



## Diretrizes analíticas:

# Como criar identificadores de deficiência usando a sintaxe SAS do Conjunto Resumido de Perguntas sobre Funcionalidade do Grupo de Washington (WG-SS)

## Introdução

Como ocorre com o Conjunto Resumido de Perguntas sobre Funcionalidade do Grupo de Washington (WG-SS), a análise do Conjunto ampliado de perguntas sobre funcionalidade do Grupo de Washington (WG-ES) também pode produzir diversos identificadores de deficiência com base na escolha do limiar ou ponto de corte de severidade. A sintaxe SAS descrita abaixo, no entanto, permite o cálculo de identificadores de deficiência usando diferentes conjuntos de domínios do conjunto WG-ES com base no ponto de corte recomendado para comparações internacionais (descrito abaixo).

Para cada um dos identificadores de deficiência descritos, o nível de inclusão se refere a pelo menos um domínio/pergunta codificada como MUITA DIFICULDADE ou NÃO CONSEGUE DE MODO ALGUM – ou, para os domínios Ansiedade, Depressão, Dor e Fadiga, o nível mais alto de dificuldade em uma escala de quatro pontos.

Cada um dos quatro identificadores de deficiência descritos neste documento é definido com base na escolha dos domínios de funcionalidade incluídos:

**WG-SS:** *Conjunto resumido:* 6 domínios, 6 perguntas.

**WG-ES 1:** *Conjunto ampliado:* 11 domínios, 25 perguntas.

**WG-ES 2:** *Conjunto ampliado modificado* (WG-ES MENOS dor e fadiga): 9 domínios, 20 perguntas.

**WG-ES 3:** *Conjunto resumido estendido* (WG-SS MAIS parte superior do corpo, ansiedade e depressão): 9 domínios, 12 perguntas.

Os **Documentos de Implementação do Grupo de Washington** abrangem as ferramentas desenvolvidas pelo Grupo de Washington para Estatísticas sobre Pessoas com Deficiência (WG) para coletar dados sobre deficiências comparáveis internacionalmente em censos e pesquisas. Os documentos abordam as melhores práticas a serem adotadas na implementação do Conjunto Resumido, Conjunto Ampliado e Conjunto Resumido – Estendido, dos Módulos sobre Funcionalidade da Criança do WG/UNICEF para crianças nas faixas etárias de 2 a 4 e de 5 a 17 anos e do Módulo de Deficiência do WG/OIT LFS, bem como de outras ferramentas do WG. Os tópicos incluem tradução, especificações de perguntas, diretrizes analíticas, código de programação para análises, o uso das ferramentas para fins de desagregação e muitos outros.

Para localizar outros documentos de implementação do WG e para obter mais informações, visite o site do Grupo de Washington:  
<http://www.washingtongroup-disability.com/>.

**OBS.:** Para a análise dos dados, use suas técnicas padronizadas de ponderação e estimativa.

A sintaxe SAS baseia-se nos *rótulos de variáveis* indicados na tabela abaixo. O módulo completo do conjunto WG-ES inclui mais perguntas do que as apresentadas nessa tabela. A condição de deficiência é determinada pelo grau de dificuldade de uma pessoa de desempenhar atividades básicas e universais *sem* a necessidade de alguma tecnologia assistiva ou outra assistência. Há diversas perguntas sobre mobilidade que, por exemplo, relacionam a dificuldade de andar *com* a necessidade de assistência. Essas perguntas não estão incluídas no plano analítico apresentado aqui; no entanto, elas podem ser usadas em outras análises mais meticulosas do efeito de uma tecnologia assistiva (facilitadores ambientais) sobre a funcionalidade.

Somente as perguntas/variáveis apresentadas abaixo são usadas na determinação de identificadores de deficiência. **Não deixe de usar os mesmos rótulos de variáveis OU revise a sintaxe SAS para que ela reflita os rótulos de variáveis usados no seu banco de dados.**

O WG-SS é administrado como parte da Pesquisa Nacional de Saúde dos Estados Unidos (NHIS). Os dados usados na elaboração destas diretrizes foram extraídos da NHIS realizada em 2013.

*Observação para usuários da NHIS: os nomes das variáveis contidos no arquivo de dados e na documentação da NHIS podem ser diferentes dos usados neste documento; por exemplo, a variável do domínio de cuidados pessoais referenciada como SC-SS neste documento tem o nome de UB\_SS no arquivo de dados e na documentação da NHIS.*

*O código SAS usado para produzir os resultados apresentados neste documento está incluído, na sua totalidade, no Apêndice 1.*

Perguntas/Domínios do Conjunto Ampliado do WG	Rótulo de variável	Padrão de resposta
<b>VISÃO</b>		
<b>1. Você tem dificuldade para enxergar mesmo quando usa óculos?</b>	VIS_SS	1
<b>COMUNICAÇÃO</b>		
<b>2. Usando sua linguagem habitual, você tem dificuldade para se comunicar (por exemplo, para compreender ou ser compreendido(a) por outras pessoas)?</b>	COM_SS	1
<b>AUDIÇÃO</b>		
<b>3. Você tem dificuldade em ouvir mesmo quando usa um aparelho auditivo?</b>	HEAR_SS	1
<b>4. Tem dificuldade para ouvir o que é dito em uma conversa com outra pessoa em um local silencioso?</b>	HEAR_3	1
<b>5. Tem dificuldade para ouvir o que é dito em uma conversa com outra pessoa em um local mais barulhento?</b>	HEAR_4	1
<b>COGNIÇÃO</b>		
<b>6. Você tem dificuldade para se lembrar de coisas ou para se concentrar?</b>	COG_SS	1

7. Tem dificuldade para se lembrar de coisas, se concentrar ou ambos?	COG_1	2
8. Com que frequência você tem dificuldade para se lembrar de coisas?	COG_2	3
9. De quantas coisas você tem dificuldade de se lembrar?	COG_3	4
<b>CUIDADOS PESSOAIS / PARTE SUPERIOR DO CORPO</b>		
10. Você tem dificuldade (para realizar cuidados pessoais como) para lavar o corpo ou se vestir?	SC_SS	1
11. Tem dificuldade para levantar uma garrafa de dois litros de água da cintura até a altura dos olhos?	UB_1	1
12. Grau de dificuldade para usar as mãos e os dedos	UB_2	1
<b>MOBILIDADE</b>		
13. Você tem dificuldade para andar ou subir degraus?	MOB_SS	1
14. Tem dificuldade para andar 100 metros em terreno plano sem auxílio ou equipamento?	MOB_4	1
15. Tem dificuldade para andar 500 metros em terreno plano sem auxílio ou equipamento?	MOB_5	1
16. Tem dificuldade para subir ou descer 12 degraus sem auxílio ou equipamento?	MOB_6	1
<b>AFETO (ANSIEDADE)</b>		
17. Com que frequência você fica preocupado(a), nervoso(a) ou ansioso(a)?	ANX_1	5
18. Qual seria o nível dos seus sentimentos na última vez que se sentiu preocupado(a), nervoso(a) ou ansioso(a)?	ANX_3	6
<b>AFETO (DEPRESSÃO)</b>		
19. Com que frequência você se sente deprimido(a)?	DEP_1	5
20. Na última vez que você se sentiu deprimido(a), qual foi o nível da depressão?	DEP_3	6
<b>DOR</b>		
21. Nos últimos três meses, com que frequência você sentiu dor?	DOR	7
22. Na última vez que você sentiu dor, qual foi o nível da dor?	DOR	6
<b>FADIGA</b>		
23. Nos últimos três meses, com que frequência você se sentiu muito cansado(a) ou exausto(a)?	TIRED_1	7
24. Na última vez que você se sentiu muito cansado(a) ou exausto(a), quanto tempo durou essa sensação?	TIRED_2	8
25. Na última vez que você se sentiu assim muito cansado(a) ou exausto(a), como você descreveria o nível de cansaço ou exaustão?	TIRED_3	6

**OBS.:** A cor **Vermelha** indica o Conjunto Resumido de Perguntas do Grupo de Washington (**WG-SS**).

Para obter mais informações sobre o Grupo de Washington para Estatísticas sobre Pessoas com Deficiência, visite:

<http://www.washingtongroup-disability.com/>.

Todas as 25 perguntas estão incluídas no **WG-ES 1**.

Perguntas destacadas em **Vermelho** mais **Azul** mais **Verde** estão incluídas no **WG-ES 2**.

Perguntas destacadas em **Vermelho** mais **Verde** estão incluídas no **WG-ES 3**.

**Padrões de resposta:**

	<b>Padrão 1</b>	<b>Padrão 2</b>	<b>Padrão 3</b>	<b>Padrão 4</b>
1	Nenhuma dificuldade	Apenas dificuldade para me lembrar de coisas	Às vezes	Algumas coisas
2	Sim, alguma dificuldade	Apenas dificuldade para me concentrar	Frequentemente	Muitas coisas
3	Sim, muita dificuldade	Dificuldade tanto para me lembrar de coisas como para me concentrar	O tempo todo	Quase tudo
4	Não consigo de modo algum			
7	Não quis responder			
8	Não comprovado			
9	Não sabe			

	<b>Padrão 5</b>	<b>Padrão 6*</b>	<b>Padrão 7</b>	<b>Padrão 8</b>
1	Diariamente	Fraco	Nunca	Uma parte do dia
2	Semanalmente	Intenso	Em alguns dias	A maior parte do dia
3	Mensalmente	Em algum ponto intermediário entre fraco e intenso	Na maioria dos dias	O dia inteiro
4	Algumas vezes por ano		Todos os dias	
5	Nunca			
7	Não quis responder			
8	Não comprovado			
9	Não sabe			

**\* NA SINTAXE ABAIXO, OBSERVE QUE ITENS COM O PADRÃO DE RESPOSTA 6 (ANX\_3, DEP\_3, PAIN\_4 E TIRED\_3) SÃO RECODIFICADOS PARA SITUAR "EM ALGUM PONTO INTERMEDIÁRIO" NUMERICAMENTE NO PONTO CORRESPONDENTE ENTRE "FRACO" E "INTENSO".**

O conjunto WG-SS está incorporado ao WG-ES.

O conjunto WG-ES é complementado por:

- perguntas adicionais aos 6 domínios existentes e
- domínios adicionais (diversos domínios com diversas perguntas).

A sintaxe SAS apresentada abaixo inclui alguns elementos específicos para o conteúdo do conjunto WG-ES.

Em primeiro lugar, foi importante determinar identificadores individuais de domínios específicos para

domínios de funcionalidade que incluíam múltiplas perguntas. Por exemplo, a funcionalidade da parte superior do corpo inclui duas perguntas, cada uma das quais relacionadas a ações específicas e singulares: dificuldade para levantar uma garrafa de água da cintura até a altura dos olhos (braços/ombros) e dificuldade para usar as mãos e os dedos. Essas duas perguntas foram analisadas e combinadas para produzir um indicador individual para a parte superior do corpo com quatro níveis de dificuldade que variam de 1 - pouca dificuldade - a 4 - muita dificuldade -, não muito diferentes das respostas categóricas às perguntas individuais do conjunto WG-SS: nenhuma dificuldade, alguma dificuldade, muita dificuldade e não consegue de forma alguma. Assim como no domínio da parte superior do corpo, os domínios do conjunto WG-ES, a saber, cognição, ansiedade, depressão, dor e fadiga, têm diferentes padrões de resposta que não se traduzem facilmente no padrão de resposta usual do WG. Para esses domínios de funcionalidade, um padrão semelhante de respostas em 4 escalas foi produzido e anotado como de nível 1 a 4, em que 1 é o nível mais baixo de dificuldade e 4 corresponde ao mais alto.

Em segundo lugar, indicadores de domínio individuais foram avaliados para determinar o ponto de corte adequado para inclusão em um identificador geral de deficiência – com o objetivo de estimar a prevalência e desagregar os indicadores de resultados por condição de deficiência.

### OBS.:

Para todas as variáveis, os códigos (7) *Não quis responder*, (8) *Não comprovado* e (9) *Não sabe* são recodificados para Ausente.

## **SAS WG Extended Set Syntax Annotated with Output Tables**

Actual SAS syntax is indented and are in **Blue text**.

NOTE: For data analysis, use your standard weighting and estimation techniques.

The syntax below produces **frequency distributions** on individual domain questions – **cross-tabulations** on multiple domain questions, and calculates INDICATOR variables for domains with multiple questions – for use in the determination of disability identifiers.

### **VISION**

*Step 1. Generate frequency distribution for Vision domain.*

VIS\_SS is the WG-SS Vision question.

