked to think of words that begin with the letter "F", the words "phoenix" and "mouse" would constitute incorrect responses. For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i227rec: Letter Fluency, Quartile 2: Total number of scored words named.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		48	53	101
1		139	114	253
2		143	182	325
3		139	204	343
4		93	141	234
5		68	93	161
6		24	29	53
7		2	15	17
8		4	1	5

Note: Quartile #2 comprises the second 15 seconds of the Letter Fluency task's 60-second administration period; this variable, then, provides a sum of the scored words said by the participant during quartile #2 after all Letter Fluency coding rules were implemented and any disqualified words were removed from consideration (see o1i228rec). For more information on how the task was transcribed and scored, see cor860 in Appendix G.

**o1i228rec: Letter Fluency, Quartile 2: Total raw number of words said, both those that were scored and those that were disqualified.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1



Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		35	37	72
1		103	97	200
2		140	161	301
3		144	198	342
4		108	162	270
5		80	108	188
6		36	51	87
7		9	17	26
8		4	1	5
9		1	0	1

Note: Quartile #2 comprises the second 15 seconds of the Letter Fluency task's 60-second administration period. See cor860 in Appendix G for more information on how the task was transcribed and scored.

**o1i229rec: Letter Fluency, Quartile 2: Total number of exactly repeated words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone

Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		540	695	1235
1		92	115	207
2		26	16	42
3		1	6	7
4		1	0	1

Note: Quartile #2 comprises the second 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to repeat words when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i230rec: Letter Fluency, Quartile 2: Total number of repeated root words with different endings.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		634	800	1434
1		25	29	54
2		1	3	4

Note: Quartile #2 comprises the second 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to say any of the same words with a different ending when attempting it; an example of the same root word with a different ending would be "love" and "loving". For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i231rec: Letter Fluency, Quartile 2: Total number of repeated words caught by Participant.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		647	813	1460
1		13	19	32

Note: Quartile #2 comprises the second 15 seconds of the Letter Fluency task's 60-second administration period. A participant was considered to have caught an exactly repeated word (see o1i229rec), or a repetition of the same root word with a different ending (see o1i230rec), if they said something to the effect of, "oh, I already said that" during their timed attempt of the task. For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i232rec: Letter Fluency, Quartile 2: Total number of proper nouns.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		616	803	1419
1		40	26	66
2		2	3	5
3		2	0	2

Note: Quartile #2 comprises the second 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to use proper names of people or places (e.g. "France" or "Fred") when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i233rec: Letter Fluency, Quartile 2: Total number of incorrect words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		655	823	1478
1		4	7	11
2		1	1	2
4		0	1	1

Note: Quartile #2 comprises the second 15 seconds of the Letter Fluency task's 60-second administration period. An "incorrect" word is one that falls outside of the specified parameters for the task: to say words that begin with a particular letter of the alphabet, "L" or "F". For a participant asked to think of words that begin with the letter "F", the words "phoenix" and "mouse" would constitute incorrect responses. For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i234rec: Letter Fluency, Quartile 3: Total number of scored words named.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		105	109	214
1		147	181	328
2		151	228	379
3		154	168	322
4		61	94	155
5		31	40	71
6		7	10	17
7		4	1	5
8		0	1	1

Note: Quartile #3 comprises the third 15 seconds of the Letter Fluency task's 60-second administration period; this variable, then, provides a sum of the scored words said by the participant during quartile #3 after all Letter Fluency coding rules were implemented and any disqualified words were removed from consideration (see o1i235rec). For more information on how the task was transcribed and scored, see cor860 in Appendix G.

**o1i235rec: Letter Fluency, Quartile 3: Total raw number of words said, both those that were scored and those that were disqualified.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		90	77	167
1		117	149	266
2		144	209	353
3		165	188	353
4		77	129	206
5		51	61	112
6		11	15	26
7		4	3	7
8		1	1	2

Note: Quartile #3 comprises the third 15 seconds of the Letter Fluency task's 60-second administration period. See cor860 in Appendix G for more information on how the task was transcribed and scored.

**o1i236rec: Letter Fluency, Quartile 3: Total number of exactly repeated words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		537	660	1197
1		99	139	238
2		21	25	46
3		1	6	7
4		2	1	3
5		0	1	1

Note: Quartile #3 comprises the third 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to repeat words when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i237rec: Letter Fluency, Quartile 3: Total number of repeated root words with different endings.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		647	803	1450
1		11	28	39
2		1	1	2
3		1	0	1

Note: Quartile #3 comprises the third 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to say any of the same words with a different ending when attempting it; an example of the same root word with a different ending would be "love" and "loving". For more information on transcription and scoring, see cor860 in Appendix G.