**If** VIS\_SS in (1, 2, 3, 4) **then** Vision=VIS\_SS;  
**Else If** VIS\_SS in (7, 8, 9) **then** Vision=.;

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** Vision;  
**Run**;

#### **Vision: Degree of difficulty seeing**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13690	79.0	81.6	81.6

	Some difficulty	2708	15.6	16.2	97.8
	A lot of difficulty	333	1.9	2.0	99.8
	Cannot do at all	36	.2	.2	100.0
	Total	16767	96.8	100.0	
Missing		559	3.2		
Total		17326	100.0		

## COMMUNICATION

Step 2. Generate frequency distribution for Communication domain.

COM\_SS is the WG-SS Communication question.

```
If COM_SS in (1, 2, 3,4) then Communication=COM_SS;  
Else If COM_SS in (7, 8, 9) then Communication=.;
```

```
Proc Freq Data=SS. ExtendedSets2013;  
Tables Communication;  
Run;
```

### Communication: Degree of difficulty communicating using usual language

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	15874	91.6	94.7	94.7
	Some difficulty	745	4.3	4.4	99.2
	A lot of difficulty	94	.5	.6	99.7
	Cannot do at all	43	.2	.3	100.0
	Total	16756	96.7	100.0	
Missing		570	3.3		
Total		17326	100.0		

## HEARING

Step 3. Generate frequency distributions and cross-tabulations for Hearing domain questions and determine Hearing Indicator

HEAR\_SS is the WG-SS Hearing question.

```
If HEAR_SS in (1, 2, 3, 4) then Hearing=HEAR_SS;  
Else If HEAR_SS in (7, 8, 9) then Hearing=.;
```

HEAR\_3 is Difficulty hearing conversation with one person in quiet room.

```
If HEAR_3 in (1, 2, 3, 4) then HEAR_3_R=HEAR_3;  
Else If HEAR_3 in (7, 8, 9) then HEAR_3_R=.;
```

HEAR\_4 is Difficulty hearing one person in noisier room.

```
If HEAR_4 in (1, 2, 3, 4) then HEAR_4_R=HEAR_4;  
Else If HEAR_4 in (7, 8, 9) then HEAR_4_R=.;
```



**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** Hearing HEAR\_3\_R HEAR\_4\_R;  
**Run**;

**Hearing: Degree of difficulty hearing**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13680	79.0	81.6	81.6
	Some difficulty	2753	15.9	16.4	98.0
	A lot of difficulty	310	1.8	1.8	99.9
	Cannot do at all	23	.1	.1	100.0
	Total	16766	96.8	100.0	
Missing		560	3.2		
Total		17326	100.0		

**HEAR\_3\_R : Difficulty hearing conversation with one person in quiet room**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	15249	88.0	91.0	91.0
	Some difficulty	1316	7.6	7.9	98.9
	A lot of difficulty	162	.9	1.0	99.9
	Cannot do at all	10	.1	.1	100.0
	Total	16737	96.6	100.0	
Missing		589	3.4		
Total		17326	100.0		

**HEAR\_4\_R: Difficulty hearing one person in noisier room**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	11697	67.5	70.0	70.0
	Some difficulty	4191	24.2	25.1	95.1
	A lot of difficulty	779	4.5	4.7	99.7
	Cannot do at all	48	.3	.3	100.0
	Total	16715	96.5	100.0	
Missing		611	3.6		
Total		17326	100.0		

*Step 4. For Hearing questions, recode HEAR\_3\_R and HEAR\_4\_R to value 4 (cannot do at all) if Hear\_SS is 4 (Cannot do at all).*

The syntax below recodes HEAR\_3\_R and HEAR\_4\_R to 4 (cannot do at all) if Hear\_SS is 4 (cannot do at all).

If Hearing = 4 and HEAR\_3\_R = . then HEAR\_3\_X = 4;  
Else HEAR\_3\_X=HEAR\_3\_R;

If Hearing = 4 and HEAR\_4\_R = . then HEAR\_4\_X = 4;  
Else HEAR\_4\_X=HEAR\_4\_R;

Proc Freq Data=SS. ExtendedSets2013;

Tables HEAR\_3\_X HEAR\_4\_X;

Run;

#### HEAR\_3\_X : Difficulty hearing conversation with one person in quiet room

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	15249	88.0	91.0	91.0
	Some difficulty	1316	7.6	7.9	98.8
	A lot of difficulty	162	.9	1.0	99.8
	Cannot do at all	33	.2	.2	100.0
	Total	16760	96.7	100.0	
Missing		566	3.3		
Total		17326	100.0		

#### HEAR\_4\_X: Difficulty hearing one person in noisier room

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	11697	67.5	69.9	69.9
	Some difficulty	4191	24.2	25.0	94.9
	A lot of difficulty	779	4.5	4.7	99.6
	Cannot do at all	71	.4	.4	100.0
	Total	16738	96.6	100.0	
Missing		588	3.4		
Total		17326	100.0		

Step 5. Generate a cross-tabulation of the two Hearing Extended Set questions: HEAR\_3\_X and HEAR\_4\_X.

The syntax below produces a cross-tabulation of the two Extended Set questions: HEAR\_3\_X: *Difficulty hearing in a quiet room* and HEAR\_4\_X: *Difficulty hearing in a noisier room* to determine a single HEARING INDICATOR.

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** HEAR\_4\_X\*HEAR\_3\_X **/NOROW NOCOL NOPERCENT**;  
**Run**;

		HEAR_3_X : Difficulty hearing conversation with one person in quiet room				
HEAR_4_X (Difficulty hearing in a Nosier room)		No difficulty	Some difficulty	A lot of difficulty	Cannot do at all	Total
	No difficulty	11603	94	0	0	11697
	Some difficulty	3373	809	8	0	4190
	A lot of difficulty	253	388	138	0	779
	Cannot do at all	8	24	16	23	71
Total		15237	1315	162	23	16737

Step 6. Create a HEARING INDICATOR (H\_INDICATOR) based on the two additional hearing questions HEAR\_3\_X and HEAR\_4\_X.

The syntax below creates a HEARING INDICATOR (H\_INDICATOR) based on the cross-tabulation of the two additional hearing questions HEAR\_3\_X and HEAR\_4\_X.

```

If ( HEAR_3_X = 1 AND HEAR_4_X = 1) OR (HEAR_3_X = 1 AND HEAR_4_X = 2)
then H_INDICATOR = 1;
Else If ( HEAR_3_X = 2 AND (HEAR_4_X = 1 OR HEAR_4_X = 2)) OR (HEAR_3_X = 1
AND HEAR_4_X = 3) then H_INDICATOR = 2;
Else If ( HEAR_3_X = 3 AND (HEAR_4_X = 1 OR HEAR_4_X = 2) OR (HEAR_3_X = 2
AND HEAR_4_X = 3) OR (HEAR_3_X = 1 AND HEAR_4_X = 4)) then H_INDICATOR =
3;
Else If ((HEAR_3_X = 3 AND HEAR_4_X = 3) OR HEAR_3_X = 4 OR (HEAR_4_X = 4
AND (HEAR_3_X = 2 OR HEAR_3_X = 3))) then H_INDICATOR = 4;

```

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** H\_INDICATOR;  
**Run**;

		H_INDICATOR			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	14976	86.4	89.4	89.4
	2.00	1156	6.7	6.9	96.3
	3.00	404	2.3	2.4	98.7
	4.00	211	1.2	1.3	100.0
	Total	16747	96.7	100.0	
Missing		579	3.3		
Total		17326	100.0		

## COGNITION: Degree of difficulty remembering or concentrating

Step 7. Generate frequency distributions and cross-tabulations for Cognition domain questions and determine a Cognition Indicator.

COG\_SS is the WG-SS Cognition question.

**If** COG\_SS in (1, 2, 3, 4) **then** Cognition=COG\_SS;

**Else If** COG\_SS in (7, 8, 9) **then** Cognition=.;

**Proc Freq Data**=SS. ExtendedSets2013;

**Tables** Cognition;

**Run**;

### Cognition: Degree of difficulty remembering or concentrating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13719	79.2	81.9	81.9
	Some difficulty	2632	15.2	15.7	97.6
	A lot of difficulty	382	2.2	2.3	99.9
	Cannot do at all	20	.1	.1	100.0
	Total	16753	96.7	100.0	
Missing		573	3.3		
Total		17326	100.0		

If response to COG-SS is *some difficulty*, *a lot of difficulty* or *cannot do at all*, then the respondent is asked COG\_1: whether they have difficulty remembering, concentrating or both.

**If** COG\_1 in (1, 2, 3) **then** COG\_1\_R=COG\_1;

**Else If** COG\_1 in (7, 8, 9) **then** COG\_1\_R=.;

**Proc Freq Data**=SS. ExtendedSets2013;

**Tables** COG\_1\_R;

**Run**;

### COG\_1\_R: Difficulty remembering, concentrating, or both?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Difficulty remembering only	983	5.7	32.4	32.4
	Difficulty concentrating only	388	2.2	12.8	45.2
	Difficulty with both remembering and concentrating	1659	9.6	54.8	100.0
	Total	3030	17.5	100.0	
Missing		14296	82.5		
Total		17326	100.0		

Step 8. Account for those who did not answer COG\_1 (COG\_SS is 1 – no difficulty and they were skipped) by recoding COG\_1 to 0 (No difficulty).

If response to COG-SS is 1: *no difficulty*, then the variable COG\_1\_R is recoded into COG\_1A, and the value assigned is 0: *no difficulty*.

```
If COG_SS=1 then COG_1A=0;
Else COG_1A=COG_1_R;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables COG_1A;
Run;
```

#### COG\_1A: Difficulty remembering, concentrating, or both? (including no difficulty)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13719	79.2	81.9	81.9
	Difficulty remembering only	983	5.7	5.9	87.8
	Difficulty concentrating only	388	2.2	2.3	90.1
	Difficulty with both remembering and concentrating	1659	9.6	9.9	100.0
	Total	16749	96.7	100.0	
Missing		577	3.3		
Total		17326	100.0		

Step 9. Generate frequency distribution for remaining cognition questions.

Frequency distribution of the Cognition extended REMEMBERING questions: COG\_2 *How often have difficulty remembering*, and COG\_3 *Amount of things you have difficulty remembering*.

```
If COG_2 in (1, 2, 3) then COG_2_R=COG_2;
Else If COG_2 in (7, 8, 9) then COG_2_R=.;
```

```
If COG_3 in (1, 2, 3) then COG_3_R=COG_3;
Else If COG_3 in (7, 8, 9) then COG_3_R=.;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables COG_2_R COG_3_R;
Run;
```

**COG\_2\_R: How often have difficulty remembering?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sometimes	1916	11.1	72.4	72.4
	Often	513	3.0	19.4	91.8
	All of the time	216	1.2	8.2	100.0
	Total	2645	15.3	100.0	
Missing		14681	84.7		
Total		17326	100.0		

**COG\_3\_R: Amount of things you have difficulty remembering?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A few things	2119	12.2	80.3	80.3
	A lot of things	386	2.2	14.6	94.9
	Almost everything	134	.8	5.1	100.0
	Total	2639	15.2	100.0	
Missing		14687	84.8		
Total		17326	100.0		

Step 10. Generate cross-tabulation of the two Cognition extended set questions COG\_2R by COG\_3\_R.

The syntax below produces a cross-tabulation of the two Extended Set REMEMBERING questions: COG\_2\_R: How often you have difficulty remembering and COG\_3\_R: The amount of things you have difficulty remembering to determine a single REMEMBERING INDICATOR.

```
Proc Freq Data=SS. ExtendedSets2013;
Tables COG_2_R*COG_3_R /NOROW NOCOL NOPERCENT;
Run;
```

		COG_3_R: Amount of things you have difficulty remembering?			
COG_2_R: How often do you have difficulty remembering?		A few things	A lot of things	Almost everything	Total
How often have difficulty remembering?	Sometimes	1788	105	20	1913
	Often	279	197	34	510
	All of the time	51	84	80	215
Total		2118	386	134	2638

Step 11. Create a Remembering Indicator based on distribution of COG\_2\_R and COG\_3\_R.

The syntax below creates a REMEMBERING INDICATOR (R\_INDICATOR) based on the two additional remembering questions (COG\_2\_R and COG\_3\_R).

If Cognition is 1: no difficulty, then the Remembering Indicator is coded as 1: the lowest level of difficulty.

```

If (Cognition = 1) then R_INDICATOR = 1;
Else If ((COG_2_R = 1 AND COG_3_R = 1) OR (COG_3_R = 1 AND COG_2_R = 2) OR
(COG_3_R = 2 AND COG_2_R = 1)) then R_INDICATOR = 2;
Else If (COG_3_R = 2 AND COG_2_R = 2) then R_INDICATOR = 3;
Else If (COG_3_R = 3 OR COG_2_R = 3) then R_INDICATOR = 4;

```

*Step 12. If COG\_1A is coded as 2 (concentrating only), then the Remembering Indicator is coded as 5.*

These 388 individuals are respondents who were not included in the Remembering Indicator since they had only difficulty concentrating.

```

Else If (COG_1A = 2) then R_INDICATOR = 5;
Else R_INDICATOR = 0;

```

*Step 13. Generate frequency distribution of the Remembering Indicator.*

```

Proc Freq Data=SS. ExtendedSets2013;
Tables R_INDICATOR;
Run;

```

		R_INDICATOR		
		Frequency	Percent	Valid Percent
Valid	.00	580	3.3	3.3
	1.00	13719	79.2	79.2
	2.00	2172	12.5	12.5
	3.00	197	1.1	1.1
	4.00	270	1.6	1.6
	5.00	388	2.2	2.2
Total		17326	100.0	100.0

*Step 14. Supplement Remembering Indicator with information on difficulty concentrating.*

The syntax below adds information on whether cognitive difficulties are compounded by difficulty concentrating in addition to difficulty remembering.

Create a COGNITION INDICATOR (COG\_INDICATOR) based on R\_INDICATOR (above) and the cognition question (COG\_1\_R).

The 388 individuals with ‘concentrating only’ were allocated as follows:

1. 357 with a little difficulty on Cognition question were classified as **2**
2. 30 with a lot of difficulty on Cognition question were classified as **3**
3. 1 with cannot do on Cognition question was classified as **4**

Those with both remembering and concentrating difficulty were upgraded 36 individuals from **2** to **3**, and 125 individuals from **3** to **4**.

```

COG_INDICATOR=R_INDICATOR;
If (R_INDICATOR = 5 AND Cognition = 2) then COG_INDICATOR = 2;
Else If (R_INDICATOR = 5 AND Cognition = 3) then COG_INDICATOR = 3;
Else If (R_INDICATOR = 5 AND Cognition = 4) then COG_INDICATOR = 4;

If (R_INDICATOR = 2 AND COG_1_R = 3 AND Cognition = 3) then COG_INDICATOR = 3;
Else If (R_INDICATOR = 3 AND COG_1_R = 3 AND Cognition = 3) then
COG_INDICATOR = 4;

```

*Step 15. Generate frequency distribution of the Cognition Indicator.*

```

Proc Freq Data=SS. ExtendedSets2013;
Tables COG_INDICATOR;
Run;

```

		COG_INDICATOR			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	580	3.3	3.3	3.3
	<b>1.00</b>	13719	79.2	79.2	82.5
	<b>2.00</b>	2449	14.1	14.1	96.7
	<b>3.00</b>	226	1.3	1.3	98.0
	<b>4.00</b>	352	2.0	2.0	100.0
	Total	17326	100.0	100.0	

## UPPER BODY

*Step 16. Generate frequency distributions and cross-tabulations for Self-care and Upper body domain questions and determine the Upper Body Indicator.*

SC\_SS is the WG-SS Self-care question.

UB\_1 is *Difficulty raising 2 liter bottle of water from waist to eye level.*

UB\_2 is *Difficulty using hands and fingers*

```

If SC_SS in (1, 2, 3, 4) then Self_Care=SC_SS;
Else If SC_SS in (7, 8, 9) then Self_Care=.;

```

```

If UB_1 in (1, 2, 3, 4) then UB_1_R=UB_1;
Else If UB_1 in (7, 8, 9) then UB_1_R=.;

```

```

If UB_2 in (1, 2, 3, 4) then UB_2_R=UB_2;
Else If UB_2 in (7, 8, 9) then UB_2_R=.;

```

First, calculate frequency distributions on the short set and two extended set questions.



**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** Self\_Care UB\_1\_R UB\_2\_R;  
**Run**;

**SELF\_CARE: Degree of difficulty with self-care**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	16029	92.5	95.7	95.7
	Some difficulty	544	3.1	3.2	98.9
	A lot of difficulty	114	.7	.7	99.6
	Cannot do at all	68	.4	.4	100.0
	Total	16755	96.7	100.0	
Missing		571	3.3		
Total		17326	100.0		

**UB\_1\_R: Diff raising 2 liter bottle of water from waist to eye level**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	15677	90.5	93.6	93.6
	Some difficulty	743	4.3	4.4	98.0
	A lot of difficulty	167	1.0	1.0	99.0
	Cannot do at all	166	1.0	1.0	100.0
	Total	16753	96.7	100.0	
Missing		573	3.3		
Total		17326	100.0		

**UB\_2\_R: Degree of difficulty using hands and fingers**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	15199	87.7	90.7	90.7
	Some difficulty	1229	7.1	7.3	98.1
	A lot of difficulty	255	1.5	1.5	99.6
	Cannot do at all	70	.4	.4	100.0
	Total	16753	96.7	100.0	
Missing		573	3.3		
Total		17326	100.0		

*Step 17. Generate a cross-tabulation of the two Upper body Extended Set questions: UB\_2\_R and UB\_1\_R.*

The syntax below produces a cross-tabulation of the two Extended Set questions: UB\_1\_R: *Difficulty raising a 2 liter bottle of water from waste to eye level* UB\_2\_R: *Difficulty using hands and fingers* to determine a single UPPER BODY INDICATOR (UB\_INDICATOR).

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** UB\_2\_R\*UB\_1\_R /**NOROW NOCOL NOPERCENT**;  
**Run**;

		UB_1_R: Diff raising 2 liter bottle of water from waist to eye level				
UB_2_R: Difficulty using hands and fingers		No difficulty	Some difficulty	A lot of difficulty	Cannot do at all	Total
Degree of difficulty using hands and fingers	No difficulty	14786	309	58	44	15197
	Some difficulty	782	355	51	40	1228
	A lot of difficulty	98	73	51	33	255
	Cannot do at all	9	5	7	49	70
Total		15675	742	167	166	16750

Step 18. Create an UPPER BODY INDICATOR (UB\_INDICATOR) based on the two additional upper body questions UB\_2\_R and UB\_3\_R.

Syntax below creates UB\_INDICATOR based on the distribution in the cross-tabulation above.

**If** (UB\_1\_R = 4 OR UB\_2\_R = 4) **then** UB\_INDICATOR = 4;  
**Else If** UB\_INDICATOR NE 4 AND (UB\_1\_R = 3 OR UB\_2\_R = 3)  
**then** UB\_INDICATOR = 3;  
**Else If** UB\_INDICATOR NE 4 AND UB\_INDICATOR NE 3 AND (UB\_1\_R = 2 OR UB\_2\_R = 2) **then** UB\_INDICATOR = 2;  
**Else If** UB\_INDICATOR NE 4 AND UB\_INDICATOR NE 3 AND UB\_INDICATOR NE 2  
AND (UB\_1\_R = 1 OR UB\_2\_R = 1) **then** UB\_INDICATOR = 1.;

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** UB\_INDICATOR;  
**Run**;

		UB_INDICATOR			
		Frequen cy	Percent	Valid Percent	Cumulative Percent
Valid	1.00	14790	85.4	88.3	88.3
	2.00	1448	8.4	8.6	96.9
	3.00	331	1.9	2.0	98.9
	4.00	187	1.1	1.1	100.0
	Total	16756	96.7	100.0	
Missing		570	3.3		
Total		17326	100.0		

## MOBILITY

Step 19. Generate frequency distributions and cross-tabulations for Mobility domain questions and determine Mobility Indicator.

MOB\_SS is the WG-SS Mobility question.

MOB\_4 is Difficulty walking 100 yards on level ground without aid or equipment.

MOB\_5 is Difficulty walking 1/3rd mile on level ground without aid or equipment.

**If** MOB\_SS in (1, 2, 3, 4) **then** Mobility=MOB\_SS;

**Else** MOB\_SS in (7, 8, 9) **then** Mobility=.;

**If** MOB\_4 in (1, 2, 3, 4) **then** MOB\_4\_R=MOB\_4;

**Else If** MOB\_4 in (7, 8, 9) **then** MOB\_4\_R=.;

**If** MOB\_5 in (1, 2, 3, 4) **then** MOB\_5\_R=MOB\_5;

**Else If** MOB\_5 in (7, 8, 9) **then** MOB\_5\_R=.;

First, calculate frequency distributions on the short set and two extended set WALKING questions.

**Proc Freq Data**=SS. ExtendedSets2013;

**Tables** Mobility MOB\_4\_R MOB\_5\_R;

**Run**;

### Mobility: Degree of difficulty walking or climbing steps

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13424	77.5	80.1	80.1
	Some difficulty	2165	12.5	12.9	93.0
	A lot of difficulty	792	4.6	4.7	97.7
	Cannot do at all	380	2.2	2.3	100.0
	Total	16761	96.7	100.0	
Missing		565	3.3		
Total		17326	100.0		

### MOB\_4\_R: Diff walking 100 yards on level ground w/o aid or equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13892	80.2	84.8	84.8
	Some difficulty	1369	7.9	8.4	93.2
	A lot of difficulty	491	2.8	3.0	96.2
	Cannot do at all	623	3.6	3.8	100.0
	Total	16375	94.5	100.0	
Missing		951	5.5		
Total		17326	100.0		

### MOB\_5\_R: Diff walking 1/3rd mile on level ground w/o aid or equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No difficulty	13025	75.2	82.8	82.8
	Some difficulty	1650	9.5	10.5	93.3
	A lot of difficulty	708	4.1	4.5	97.8
	Cannot do at all	347	2.0	2.2	100.0
	Total	15730	90.8	100.0	
Missing		1596	9.2		
Total		17326	100.0		

Step 20. Generate a cross-tabulation of the walking distance questions: MOB\_4\_R and MOB\_5\_R.

The syntax below produces a cross-tabulation of the two Extended Set WALKING questions: MOB\_4\_R: *Difficulty walking 100 yards without equipment* and MOB\_5\_R: *Difficulty walking 1/3 mile without equipment* to determine a single WALKING INDICATOR.

NOTE: **623** individuals who responded cannot do at all to MOB\_4\_R were not asked MOB\_5\_R and they do not appear in the table below. They are, however, accounted for in the WALKING indicator calculation.

```
Proc Freq Data=SS. ExtendedSets2013;
Tables MOB_4_R*MOB_5_R /NOROW NOCOL NOPERCENT;
Run;
```

MOB_4_R: Diff walking 100 yards on level ground w/o aid or equipment	MOB_5_R: Diff walking 1/3rd mile on level ground w/o aid or equipment				
	No difficulty	Some difficulty	A lot of difficulty	Cannot do at all	Total
No difficulty	12950	819	63	39	13871
Some difficulty	72	810	343	142	1367
A lot of difficulty	3	21	301	166	491
Cannot do at all ( <b>623</b> )	0	0	0	0	0
Total	13025	1650	707	347	15729

Step 21. Create a WALKING INDICATOR (WALK\_INDICATOR) based on the two additional walking questions MOB\_4\_R and MOB\_5\_R.

Syntax below creates WALKING\_INDICATOR based on the distribution in the cross-tabulation above.

```

WALK_INDICATOR=0;
If (MOB_4_R = 1 AND (MOB_5_R = 1 OR MOB_5_R = 2)) then WALK_INDICATOR = 1;
Else If (MOB_4_R = 1 AND MOB_5_R = 3) OR (MOB_4_R = 2 AND (MOB_5_R = 1 OR
MOB_5_R = 2 OR MOB_5_R = 3)) then WALK_INDICATOR = 2;
Else If (MOB_4_R = 1 AND MOB_5_R = 4) OR (MOB_4_R = 3 AND (MOB_5_R = 1 OR
MOB_5_R = 2 OR MOB_5_R = 3)) then WALK_INDICATOR = 3;
Else If (MOB_4_R = 2 AND MOB_5_R = 4) OR (MOB_4_R = 3 AND MOB_5_R = 4)
then WALK_INDICATOR = 4;

```

Syntax below includes the 623 who responded cannot do at all to MOB\_4\_R into the WALKING INDICATOR.

```

Else If (WALK_INDICATOR = 0 AND MOB_4_R = 4) then WALK_INDICATOR = 4;

```

```

If WALK_INDICATOR=0 then WALK_INDICATOR=.;

```

```

Proc Freq Data=SS. ExtendedSets2013;

```

```

Tables WALK_INDICATOR;

```

```

Run;

```

#### WALK\_INDICATOR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	13769	79.5	84.2	84.2
	2.00	1288	7.4	7.9	92.1
	3.00	364	2.1	2.2	94.3
	4.00	931	5.4	5.7	100.0
	Total	16352	94.4	100.0	
Missing		974	5.6		
Total		17326	100.0		

Step 22. Supplement Walking Indicator with information on difficulty Climbing steps (MOB\_6).