**o1i238rec: Letter Fluency, Quartile 3: Total number of repeated words caught by Participant.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

Frequencies				
Value	Label	Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		654	807	1461
1		5	25	30
2		1	0	1

Note: Quartile #3 comprises the third 15 seconds of the Letter Fluency task's 60-second administration period. A participant was considered to have caught an exactly repeated word (see o1i236rec), or a repetition of the same root word with a different ending (see o1i237rec), if they said something to the effect of, "oh, I already said that" during their timed attempt of the task. For more information on transcription and scoring, see cor860 in Appendix G.

**o1i239rec: Letter Fluency, Quartile 3: Total number of proper nouns.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1



<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		635	809	1444
1		23	22	45
2		2	1	3

Note: Quartile #3 comprises the third 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to use proper names of people or places (e.g. "France" or "Fred") when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i240rec: Letter Fluency, Quartile 3: Total number of incorrect words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		653	824	1477
1		6	5	11
2		0	2	2
3		1	0	1
4		0	1	1

Note: Quartile #3 comprises the third 15 seconds of the Letter Fluency task's 60-second administration period. An "incorrect" word is one that falls outside of the specified parameters for the task: to say words that begin with a particular letter of the alphabet, "L" or "F". For a participant asked to think of words that begin with the letter "F", the words "phoenix" and "mouse" would constitute incorrect responses. For more information on transcription and scoring, see cor860 in Appendix G.

**o1i241rec: Letter Fluency, Quartile 4: Total number of scored words named.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

Frequencies				
Value	Label	Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		180	183	363
1		190	215	405
2		152	231	383
3		78	126	204
4		37	50	87
5		14	17	31
6		6	7	13
7		2	3	5
8		1	0	1

Note: Quartile #4 comprises the fourth 15 seconds of the Letter Fluency task's 60-second administration period; this variable, then, provides a sum of the scored words said by the participant during quartile #4 after all Letter Fluency coding rules were implemented and any disqualified words were removed from consideration (see o1i242rec). For more information on how the task was transcribed and scored, see cor860 in Appendix G.

**o1i242rec: Letter Fluency, Quartile 4: Total raw number of words said, both those that were scored and those that were disqualified.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
Source variables: o1i202rec, o1i203rec, x\_i11b1

Value	Label	Frequencies		
		Male	Female	Total
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		135	150	285
1		178	181	359
2		160	231	391
3		99	141	240
4		52	74	126
5		22	41	63
6		11	10	21
7		2	4	6
8		1	0	1

Note: Quartile #4 comprises the fourth 15 seconds of the Letter Fluency task's 60-second administration period. See cor860 in Appendix G for more information on how the task was transcribed and scored.

**o1i243rec: Letter Fluency, Quartile 4: Total number of exactly repeated words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		533	678	1211
1		103	128	231
2		20	22	42
3		3	3	6
4		1	1	2

Note: Quartile #4 comprises the fourth 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to repeat words when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i244rec: Letter Fluency, Quartile 4: Total number of repeated root words with different endings.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		643	798	1441
1		15	34	49
2		2	0	2

Note: Quartile #4 comprises the fourth 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to say any of the same words with a different ending when attempting it; an example of the same root word with a different ending would be "love" and "loving". For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i245rec: Letter Fluency, Quartile 4: Total number of repeated words caught by Participant.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		641	806	1447
1		19	24	43
2		0	2	2

Note: Quartile #4 comprises the fourth 15 seconds of the Letter Fluency task's 60-second administration period. A participant was considered to have caught an exactly repeated word (see o1i243rec), or a repetition of the same root word with a different ending (see o1i244rec), if they said something to the effect of, "oh, I already said that" during their timed attempt of the task. For more information on transcription and scoring, see cor860 in Appendix G.

### **o1i246rec: Letter Fluency, Quartile 4: Total number of proper nouns.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone  
 Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		639	808	1447
1		18	23	41
2		2	1	3
4		1	0	1

Note: Quartile #4 comprises the fourth 15 seconds of the Letter Fluency task's 60-second administration period. Participants were instructed not to use proper names of people or places (e.g. "France" or "Fred") when attempting it; for more information on transcription and scoring, see cor860 in Appendix G.