Syntax below adds information from MOB\_6 on *difficulty climbing up or down 12 steps* to create a combined Mobility Indicator (MOB\_INDICATOR).

```

If MOB_6 in (1, 2, 3, 4) then MOB_6_R=MOB_6;

```

```

Else If MOB_6 in (7, 8, 9) then MOB_6_R=.;

```

```

Proc Freq Data=SS. ExtendedSets2013;

```

```

Tables WALK_INDICATOR* MOB_6_R /NOROW NOCOL NOPERCENT;

```

```

Run;

```

		MOB_6_R: Difficulty climbing up or down 12 steps				
WALK_INDICATOR		No difficulty	Some difficulty	A lot of difficulty	Cannot do at all	Total
walk_INDICATOR2	1.00	13048	645	55	17	13765
	2.00	370	767	135	16	1288
	3.00	43	106	200	14	363
	4.00	79	242	226	384	931
Total		13540	1760	616	431	16347

According to the table above, the syntax below reclassifies:

1. 55 individuals with level 1 on the WALKING INDICATOR as level 2 on the MOBILITY INDICATOR
2. 17 individuals with level 1 on the WALKING INDICATOR and 135 individuals with level 2 on the WALKING INDICATOR as level 3 on the MOBILITY INDICATOR, and
3. 16 individuals with level 2 on the WALKING INDICATOR as level 4 on the MOBILITY INDICATOR.

Step 23. Create a mobility indication (MOB\_INDICATOR) with information garnered from cross-tabulation above.

```
MOB_INDICATOR = WALK_INDICATOR;
If (WALK_INDICATOR = 2 AND MOB_6_R = 3) then MOB_INDICATOR = 3;
Else If (WALK_INDICATOR = 1 AND MOB_6_R = 3) then MOB_INDICATOR = 2;
Else If (WALK_INDICATOR = 2 AND MOB_6_R = 4) then MOB_INDICATOR = 4;
Else If (WALK_INDICATOR = 1 AND MOB_6_R = 4) then MOB_INDICATOR = 3;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables MOB_INDICATOR;
Run;
```

MOB_IDICATOR					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	13697	79.1	83.8	83.8
	2.00	1192	6.9	7.3	91.1
	3.00	516	3.0	3.2	94.2
	4.00	947	5.5	5.8	100.0
	Total	16352	94.4	100.0	
Missing		974	5.6		
Total		17326	100.0		

## ANXIETY

Step 24. Generate frequency distribution on ANX\_1.

First, calculate frequency distributions on ANX\_1: *How often do you feel worried, nervous or anxious?*

**If** ANX\_1 in (1, 2, 3, 4, 5) **then** ANX\_1\_R=ANX\_1;

**Else If** ANX\_1 in (7, 8, 9) **then** ANX\_1\_R=.;

**Proc Freq Data**=SS. ExtendedSets2013;

**Tables** ANX\_1\_R;

**Run**;

### ANX\_1\_R: How often feel worried, nervous, or anxious?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	1632	9.4	9.8	9.8
	Weekly	1872	10.8	11.2	21.0
	Monthly	1558	9.0	9.3	30.4
	A few times a year	4898	28.3	29.4	59.7
	Never	6714	38.8	40.3	100.0
	Total	16674	96.2	100.0	
Missing		652	3.8		
Total		17326	100.0		

Step 25. The syntax below recodes ANX\_3 into ANX\_3Y

1) to create a NOT ASKED category based on those who responded NEVER to ANX\_1\_R and

2) to place "SOMEWHERE BETWEEN" numerically in-between "A LITTLE" and "A LOT".

**If** ANX\_3 =1 **then** ANX\_3Y=1;

**Else If** ANX\_3 =2 **then** ANX\_3Y=3;

**Else If** ANX\_3 =3 **then** ANX\_3Y=2;

**Else If** ANX\_3 in (7, 8, 9) **then** ANX\_3Y=.;

Recode ANX\_3Y to 0 (not asked) If ANX\_1 is 5 (Never).

**If** ANX\_1 =5 **then** ANX\_3Y=0;

**Proc Freq Data**=SS. ExtendedSets2013;

**Tables** ANX\_3Y;

**Run**;

### ANX\_3Y: Level of feelings last time felt worried/nervous/anxious

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not asked	6714	38.8	40.3	40.3
	A little	5700	32.9	34.2	74.5
	In between a little and a lot	3076	17.8	18.5	92.9
	A lot	1176	6.8	7.1	100.0
	Total	16666	96.2	100.0	
Missing		660	3.8		
Total		17326	100.0		

Step 26. Generate a cross-tabulation of the anxiety Extended Set questions: ANX\_1\_R and ANX\_3Y.

The syntax below produces a cross-tabulation of ANX\_1\_R: *How often you felt worried, nervous or anxious* (a measure of frequency) and ANX\_3Y: *The level of those feeling the last time you felt worried, nervous or anxious* (a measure of intensity) – used to determine a single ANXIETY INDICATOR (ANX\_INDICATOR).

```
Proc Freq Data=SS. ExtendedSets2013;
Tables ANX_3Y*ANX_1_R/NOROW NOCOL NOPERCENT;
Run;
```

ANX_3Y: Level of feelings last time felt worried, nervous or anxious	ANX_1_R: How often feel worried, nervous or anxious?					
	Daily	Weekly	Monthly	A Few Times A Year	Never	Total
Not asked	0	0	0	0	6714	6714
A little	489	887	897	3417	0	5690
In between a little and a lot	589	725	535	1221	0	3070
A lot	548	256	123	248	0	1175
Total	1626	1868	1555	4886	6714	16649

Step 27. Create an ANXIETY INDICATOR (ANX\_INDICATOR) based on the two anxiety questions ANX\_1\_R and ANX\_3Y.

Syntax below creates ANX\_INDICATOR based on the distribution in the cross-tabulation above.

```
If (missing(ANX_1_R) OR missing(ANX_3Y)) then ANX_INDICATOR=.;
Else If ( ANX_3Y le 4 AND (ANX_1_R = 4 OR ANX_1_R = 5)) then ANX_INDICATOR=1;
Else If ((ANX_1_R = 3) OR (ANX_1_R LT 3 AND ANX_3Y=1) OR
(ANX_1_R = 2 AND ANX_3Y = 2)) then ANX_INDICATOR = 2;
Else If ((ANX_1_R = 1 AND ANX_3Y = 2) OR (ANX_1_R = 2 AND ANX_3Y = 3))
then ANX_INDICATOR = 3;
Else If ( ANX_1_R = 1 AND ANX_3Y = 3) then ANX_INDICATOR = 4;
```



**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** ANX\_INDICATOR;  
**Run**;

ANX_INDICATOR					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	11600	67.0	69.7	69.7
	2.00	3656	21.1	22.0	91.6
	3.00	845	4.9	5.1	96.7
	4.00	548	3.2	3.3	100.0
	Total	16649	96.1	100.0	
Missing		677	3.9		
Total		17326	100.0		

## DEPRESSION

*Step 28. Generate frequency distribution on DEP\_1.*

First, calculate frequency distributions on DEP\_1: *How often do you feel depressed?*

**If** DEP\_1 in (1, 2, 3, 4, 5) **then** DEP\_1\_R=DEP\_1;  
**Else If** DEP\_1 in (7, 8, 9) **then** DEP\_1\_R=.;  
**Else** DEP\_1\_R=.;

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** DEP\_1\_R;  
**Run**;

DEP_1_R: How often do you feel depressed?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	756	4.4	4.5	4.5
	Weekly	926	5.3	5.6	10.1
	Monthly	1038	6.0	6.2	16.3
	A few times a year	4012	23.2	24.1	40.4
	Never	9929	57.3	59.6	100.0
	Total	16661	96.2	100.0	
Missing		665	3.8		
Total		17326	100.0		

*Step 29. The syntax below recodes DEP\_3 into DEP\_3Y to place “SOMEWHERE BETWEEN” numerically in-between “A LITTLE” and “A LOT”. It also creates the category NOT ASKED, if DEP\_1 is NEVER (1)*

```

If DEP_3 =1 then DEP_3Y=1;
Else If DEP_3=2 then DEP_3Y=3;
Else If DEP_3=3 then DEP_3Y=2;
Else If DEP_3in (7,8,9) then DEP_3Y=.;

```

```

If DEP_1 =5 then DEP_3Y=0;

```

```

Proc Freq Data=SS. ExtendedSets2013;
Tables DEP_3Y;
Run;

```

#### DEP\_3Y: Level of feelings last time felt depressed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not asked	9929	57.3	59.6	59.6
	A little	3775	21.8	22.7	82.3
	In between a little and a lot	2016	11.6	12.1	94.4
	A lot	935	5.4	5.6	100.0
	Total	16655	96.1	100.0	
Missing		671	3.9		
Total		17326	100.0		

Step 30. Generate a cross-tabulation of the depression Extended Set questions: DEP\_1\_R and DEP\_3Y.

The syntax below produces a cross-tabulation of DEP\_1\_R: *How often do you feel depressed* (a measure of frequency) and DEP\_3Y: *The level of those feeling the last time you felt depressed* (a measure of intensity) – used to determine a single DEPRESSION INDICATOR (DEP\_INDICATOR).

```

Proc Freq Data=SS. ExtendedSets2013;
Tables DEP_3Y*DEP_1_R/NOROW NOCOL NOPERCENT;
Run;

```

DEP_3Y: Level of feelings last time felt depressed		DEP_1_R: How often do you feel depressed?					Total
		Daily	Weekly	Monthly	A Few Times A Year	Never	
Not asked		0	0	0	0	9929	9929
A little		161	346	548	2708	0	3763
In between a little and a lot		209	384	378	1042	0	2013
A lot		381	191	112	248	0	932
Total		751	921	1038	3998	9929	16637

Step 31. Create a *DEPRESSION INDICATOR* (*DEP\_INDICATOR*) based on the two depression questions *DEP\_1\_R* and *DEP\_3Y*.

Syntax below creates *DEP\_INDICATOR* based on the distribution in the cross-tabulation above.

```
If (missing(DEP_1_R) OR missing(DEP_3Y)) then DEP_INDICATOR = .;
Else If (DEP_3Y Le 4 AND (DEP_1_R = 4 OR DEP_1_R = 5)) then DEP_INDICATOR=1;
Else If ((DEP_1_R = 3) OR (DEP_1_R LT 3 AND DEP_3Y=1) OR
(DEP_1 = 2 AND DEP_3Y = 2)) then DEP_INDICATOR = 2;
Else If ((DEP_1_R = 1 AND DEP_3Y = 2) OR (DEP_1_R = 2 AND DEP_3Y = 3))
then DEP_INDICATOR = 3;
Else If (DEP_1_R = 1 AND DEP_3Y = 3) then DEP_INDICATOR = 4;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables DEP_INDICATOR;
Run;
```

		DEP_INDICATOR			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	13927	80.4	83.7	83.7
	2.00	1929	11.1	11.6	95.3
	3.00	400	2.3	2.4	97.7
	4.00	381	2.2	2.3	100.0
	Total	16637	96.0	100.0	
Missing		689	4.0		
Total		17326	100.0		

## PAIN

Step 32. Generate frequency distribution on *PAIN\_2*.

First, calculate frequency distributions on *PAIN\_2*: *Frequency of pain in the past 3 months*.

```
If PAIN_2 in (1, 2, 3, 4) then PAIN_2_R=PAIN_2;
Else If PAIN_2 in (7, 8, 9) then PAIN_2_R=.;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables PAIN_2_R;
Run;
```

### PAIN\_2\_R: Frequency of pain in past 3 months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	6636	38.3	39.8	39.8
	Some days	6556	37.8	39.3	79.2
	Most days	1227	7.1	7.4	86.5
	Every day	2245	13.0	13.5	100.0
	Total	16664	96.2	100.0	
Missing		662	3.8		
Total		17326	100.0		

Step 33. The syntax below recodes PAIN\_4 into PAIN\_4Y to place “SOMEWHERE BETWEEN” numerically in-between “A LITTLE” and “A LOT”. It also creates the category NOT ASKED, if PAIN\_2 is NEVER (1).

```
If PAIN_4 =1 then PAIN_4Y=1;
Else If PAIN_4 =2 then PAIN_4Y=3;
Else If PAIN_4 =3 then PAIN_4Y=2;
Else If PAIN_4 in (7,8,9) then PAIN_4Y=.;
```

```
If PAIN_2=1 then PAIN_4Y=0;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables PAIN_4Y;
Run;
```

### PAIN\_4Y: How much pain you had last time you had pain?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not asked	6636	38.3	39.8	39.8
	A little	4865	28.1	29.2	69.0
	In between a little and a lot	3296	19.0	19.8	88.8
	A lot	1869	10.8	11.2	100.0
	Total	16666	96.2	100.0	
Missing		660	3.8		
Total		17326	100.0		

Step 34. Generate a cross-tabulation of the PAIN Extended Set questions: PAIN\_2\_R and PAIN\_4Y.

The syntax below produces a cross-tabulation of PAIN\_2\_R: *Frequency of pain in the past 3 months* and PAIN\_4Y: *How much pain you has the last time you had pain* (a measure of intensity) – used to determine a single PAIN INDICATOR (P\_INDICATOR).

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** PAIN\_4Y\*PAIN\_2\_R/**NOROW NOCOL NOPERCENT**;  
**Run**;

PAIN_4Y: How much pain you had last time you had pain		PAIN_2_R: Frequency of pain in past 3 months				
		Never	Some days	Most days	Every day	Total
	Not asked	6636	0	0	0	6636
	A little	0	4136	323	401	4860
	In between a little and a lot	0	1772	624	896	3296
	A lot	0	645	278	944	1867
Total		6636	6553	1225	2241	16655

Step 35. Create a PAIN INDICATOR (P\_INDICATOR) based on the two PAIN questions PAIN\_2\_R and PAIN\_4Y.

Syntax below creates P\_INDICATOR based on the distribution in the cross-tabulation above.

```
If ( PAIN_2_R = 1) OR (PAIN_4Y = 1 AND (PAIN_2_R = 2 OR PAIN_2_R = 3)) then
P_INDICATOR = 1;
Else If ((PAIN_2_R = 2 AND (PAIN_4Y = 2 OR PAIN_4Y = 3)) OR (PAIN_2_R = 3 AND
PAIN_4Y = 2) OR (PAIN_2_R = 4 AND PAIN_4Y = 1)) then P_INDICATOR = 2;
Else If ( PAIN_2_R = 3 AND PAIN_4Y = 3) OR (PAIN_2_R = 4 AND PAIN_4Y = 2) then
P_INDICATOR = 3;
Else If (PAIN_2_R = 4 AND PAIN_4Y = 3) then P_INDICATOR = 4;
```

**Proc Freq Data**=SS. ExtendedSets2013;  
**Tables** P\_INDICATOR;  
**Run**;

		P_INDICATOR			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	11095	64.0	66.6	66.6
	2.00	3442	19.9	20.7	87.3
	3.00	1174	6.8	7.0	94.3
	4.00	944	5.4	5.7	100.0
	Total	16655	96.1	100.0	
Missing		671	3.9		
Total		17326	100.0		

## FATIGUE (Tired)

Step 36. Generate frequency distribution on FATIGUE Extended Set questions Tired\_1, Tired\_2 and Tired\_3.

First, calculate frequency distributions on TIRED\_1: How often you felt tired in the past 3 months.

```

If TIRED_1 in (1, 2, 3, 4) then TIRED_1_R=TIRED_1;
Else If TIRED_1 in (7, 8, 9) then TIRED_1_R=.;

```

```

Proc Freq Data=SS. ExtendedSets2013;
Tables TIRED_1_R;
Run;

```

#### TIRED\_1\_R:How often felt very tired or exhausted in past 3 months

		Frequen cy	Percent	Valid Percent	Cumulative Percent
Valid	Never	5619	32.4	33.7	33.7
	Some days	8391	48.4	50.4	84.1
	Most days	1632	9.4	9.8	93.9
	Every day	1019	5.9	6.1	100.0
	Total	16661	96.2	100.0	
Missing		665	3.8		
Total		17326	100.0		

Step 37. Recode Tired\_2 to 0 (not asked) if Tired\_1 is 1 (Never).

If response to TIRED\_1 is 1: Never, then TIRED\_2 (How long most recent tired or exhausted feelings lasted) is not asked. This variable is recoded so these individuals are included in the syntax below.

```

If TIRED_2 in (1, 2, 3) then TIRED_2_R=TIRED_2;
Else If TIRED_2 in (7, 8, 9) then TIRED_2_R=.;
Else TIRED_2_R=.;

```

```

If TIRED_1 =1 then TIRED_2_R=0;
Proc Freq Data=SS. ExtendedSets2013;
Tables TIRED_2_R;
Run;

```

#### TIRED\_2\_R: How long most recent tired or exhausted feelings lasted?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not asked	5619	32.4	33.8	33.8
	Some of the day	8036	46.4	48.3	82.0
	Most of the day	1955	11.3	11.7	93.8
	All of the day	1036	6.0	6.2	100.0
	Total	16646	96.1	100.0	
Missing		680	3.9		
Total		17326	100.0		

Step 38. The syntax below recodes *TIRED\_3* into *TIRED\_3Y* to place “SOMEWHERE BETWEEN” numerically in-between “A LITTLE” and “A LOT”.

Also, if response to *TIRED\_1* is 1: Never, then *TIRED\_3* (*Level of tiredness*) is not asked. This variable is recoded so these individuals are included in the syntax below.

```
If TIRED_3 =1 then TIRED_3Y=1;
Else If TIRED_3 =2 then TIRED_3Y=3;
Else If TIRED_3 =3 then TIRED_3Y=2;
Else If TIRED_3 in (7, 8, 9) then TIRED_3Y=.;
```

```
If TIRED_1=1 then TIRED_3Y=0;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables TIRED_3Y;
Run;
```

**TIRED\_3Y: Level of tiredness**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not asked	5619	32.4	33.8	33.8
	A little	4912	28.4	29.5	63.3
	In between a little and a lot	4030	23.3	24.2	87.5
	A lot	2087	12.0	12.5	100.0
	Total	16648	96.1	100.0	
Missing		678	3.9		
Total		17326	100.0		

Step 39. Generate a cross-tabulation of the *FATIGUE* Extended Set questions: *TIRED\_1\_R*, *TIRED\_2\_R* and *TIRED\_3Y*.

The syntax below produces a cross-tabulation of *TIRED\_1\_R*: *How often you felt tired or exhausted in the past 3 months* (a measure of frequency) and *TIRED\_2\_R*: *How long those feelings lasted* (a measure of duration) and *TIRED\_3Y*: *The level of tiredness* (a measure of intensity) – used to determine a single *TIRED INDICATOR* (*T\_INDICATOR*).

```
Proc Freq Data=SS. ExtendedSets2013;
Tables TIRED_3Y* TIRED_2_R*TIRED_1_R /NOROW NOCOL NOPERCENT;
Run;
```

TIRED_3Y: Level of tiredness: <i>Intensity</i>	TIRED_2: How long feelings lasted: <i>Duration</i>	TIRED_1: How often felt very tired or exhausted in past 3 months: <i>Frequency</i>				Total
		Never	Some days	Most days	Every day	
Not asked	Not asked	5619				5619
A little	Some of the day		4066	264	124	4454
	Most of the day		252	73	27	352
	All of the day		68	15	18	101
In between	Some of the day		2224	400	166	2791
	Most of the day		497	266	123	887
	All of the day		194	71	84	349
A lot	Some of the day		536	165	84	785
	Most of the day		297	255	160	713
	All of the day		237	118	230	585
TOTAL		5619	8371	1627	1016	16633

Step 40. Create a *FATIGUE INDICATOR* (*T\_INDICATOR*) based on the three *FATIGUE* questions *TIRED\_1\_R*, *TIRED\_2\_R* and *TIRED\_3Y*.

Syntax below creates *T\_INDICATOR* based on the distribution in the cross-tabulation above.

```

If (TIRED_1_R = 1) then T_INDICATOR = 1;
Else If (TIRED_1_R = 2 AND TIRED_2_R = 1 AND TIRED_3Y = 1) then T_INDICATOR = 1;
Else If (TIRED_1_R = 3 AND TIRED_2_R = 1 AND TIRED_3Y = 1) then T_INDICATOR = 1;
Else If (TIRED_1_R in (2, 3, 4) AND TIRED_2_R in (2,3) AND TIRED_3Y =1) then T_INDICATOR
= 2;
Else If (TIRED_1_R in (2, 3, 4) AND TIRED_2_R =1 AND TIRED_3Y =2) then T_INDICATOR = 2;
Else If (TIRED_1_R =2 AND TIRED_2_R =2 AND TIRED_3Y =2) then T_INDICATOR = 2;
Else If (TIRED_1_R =4 AND TIRED_2_R =1 AND TIRED_3Y =1) then T_INDICATOR = 2;
Else If (TIRED_1_R in (3, 4) AND TIRED_2_R =2 AND TIRED_3Y =2) then T_INDICATOR = 3;
Else If (TIRED_1_R in (2, 3, 4) AND TIRED_2_R =3 AND TIRED_3Y =2) then T_INDICATOR = 3;
Else If (TIRED_1_R in (2, 3, 4) AND TIRED_2_R =1 AND TIRED_3Y =3) then T_INDICATOR = 3;
Else If (TIRED_1_R in (2, 3) AND TIRED_2_R =2 AND TIRED_3Y =3) then T_INDICATOR = 3;
Else If (TIRED_1_R =2 AND TIRED_2_R =3 AND TIRED_3Y =3) then T_INDICATOR = 3;
Else If (TIRED_1_R =4 AND TIRED_2_R =2 AND TIRED_3Y =3) then T_INDICATOR = 4;
Else If (TIRED_1_R in (3, 4) AND TIRED_2_R =3 AND TIRED_3Y =3) then T_INDICATOR = 4;
Else T_INDICATOR = .;

```

```

Proc Freq Data=SS. ExtendedSets2013;
Tables T_INDICATOR;
Run;

```



		T_Indicator		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	1.00	9949	57.4	59.8	59.8
	2.00	3864	22.3	23.2	83.0
	3.00	2312	13.3	13.9	96.9
	4.00	508	2.9	3.1	100.0
	Total	16633	96.0	100.0	
Missing		693	4.0		
Total		17326	100.0		

## Creating Disability Status Indicators

Type of Disability Indicator		Number of Questions
<b>SS_1</b>	Short Set (SS)	<b>6</b>
<b>Extended Set</b>		
<b>ES_1</b>	SS + <u>Hearing-indicator</u> , <u>Mobility-indicator</u> , <u>Cognition-indicator</u> , <u>Upper Body-indicator</u> + PFAD (4)*	<b>25</b>
<b>ES_2</b>	SS + <u>Hearing-indicator</u> , <u>Mobility-indicator</u> , <u>Cognition-indicator</u> , <u>Upper Body-indicator</u> + AD (4)†	<b>20</b>
<b>Short Set Enhanced</b>		
<b>ES_3</b>	SS + Upper Body-indicator + AD (4)†	<b>12</b>

\* PFAD (4): Pain, Fatigue, Anxiety and Depression Indicators at level 4

† AD (4): Anxiety and Depression Indicators at level 4

### SS\_1: WG Short Set Disability Indicator based on the 6 short set questions

The syntax below calculates the WG Short Set Disability Indicator based on the six short set questions **SS\_1** at the recommended cut-off. The level of inclusion is: at least 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL.