### **o1i247rec: Letter Fluency, Quartile 4: Total number of incorrect words.**

Data source: Sibling Respondent    Collected in: 2020    Mode: In person & telephone

Source variables: o1i202rec, o1i203rec, x\_i11b1

<b>Frequencies</b>				
<b>Value</b>	<b>Label</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
.	System missing - NR	3738	3481	7219
-4	NOT ASCERTAINED	22	11	33
-3	REFUSED	17	17	34
0		657	819	1476
1		3	10	13
2		0	2	2
4		0	1	1

Note: Quartile #4 comprises the fourth 15 seconds of the Letter Fluency task's 60-second administration period. An "incorrect" word is one that falls outside of the specified parameters for the task: to say words that begin with a particular letter of the alphabet, "L" or "F". For a participant asked to think of words that begin with the letter "F", the words "phoenix" and "mouse" would constitute incorrect responses. For more information on transcription and scoring, see cor860 in Appendix G.

## Table of Contents

Cognition - Letter Fluency . . . . .	1
o1i202rec: Detailed code for Letter Fluency not ascertained. . . . .	2
o1i203rec: Detailed code for Letter Fluency refused. . . . .	2
o1i204rec: Detailed code for Letter Fluency cautions. . . . .	3
o1i205rec: Duration of Letter Fluency task for Participants who stopped before 60 seconds had elapsed. . . . .	3
o1i206re: Version of Letter Fluency task, 'F' or 'L'. . . . .	4
o1i210rec: Letter Fluency: Total number of scored words named. . . . .	4
o1i211rec: Letter Fluency: Total raw number of words said, both those that were scored and those that were disqualified. . . . .	5
o1i212rec: Letter Fluency: Total number of exactly repeated words. . . . .	6
o1i213rec: Letter Fluency: Total number of repeated root words with different endings. . . . .	7
o1i214rec: Letter Fluency: Total number of repeated words caught by Participant. . . . .	8
o1i215rec: Letter Fluency: Total number of proper nouns. . . . .	9
o1i216rec: Letter Fluency: Total number of incorrect words. . . . .	9
o1i220rec: Letter Fluency, Quartile 1: Total number of scored words named. . . . .	10
o1i221rec: Letter Fluency, Quartile 1: Total raw number of words said, both those that were scored and those that were disqualified. . . . .	11
o1i222rec: Letter Fluency, Quartile 1: Total number of exactly repeated words. . . . .	12
o1i223rec: Letter Fluency, Quartile 1: Total number of repeated root words with different endings. . . . .	13
o1i224rec: Letter Fluency, Quartile 1: Total number of repeated words caught by Participant. . . . .	14
o1i225rec: Letter Fluency, Quartile 1: Total number of proper nouns. . . . .	14
o1i226rec: Letter Fluency, Quartile 1: Total number of incorrect words. . . . .	15
o1i227rec: Letter Fluency, Quartile 2: Total number of scored words named. . . . .	15
o1i228rec: Letter Fluency, Quartile 2: Total raw number of words said, both those that were scored and those that were disqualified. . . . .	16
o1i229rec: Letter Fluency, Quartile 2: Total number of exactly repeated words. . . . .	17
o1i230rec: Letter Fluency, Quartile 2: Total number of repeated root words with different endings. . . . .	18
o1i231rec: Letter Fluency, Quartile 2: Total number of repeated words caught by Participant. . . . .	19
o1i232rec: Letter Fluency, Quartile 2: Total number of proper nouns. . . . .	19
o1i233rec: Letter Fluency, Quartile 2: Total number of incorrect words. . . . .	20
o1i234rec: Letter Fluency, Quartile 3: Total number of scored words named. . . . .	20
o1i235rec: Letter Fluency, Quartile 3: Total raw number of words said, both those that were scored and those that were disqualified. . . . .	21
o1i236rec: Letter Fluency, Quartile 3: Total number of exactly repeated words. . . . .	22
o1i237rec: Letter Fluency, Quartile 3: Total number of repeated root words with different endings. . . . .	23
o1i238rec: Letter Fluency, Quartile 3: Total number of repeated words caught by Participant. . . . .	24
o1i239rec: Letter Fluency, Quartile 3: Total number of proper nouns. . . . .	24
o1i240rec: Letter Fluency, Quartile 3: Total number of incorrect words. . . . .	25
o1i241rec: Letter Fluency, Quartile 4: Total number of scored words named. . . . .	26
o1i242rec: Letter Fluency, Quartile 4: Total raw number of words said, both those that were	

Wisconsin Longitudinal Study Codebook

scored and those that were disqualified. . . . .	26
o1i243rec: Letter Fluency, Quartile 4: Total number of exactly repeated words. . . . .	27
o1i244rec: Letter Fluency, Quartile 4: Total number of repeated root words with different endings. . . . .	28
o1i245rec: Letter Fluency, Quartile 4: Total number of repeated words caught by Participant. . . . .	29
o1i246rec: Letter Fluency, Quartile 4: Total number of proper nouns. . . . .	29
o1i247rec: Letter Fluency, Quartile 4: Total number of incorrect words. . . . .	30