**If** (missing(vision) AND missing(hearing) AND missing(mobility) AND missing(communication) AND missing(Self\_Care) AND missing(Cognition)) **then** SS\_1 = .;  
**Else If** ((vision = 3 OR vision = 4) OR (hearing = 3 OR hearing = 4) OR (mobility = 3 OR mobility = 4) OR (communication = 3 OR communication = 4) OR (Self\_Care = 3 OR Self\_Care = 4) OR (Cognition = 3 OR Cognition = 4)) **then** SS\_1 = 1;  
**Else** SS\_1 = 2;

```
Proc Freq Data=SS. ExtendedSets2013;
Tables SS_1;
Run;
```

### SS\_1: WG Short Set Disability Identifier

		Frequency	Percent	Valid Percent	Weighted Estimate
Valid	WITHOUT DISABILITY	14905	86.0	88.8	90.5
	WITH DISABILITY	1872	10.8	11.2	9.5
	Total	16777	96.8	100.0	
Missing		549	3.2		
Total		17326	100.0		

**ES\_1: SS\_1 + Hearing-indicator, Mobility-indicator, Cognition-indicator + Upper Body-indicator + PFAD (4)**

The syntax below calculates an Extended Set Disability Indicator (**ES\_1**) based on 25 questions at the recommended cut-off. The level of inclusion is: at least 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL for the six short set question; severity levels 3 or 4 for the Hearing-, Mobility-, Cognition- and Upper body-Indicators; and severity level 4 for Pain-, Fatigue-, Anxiety- and Depression-Indicators.

```
If ( missing(SS_1) AND (H_INDICATOR LT 1 OR H_INDICATOR GT 4) AND
(MOB_INDICATOR LT 1 OR MOB_INDICATOR GT 4) AND missing(COM_SS) AND
missing(SC_SS) AND (COG_INDICATOR LT 1 OR COG_INDICATOR GT 4) AND
(UB_INDICATOR LT 1 OR UB_INDICATOR GT 4) AND missing(P_INDICATOR) AND
(T_INDICATOR LT 1 OR T_INDICATOR GT 4) AND (ANX_INDICATOR LT 1 OR
ANX_INDICATOR GT 4) AND (DEP_INDICATOR LT 1 OR DEP_INDICATOR GT 4))
then ES_1 =.;
Else If (SS_1 = 1 OR (H_INDICATOR = 3 OR H_INDICATOR = 4) OR (MOB_INDICATOR
= 3 OR MOB_INDICATOR = 4) OR (COG_INDICATOR = 3 OR COG_INDICATOR = 4) OR
(UB_INDICATOR = 3 OR UB_INDICATOR = 4) OR P_INDICATOR = 4 OR T_INDICATOR
= 4 OR ANX_INDICATOR = 4 OR DEP_INDICATOR = 4) then ES_1 = 1;
Else ES_1 = 2;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables ES_1;
Run;
```

**ES\_1: WG-ES Disability Indicator based on 11 domains and 25 questions**

		Frequency	Percent	Valid Percent	Weighted Estimate
Valid	WITHOUT DISABILITY	13823	79.8	79.8	82.3
	WITH DISABILITY	3503	20.2	20.2	17.7
	Total	17326	100.0	100.0	

**ES\_2: SS\_1 + Hearing-indicator, Mobility-indicator, Cognition-indicator + Upper Body-indicator + AD (4)**

The syntax below calculates an Extended Set Disability Indicator (**ES\_2**) based on 20 questions at the recommended cut-off. The level of inclusion is: at least 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL for the six short set question; severity levels 3 or 4 for the Hearing-, Mobility-, Cognition- and Upper body-Indicators; and severity level 4 for Anxiety- and Depression-Indicators.

```

If (missing(SS_1) AND (H_INDICATOR LT 1 OR H_INDICATOR GT 4) AND
(MOB_INDICATOR LT 1 OR MOB_INDICATOR GT 4) AND missing(COM_SS) AND
missing(SC_SS) AND (COG_INDICATOR LT 1 OR COG_INDICATOR GT 4) AND
(UB_INDICATOR LT 1 OR UB_INDICATOR GT 4) AND (ANX_INDICATOR LT 1 OR
ANX_INDICATOR GT 4) AND (DEP_INDICATOR LT 1 OR DEP_INDICATOR GT 4))
then ES_2 = .;
Else If (SS_1 = 1 OR (H_INDICATOR = 3 OR H_INDICATOR = 4) OR (MOB_INDICATOR
= 3 OR MOB_INDICATOR = 4) OR (COG_INDICATOR = 3 OR COG_INDICATOR = 4) OR
(UB_INDICATOR = 3 OR UB_INDICATOR = 4) OR ANX_INDICATOR = 4 OR
DEP_INDICATOR = 4) then ES_2 = 1;
Else ES_2 = 2;

```

**Proc Freq Data**=SS. ExtendedSets2013;

**Tables** ES\_2;

**Run**;

**ES\_2: WG-ES Disability Indicator based on 9 domains and 20 questions**

		Frequency	Percent	Valid Percent	Weighted Estimate
Valid	WITHOUT DISABILITY	14222	82.1	82.1	84.6
	WITH DISABILITY	3104	17.9	17.9	15.4
	Total	17326	100.0	100.0	

**ES\_3: SS\_1 + Upper Body-indicator + AD (4)**

The syntax below calculates the WG Short Set ENHANCED Disability Indicator (**ES\_3**) based on the 12 questions at the recommended cut-off. The level of inclusion is: at least 1 domain/question is coded A LOT OF DIFFICULTY or CANNOT DO AT ALL for the six short set question; severity levels 3 or 4 for the Upper body-Indicators; and severity level 4 for Anxiety- and Depression-Indicators.

**If** (missing(vision) AND missing(hearing) AND missing(mobility) AND missing(communication) AND missing(Self\_Care) AND missing(Cognition) AND missing(UB\_INDICATOR) AND missing(ANX\_INDICATOR) AND missing(DEP\_INDICATOR) ) **then** ES\_3 = .;

**Else If** ((vision = 3 OR vision = 4) OR (hearing= 3 OR hearing = 4) OR (mobility= 3 OR mobility = 4) OR (communication= 3 OR communication = 4) OR (Self\_Care = 3 OR Self\_Care = 4) OR (Cognition = 3 OR Cognition = 4) OR (UB\_INDICATOR=3 OR UB\_INDICATOR=4) OR ANX\_INDICATOR = 4 OR DEP\_INDICATOR = 4)

**then** ES\_3 = 1;

**Else** ES\_3 = 2;

**Proc Freq Data**=SS. ExtendedSets2013;

**Tables** ES\_3;

**Run**;

### ES\_3: WG-SS Enhanced Disability Indicator based on 9 domains and 12 questions

		Frequency	Percent	Valid Percent	Weighted Estimate
Valid	WITHOUT DISABILITY	14393	83.1	85.8	87.7
	WITH DISABILITY	2384	13.8	14.2	12.3
	Total	16777	96.9	100.0	
Missing		549	3.2		
Total		17326	100.1		

### POSTSCRIPT: Por que excluir a dor e a fadiga?

A exclusão dos domínios da dor e da fadiga de diversos dos Identificadores de Deficiência descritos acima é digna de nota. Esses domínios, que têm sido intensamente discutidos no WG, não são, a rigor, domínios de funcionalidade – e as nossas análises indicaram que ambos são altamente correlacionados com outros domínios e que as taxas de deficiência com a inclusão desses domínios podem ser muito altas.

Por último, em termos de comparabilidade internacional, esses domínios são menos universais; ou seja, eles são mais suscetíveis a influências socioculturais locais do que outros domínios de funcionalidade.

Por essas razões, optamos por excluí-los de várias dessas análises, embora eles possam ser incluídos em análises suplementares realizadas por institutos nacionais de estatística em âmbito nacional.

## APPENDIX 1: SAS Code used in the NHIS data file

```
Data ES.ExtendedSets13;
  Set NHIS.Funcdisb13;

  *Step 1. Generate frequency distribution for each domain question: Vision
  VIS_SS is the WG-SS Vision question;
  *Convert 7,8,9 to missing;

  If VIS_SS2 in (1,2,3,4) then Vision=VIS_SS2;
  Else Vision=.;

  *Step 2. Generate frequency distribution for each domain question:
Communication
  COM_SS is the WG-SS Communication question;
  *Convert 7,8,9 to missing;

  If COM_SS in (1,2,3,4) then communication=COM_SS;
  Else communication=.;

  *Step 3. Generate frequency distribution for each domain question (including
domains with multiple questions): Hearing
  HEAR_SS is the WG-SS Hearing question.
  HEAR_3 is Difficulty hearing conversation with one person in quiet room.
  HEAR_4 is Difficulty hearing one person in noisier room;
  *Convert 7,8,9 to;

  If HEAR_SS2 in (1,2,3,4) then hearing=HEAR_SS2;
  Else If HEAR_SS2 in (7,8,9 ) then hearing=.;

  If HEAR_3 in (1,2,3,4) then HEAR_3_R=HEAR_3;
  Else If HEAR_3 in (7,8,9 ) then HEAR_3_R=.;

  If HEAR_4 in (1,2,3,4) then HEAR_4_R=HEAR_4;
  Else If HEAR_4 in (7,8,9 ) then HEAR_4_R=.;

  *Step 4. For Hearing questions, recode Hear_3_R and Hear_4_R to 4 (cannot do
at all) if HEAR_SS2 is 4 (Cannot do at all).
  IF HEAR_SS = 4 HEAR_3_R = 4.
  IF HEAR_SS = 4 HEAR_4_R = 4.;

  If hearing = 4 and HEAR_3_R =. then HEAR_3_X = 4;
  Else HEAR_3_X=HEAR_3_R;

  If hearing = 4 and HEAR_4_R =. then HEAR_4_X = 4;
  Else HEAR_4_X=HEAR_4_R;

  *Step 5. Generate a cross-tabulation of the two Hearing Extended Set
questions: HEAR_3_X and HEAR_4_X.;

  *Step 6. Create a HEARING INDICATOR (H_INDICATOR) based on the two additional
hearing questions HEAR_3_X and HEAR_4_X
The syntax below creates a HEARING INDICATOR (H_INDICATOR) based on the two
additional hearing questions HEAR_3_X and HEAR_4_X;

  IF (HEAR_3_X = 1 AND HEAR_4_X = 1) OR (HEAR_3_X = 1 AND HEAR_4_X = 2) then
H_INDICATOR = 1;
```

```

Else IF (HEAR_3_X = 2 AND (HEAR_4_X = 1 OR HEAR_4_X = 2)) OR (HEAR_3_X = 1
AND HEAR_4_X = 3) then H_INDICATOR = 2;
Else IF (HEAR_3_X = 3 AND (HEAR_4_X = 1 OR HEAR_4_X = 2) OR (HEAR_3_X = 2
AND HEAR_4_X = 3) OR (HEAR_3_X = 1 AND HEAR_4_X = 4)) then H_INDICATOR = 3;
Else IF ((HEAR_3_X = 3 AND HEAR_4_X = 3) OR HEAR_3_X = 4 OR (HEAR_4_X = 4
AND (HEAR_3_X = 2 OR HEAR_3_X = 3))) then H_INDICATOR = 4;

```

**\*Step 7.** Generate frequency distribution for each domain question: **Cognition**  
COG\_SS is the WG-SS Cognition question.

Cognition: Degree of difficulty remembering or concentrating;

\*Recode 7,8,9 to .;

```

If COG_SS in (1,2,3,4) then Cognition=COG_SS;
Else If COG_SS in (7,8,9) then Cognition=.;

```

\*If response to COG-SS 2, 3 or 4 then the respondent is asked COG\_1: whether they have difficulty remembering, concentrating or both. ;

```

If COG_1 in (1,2,3) then COG_1_R=COG_1;
Else If COG_1 in (7,8,9) then COG_1_R=.;

```

**\*Step 8.** Account for those who did not answer COG\_1 (COG\_SS is 1 - no difficulty and they were skipped) by recoding COG\_1 to 0 (No difficulty).  
If response to COG-SS is 1: no difficulty, then the variable COG\_1 is recoded into COG\_1A, and the value assigned is 0: no difficulty;

```

If COG_SS=1 then COG_1A=0;
Else COG_1A=COG_1_R;

```

**\*Step 9.** Generate frequency distribution for remaining cognition questions.  
Frequency distribution of the Cognition extended REMEMBERING questions: COG\_2 and COG\_3.;

```

If COG_2 in (1,2,3) then COG_2_R=COG_2;
Else If COG_2 in (7,8,9) then COG_2_R=.;

```

```

If COG_3 in (1,2,3) then COG_3_R=COG_3;
Else If COG_3 in (7,8,9) then COG_3_R=.;

```

**\*Step 10.** Generate cross-tabulation of the two Cognition extended set questions COG\_2 by COG\_3.;

**\*Step 11.** Create a Remembering Indicator based on distribution of COG\_2 and COG\_3. The syntax below creates a REMEMBERING INDICATOR (R\_INDICATOR) based on the additional remembering questions (COG\_2\_R and COG\_3\_R).  
If COG\_SS is 1: no difficulty, then the Remembering Indicator is coded as 1: the lowest level of difficulty;

```

IF (Cognition = 1) then R_INDICATOR = 1;
Else IF ((COG_2_R = 1 AND COG_3_R = 1) OR (COG_3_R = 1 AND COG_2_R = 2) OR
(COG_3_R = 2 AND COG_2_R = 1)) then R_INDICATOR = 2;
Else IF (COG_3_R = 2 AND COG_2_R = 2) then R_INDICATOR = 3;
Else IF (COG_3_R = 3 OR COG_2_R = 3) then R_INDICATOR = 4;

```

**\*Step 12.** If COG\_1A is coded as 2 (concentrating only), then the Remembering Indicator is coded as 5.

These 388 individuals are respondents who were not included in the Remembering Indicator since they had only difficulty concentrating. ;

```
Else IF (COG_1A = 2) then R_INDICATOR = 5;
Else R_INDICATOR = 0;
```

**\*Step 13.** Generate frequency distribution of the Remembering Indicator.;

**\*Step 14.** Supplement Remembering Indicator with information on difficulty concentrating.

The syntax below adds information on whether cognitive difficulties are compounded by difficulty concentrating in addition to difficulty remembering. Create a COGNITION INDICATOR (COG\_INDICATOR) based on R\_INDICATOR (above) and the cognition question (COG\_1). The 388 individuals with 'concentrating only' were allocated as follows:

1. 357 with a little difficulty on COG\_SS question were classified as 2
2. 30 with a lot of difficulty on COG\_SS question were classified as 3
3. 1 with cannot do on COG\_SS question was classified as 4

Those with both remembering and concentrating difficulty were upgraded 36 individuals from 2 to 3, and 125 individuals from 3 to 4.;

```
COG_INDICATOR=R_INDICATOR;
IF (R_INDICATOR = 5 AND Cognition = 2) then COG_INDICATOR = 2;
Else IF (R_INDICATOR = 5 AND Cognition = 3) then COG_INDICATOR = 3;
Else IF (R_INDICATOR = 5 AND Cognition = 4) then COG_INDICATOR = 4;
IF (R_INDICATOR = 2 AND COG_1_R = 3 AND Cognition = 3) then COG_INDICATOR = 3;
Else IF (R_INDICATOR = 3 AND COG_1_R = 3 AND Cognition = 3) then
COG_INDICATOR = 4;
```

**\*Step 15.** Generate frequency distribution of the Cognition Indicator.;

**\*Step 16.** Generate frequency distribution for each domain question: **Self-care and Upper body functioning.**;

\*UB\_SS is the WG-SS Self-care question.

Recode 7,8,9 to .;

```
If UB_SS in (1,2,3,4) then Self_care =UB_SS;
Else Self_care =.;
```

```
If UB_1 in (1,2,3,4) then UB_1_R=UB_1;
Else If UB_1 in (7,8,9) then UB_1_R=.;
```

```
If UB_2 in (1,2,3,4) then UB_2_R=UB_2;
Else If UB_2 in (7,8,9) then UB_2_R=.;
```

**\*Step 17.** Generate a cross-tabulation of the two Upper body Extended Set questions: UB\_2\_R and UB\_1\_R.;

**\*Step 18.** Create an UPPER BODY INDICATOR (UB\_INDICATOR) based on the two additional self care questions UB\_2\_R and UB\_3\_R.

Syntax below creates UB\_INDICATOR based on the distribution in the cross-tabulation above.;

```
IF (UB_1_R = 4 OR UB_2_R = 4) then UB_INDICATOR = 4;
Else IF UB_INDICATOR NE 4 AND (UB_1_R = 3 OR UB_2_R = 3) then UB_INDICATOR = 3;
Else IF UB_INDICATOR NE 4 AND UB_INDICATOR NE 3 AND (UB_1_R = 2 OR UB_2_R = 2) then UB_INDICATOR = 2;
Else IF UB_INDICATOR NE 4 AND UB_INDICATOR NE 3 AND UB_INDICATOR NE 2 AND (UB_1_R = 1 OR UB_2_R = 1) then UB_INDICATOR = 1.;
```

**\*Step 19.** Generate frequency distribution for each domain question: **Mobility**.  
 MOB\_SS is the WG-SS Mobility question  
 First, calculate frequency distributions on the short set and two extended  
 set WALKING questions (MOB\_4, MOB\_5);

```
If MOB_SS2 in (1,2,3,4) then Mobility=MOB_SS2;
Else Mobility=.;
```

```
If MOB_4 in (1,2,3,4) then MOB_4_R=MOB_4;
Else If MOB_4 in (7,8,9) then MOB_4_R=.;
```

```
If MOB_5 in (1,2,3,4) then MOB_5_R=MOB_5;
Else If MOB_5 in (7,8,9) then MOB_5_R=.;
```

**\*Step 20.** Generate a cross-tabulation of the walking distance questions:  
 MOB\_4\_R (Difficulty walking 100 yards without equipment) and MOB\_5\_R  
 (Difficulty walking 1/3 mile without equipment ) to determine a single  
 WALKING INDICATOR.

NOTE: 623 individuals who responded cannot do at all to MOB\_4 were not asked  
 MOB\_5 and they do not appear in the table below.

They are, however, accounted for in the WALKING indicator calculation;

**\*Step 21.** Create a WALKING INDICATOR (WALK\_INDICATOR) based on the two  
 additional walking questions MOB\_4\_R and MOB\_5\_R.  
 Syntax below creates WALKING\_INDICATOR based on the distribution in the  
 cross-tabulation above.;

```
WALK_INDICATOR=0;
IF (MOB_4_R = 1 AND (MOB_5_R = 1 OR MOB_5_R = 2)) then WALK_INDICATOR = 1;
Else IF (MOB_4_R = 1 AND MOB_5_R = 3) OR (MOB_4_R = 2 AND (MOB_5_R = 1 OR
MOB_5_R = 2 OR MOB_5_R = 3)) then WALK_INDICATOR = 2;
Else IF (MOB_4_R = 1 AND MOB_5_R = 4) OR (MOB_4_R = 3 AND (MOB_5_R = 1 OR
MOB_5_R = 2 OR MOB_5_R = 3)) then WALK_INDICATOR = 3;
Else IF (MOB_4_R = 2 AND MOB_5_R = 4) OR (MOB_4_R = 3 AND MOB_5_R = 4) then
WALK_INDICATOR = 4;
```

\*Syntax below includes the 623 who responded cannot do at all to MOB\_4 into  
 the WALKING INDICATOR;

```
Else IF (WALK_INDICATOR = 0 AND MOB_4_R = 4) then WALK_INDICATOR = 4;
```

```
*RECODE WALK_INDICATOR (0 = SYSMIS).;
```

```
IF WALK_INDICATOR=0 then WALK_INDICATOR=.;
```

**\*Step 22.** Supplement Walking Indicator with information on difficulty  
 Climbing steps (MOB\_6). CROSSTABS WALK\_INDICATOR BY MOB\_6.;

```
If MOB_6 in (1,2,3,4) then MOB_6_R=MOB_6;
Else If MOB_6 in (7,8,9) then MOB_6_R=.;
```

**\*Step 23.** Create a mobility indication (MOB\_INDICATOR) with information  
 garnered from cross-tabulation above.;

```
MOB_INDICATOR = WALK_INDICATOR;
IF (WALK_INDICATOR = 2 AND MOB_6_R = 3) then MOB_INDICATOR = 3;
Else IF (WALK_INDICATOR = 1 AND MOB_6_R = 3) then MOB_INDICATOR = 2;
```



```
Else IF (WALK_INDICATOR = 2 AND MOB_6_R = 4) then MOB_INDICATOR = 4;
Else IF (WALK_INDICATOR = 1 AND MOB_6_R = 4) then MOB_INDICATOR = 3;
```

**\*Step 24.** Generate frequency distribution on ANX\_1 (Anxiety);

```
If ANX_1 in (1,2,3,4,5) then ANX_1_R=ANX_1;
Else If ANX_1 in (7,8,9) then ANX_1_R=.;
```

**\*Step 25.** The syntax below recodes ANX\_3R into ANX\_3Y to place "SOMEWHERE BETWEEN" numerically in-between "A LITTLE" and "A LOT";

```
If ANX_3R =1 then ANX_3Y=1;
Else If ANX_3R =2 then ANX_3Y=3;
Else If ANX_3R =3 then ANX_3Y=2;
Else If ANX_3R in (7,8,9) then ANX_3Y=.;
```

**\*Recode** ANX\_3Y to 0 (not asked) if ANX\_1 is 5 (Never).;

```
If ANX_1 =5 then ANX_3Y=0;
```

**\*Step 26.** Generate a cross-tabulation of the anxiety Extended Set questions: ANX\_1\_R and ANX\_3Y.;

**\*Step 27.** Create an ANXIETY INDICATOR (ANX\_INDICATOR) based on the two anxiety questions ANX\_1\_R and ANX\_3Y. Syntax below creates ANX\_INDICATOR based on the distribution in the cross-tabulation above.;

```
IF (missing(ANX_1_R) OR missing(ANX_3Y)) then ANX_INDICATOR=.;
Else IF ( ANX_3Y le 4 AND (ANX_1_R = 4 OR ANX_1_R = 5)) then ANX_INDICATOR=1;
Else IF ((ANX_1_R = 3) OR (ANX_1_R LT 3 AND ANX_3Y=1) OR (ANX_1_R = 2 AND ANX_3Y = 2)) then ANX_INDICATOR = 2;
Else IF ((ANX_1_R = 1 AND ANX_3Y = 2) OR (ANX_1_R = 2 AND ANX_3Y = 3)) then ANX_INDICATOR = 3;
Else IF ( ANX_1_R = 1 AND ANX_3Y = 3) then ANX_INDICATOR = 4;
```

**\*Step 28.** Generate frequency distribution on DEP\_1 (Depression);

```
If DEP_1 in (1,2,3,4,5) then DEP_1_R=DEP_1;
Else If DEP_1 in (7,8,9) then DEP_1_R=.;
Else DEP_1_R=.;
```

**\*Step 29.** The syntax below recodes DEP\_3R into DEP\_3Y to place "SOMEWHERE BETWEEN" numerically in-between "A LITTLE" and "A LOT";

```
If DEP_3R =1 then DEP_3Y=1;
Else If DEP_3R =2 then DEP_3Y=3;
Else If DEP_3R =3 then DEP_3Y=2;
Else If DEP_3R in (7,8,9) then DEP_3Y=.;
```

**\*Recode** DEP\_3Y to 0 (not asked) if DEP\_1 is 5 (Never).;

```
If DEP_1 =5 then DEP_3Y=0;
```

**\*Step 30.** Generate a cross-tabulation of the depression Extended Set questions: DEP\_1\_R and DEP\_3Y.;

**\*Step 31.** Create a DEPRESSION INDICATOR (DEP\_INDICATOR) based on the two depression questions DEP\_1\_R and DEP\_3Y;

```
IF (missing(DEP_1_R) OR missing(DEP_3Y)) then DEP_INDICATOR = .;
Else IF (DEP_3Y Le 4 AND (DEP_1_R = 4 OR DEP_1_R = 5)) then DEP_INDICATOR=1;
Else IF ((DEP_1_R = 3) OR (DEP_1_R LT 3 AND DEP_3Y=1) OR (DEP_1 = 2 AND
DEP_3Y = 2)) then DEP_INDICATOR = 2;
Else IF ((DEP_1_R = 1 AND DEP_3Y = 2) OR (DEP_1_R = 2 AND DEP_3Y = 3)) then
DEP_INDICATOR = 3;
Else IF (DEP_1_R = 1 AND DEP_3Y = 3) then DEP_INDICATOR = 4;
```

**\*Step 32.** Generate frequency distribution on PAIN\_2 (Pain);

```
If PAIN_2 in (1,2,3,4) then PAIN_2_R=PAIN_2;
Else If PAIN_2 in (7,8,9) then PAIN_2_R=.;
```

**\*Step 33.** The syntax below recodes PAIN\_4 into PAIN\_4Y to place "SOMEWHERE BETWEEN" numerically in-between "A LITTLE" and "A LOT"  
It also creates the category NOT ASKED, if PAIN\_2 is NEVER (1);

```
If PAIN_4 =1 then PAIN_4Y=1;
Else If PAIN_4 =2 then PAIN_4Y=3;
Else If PAIN_4 =3 then PAIN_4Y=2;
Else If PAIN_4 in (7,8,9) then PAIN_4Y=.;
```

```
If PAIN_2=1 then PAIN_4Y=0;
```

**\*Step 34.** Generate a cross-tabulation of the PAIN Extended Set questions: PAIN\_2\_R and PAIN\_4Y.;

**\*Step 35.** Create a PAIN INDICATOR (P\_INDICATOR) based on the two PAIN questions PAIN\_2\_R and PAIN\_4Y.  
Syntax below creates P\_INDICATOR based on the distribution in the cross-tabulation above.;

```
IF (PAIN_2_R = 1) OR (PAIN_4Y = 1 AND (PAIN_2_R = 2 OR PAIN_2_R = 3)) then
P_INDICATOR = 1;
Else IF ((PAIN_2_R = 2 AND (PAIN_4Y = 2 OR PAIN_4Y = 3)) OR (PAIN_2_R = 3
AND PAIN_4Y = 2) OR (PAIN_2_R = 4 AND PAIN_4Y = 1)) then P_INDICATOR = 2;
Else IF (PAIN_2_R = 3 AND PAIN_4Y = 3) OR (PAIN_2_R = 4 AND PAIN_4Y = 2)
then P_INDICATOR = 3;
Else IF (PAIN_2_R = 4 AND PAIN_4Y = 3) then P_INDICATOR = 4;
```

**\*Step 36.** Generate frequency distribution on **FATIGUE** Extended Set questions Tired\_1 (How often you felt tired in the past 3 months.), Tired\_2 and Tired\_3;

```
If TIRED_1 in (1,2,3,4) then TIRED_1_R=TIRED_1;
Else If TIRED_1 in (7,8,9) then TIRED_1_R=.;
```

```
If TIRED_2 in (1,2,3) then TIRED_2_R=TIRED_2;
Else If TIRED_2 in (7,8,9) then TIRED_2_R=.;
Else TIRED_2_R=.;
```

**\*Step 37.** Recode Tired\_2 to 0 (not asked) if Tired\_1 is 1 (Never).;

```
If TIRED_1 =1 then TIRED_2_R=0;
```

**\*Step 38.** recodes TIRED\_3 into TIRED\_3Y to place "SOMEWHERE BETWEEN" numerically in-between "A LITTLE" and "A LOT".  
Also, if response to TIRED\_1 is 1: Never, then TIRED\_3 is not asked;

```
If TIRED_3 =1 then TIRED_3Y=1;  
Else If TIRED_3 =2 then TIRED_3Y=3;  
Else If TIRED_3 =3 then TIRED_3Y=2;  
Else If TIRED_3 in (7,8,9) then TIRED_3Y=.;  
If TIRED_1=1 then TIRED_3Y=0;
```

**\*Step 39.** Generate a cross-tabulation of the FATIGUE Extended Set questions: TIRED\_1\_R, TIRED\_2\_R and TIRED\_3Y.;

**\*Step 40.** Create a FATIGUE INDICATOR (T\_INDICATOR) based on the three FATIGUE questions TIRED\_1\_R, TIRED\_2\_R and TIRED\_3Y.;

```
IF (TIRED_1_R = 1) then T_INDICATOR = 1;  
Else IF (TIRED_1_R = 2 AND TIRED_2_R = 1 AND TIRED_3Y = 1) then T_INDICATOR = 1;  
Else IF (TIRED_1_R = 3 AND TIRED_2_R = 1 AND TIRED_3Y = 1) then T_INDICATOR = 1;  
  
Else IF (TIRED_1_R in (2,3,4) AND TIRED_2_R in (2,3) AND TIRED_3Y =1) then  
T_INDICATOR = 2;  
Else IF (TIRED_1_R in (2,3,4) AND TIRED_2_R =1 AND TIRED_3Y =2) then  
T_INDICATOR = 2;  
Else IF (TIRED_1_R =2 AND TIRED_2_R =2 AND TIRED_3Y =2) then T_INDICATOR = 2;  
Else IF (TIRED_1_R =4 AND TIRED_2_R =1 AND TIRED_3Y =1) then T_INDICATOR = 2;  
  
Else IF (TIRED_1_R in (3,4) AND TIRED_2_R =2 AND TIRED_3Y =2) then  
T_INDICATOR = 3;  
Else IF (TIRED_1_R in (2,3,4) AND TIRED_2_R =3 AND TIRED_3Y =2) then  
T_INDICATOR = 3;  
Else IF (TIRED_1_R in (2,3,4) AND TIRED_2_R =1 AND TIRED_3Y =3) then  
T_INDICATOR = 3;  
Else IF (TIRED_1_R in (2,3) AND TIRED_2_R =2 AND TIRED_3Y =3) then  
T_INDICATOR = 3;  
Else IF (TIRED_1_R =2 AND TIRED_2_R =3 AND TIRED_3Y =3) then T_INDICATOR = 3;  
  
Else IF (TIRED_1_R =4 AND TIRED_2_R =2 AND TIRED_3Y =3) then T_INDICATOR = 4;  
Else IF (TIRED_1_R in (3,4) AND TIRED_2_R =3 AND TIRED_3Y =3) then  
T_INDICATOR = 4;  
Else T_INDICATOR = .;
```

**\*SS\_1:** WG Short Set Disability Indicator based on the 6 short set questions.;

```
IF (missing(vision) AND missing(hearing) AND missing(mobility) AND  
missing(communication) AND missing(Self_care) AND missing(Cognition)) then  
SS_1 = .;  
Else IF ((vision = 3 OR vision = 4) OR  
(hearing= 3 OR hearing = 4) OR  
(mobility= 3 OR mobility = 4) OR  
(communication= 3 OR communication = 4) OR
```

```

                (Self_care = 3 OR Self_care = 4) OR
                (Cognition = 3 OR Cognition = 4)) then SS_1 = 1;
Else SS_1 = 2;

*ES_1: SS_1 + Hearing-indicator, Mobility-indicator, Cognition-indicator +
Upper Body-indicator + PFAD (4).
PFAD=only level 4 in Pain indictor, Fatigue indicator, Anxiety indictor, and
Depression indicator;

IF ( missing(SS_1) AND (H_INDICATOR LT 1 OR H_INDICATOR GT 4) AND
(MOB_INDICATOR LT 1 OR MOB_INDICATOR GT 4) AND missing(COM_SS) AND
missing(UB_SS) AND (COG_INDICATOR LT 1 OR COG_INDICATOR GT 4) AND
(UB_INDICATOR LT 1 OR UB_INDICATOR GT 4) AND missing(P_INDICATOR) AND
(T_INDICATOR LT 1 OR T_INDICATOR GT 4) AND (ANX_INDICATOR LT 1 OR
ANX_INDICATOR GT 4) AND (DEP_INDICATOR LT 1 OR DEP_INDICATOR GT 4)) then
ES_1 = .;

Else IF (SS_1 = 1 OR (H_INDICATOR = 3 OR H_INDICATOR = 4) OR (MOB_INDICATOR =
3 OR MOB_INDICATOR = 4) OR (COG_INDICATOR = 3 OR COG_INDICATOR = 4) OR
(UB_INDICATOR = 3 OR UB_INDICATOR = 4) OR P_INDICATOR = 4 OR T_INDICATOR = 4
OR ANX_INDICATOR = 4 OR DEP_INDICATOR = 4) then ES_1 = 1;
Else ES_1 = 2;

*ES_2: SS_1 + Hearing-indicator, Mobility-indicator, Cognition-indicator +
Upper Body-indicator + AD (4)
AD=only level 4 in Anxiety indictor and Depression indicator;

IF (missing(SS_1) AND (H_INDICATOR LT 1 OR H_INDICATOR GT 4) AND
(MOB_INDICATOR LT 1 OR MOB_INDICATOR GT 4) AND missing(COM_SS) AND
missing(UB_SS) AND (COG_INDICATOR LT 1 OR COG_INDICATOR GT 4) AND
(UB_INDICATOR LT 1 OR UB_INDICATOR GT 4) AND (ANX_INDICATOR LT 1 OR
ANX_INDICATOR GT 4) AND (DEP_INDICATOR LT 1 OR DEP_INDICATOR GT 4)) then
ES_2 = .;

Else IF (SS_1 = 1 OR (H_INDICATOR = 3 OR H_INDICATOR = 4) OR (MOB_INDICATOR =
3 OR MOB_INDICATOR = 4) OR (COG_INDICATOR = 3 OR COG_INDICATOR = 4) OR
(UB_INDICATOR = 3 OR UB_INDICATOR = 4) OR ANX_INDICATOR = 4 OR
DEP_INDICATOR = 4) then ES_2 = 1;
Else ES_2 = 2;

*ES_3: SS_1 + Upper Body-indicator + AD (4)
AD=only level 4 in Anxiety indictor and Depression indicator;

IF (missing(vision) AND missing(hearing) AND missing(mobility) AND
missing(communication) AND missing(Self_care) AND missing(Cognition) AND
missing(ANX_INDICATOR) AND missing(DEP_INDICATOR)) then ES_3 = .;

Else IF ((vision = 3 OR vision = 4) OR (hearing= 3 OR hearing = 4) OR
mobility= 3 OR mobility = 4) OR (communication= 3 OR communication = 4) OR
(Self_care = 3 OR Self_care = 4) OR (Cognition = 3 OR Cognition = 4) OR
ANX_INDICATOR = 4 OR DEP_INDICATOR = 4) then ES_3 = 1;
Else ES_3 = 2;

Label
Vision="Degree of difficulty seeing"
communication="Degree of difficulty communicating using usual language"

```

```

hearing="Degree of difficulty hearing"
HEAR_3_R="Difficulty hearing conversation with one person in quiet
room"
HEAR_3_X="Difficulty hearing conversation with one person in quiet
room:Recoded from HEAR_3_R"
HEAR_4_R="Diff hearing one person in noisier room even w/ hearing aid"
HEAR_4_X="Diff hearing one person in noisier room even w/ hearing
aid:Recoded from HEAR_4_R"
H_INDICATOR="Hearing indictor"
Cognition="Degree of difficulty remembering or concentrating"
COG_1_R="Difficulty remembering, concentrating, or both?"
COG_1A="Include respondents who did not asked COG_1"
COG_2_R="How often have difficulty remembering?"
COG_3_R="Amount of things you have difficulty remembering?"
R_INDICATOR="Remembering indicator"
COG_INDICATOR="COG INDICATOR"
Self_care="Degree of difficulty with self-care"
UB_1_R="Diff raising 2 liter bottle of water from waist to eye level"
UB_2_R="Degree of difficulty using hands and fingers"
UB_INDICATOR="UB INDICATOR"
MOB_4_R="Diff walking 100 yards on level ground w/o aid or equipment"
MOB_5_R="Diff walking 1/3rd mile on level ground w/o aid or equipment"
WALK_INDICATOR="WALK INDICATOR"
MOB_INDICATOR="MOB INDICATOR"
PAIN_2_R="Frequency of pain in past 3 months"
PAIN_4Y="How much pain you had last time you had pain?"
P_INDICATOR="Pain INDICATOR"
TIRED_1_R="How often felt very tired or exhausted in past 3 months"
TIRED_2_R="How long most recent tired or exhausted feelings lasted?"
TIRED_3Y="Level of tiredness last time felt very tired or exhausted"
T_INDICATOR="Tired INDICATOR"
SS_1="WG Short Set Disability Identifier"
ES_1="WG-ES Disability Indicator based on 11 domains and 25 questions"
ES_2="WG-ES Disability Indicator based on 9 domains and 20 questions"
ES_3="WG-SS Enhanced Disability Indicator based on 9 domains and 12
questions"
;

Format Vision communication hearing HEAR_3_R HEAR_4_R HEAR_3_X HEAR_4_X
Cognition Self_care UB_1_R      UB_2_R Mobility MOB_4_R MOB_5_R Diff.
COG_1_R COGF. COG_1A COG1AF. COG_2_R Cog2f. COG_3_R Cog3f. PAIN_2_R TIRED_1_R
pain2Tire1f.      TIRED_2_R  Tire2f.  PAIN_4Y  TIRED_3Y pain4Tire3f.
ANX_1_R DEP_1_R AnxDep. ANX_3Y DEP_3Y AnxDep3F. SS_1 ES_1 ES_2 ES_3 DisabF.;

Run;

Proc format library=ES.ES;
  Value Diff
    1="No Difficulty"
    2="Some Difficulty"
    3="A lot of Difficulty"
    4="Cannot do at all"
    .="Missing"
;
  Value COGF
    1="Difficulty remembering only"
    2="Difficulty concentrating only"
    3="Difficulty with both remembering and concentrating"

```

```

;
Value COG1AF
0="(0)No difficulty"
1="Difficulty remembering only"
2="Difficulty concentrating only"
3="Difficulty with both remembering and concentrating"
;
Value Cog2f
1="Sometimes"
2="Often"
3="All of the time"
;
Value Cog3f
1="A few things"
2="A lot of things"
3="Almost everything"
;
Value AnxDep
1="Daily"
2="Weekly"
3="Monthly"
4="A few times a year"
5="Never"
;
Value AnxDep3F
0="Not asked"
1="A little"
2="In between"
3="A lot"
;
Value pain2Tire1f
1="Never"
2="Some days"
3="Most days"
4="Every day"
;
Value Tire2f
0="NOT ASKED"
1="Some days"
2="Most days"
3="Every day"
;
Value pain4Tire3f
0="NOT ASKED"
1="A little"
2="in between"
3="A lot"
;
Value DisabF
1="With Disability"
2="Without Disability"
;
Run;

```