



## Directrices analíticas: la creación de identificadores de la discapacidad mediante la sintaxis SAS de la lista ampliada de preguntas sobre funcionamiento del Grupo de Washington

### Introducción

Igual que en el caso de la lista breve de preguntas sobre funcionamiento del Grupo de Washington, el análisis de la lista ampliada también puede dar lugar a múltiples identificadores de la discapacidad en función de la elección del umbral de gravedad o el punto de corte. No obstante, la sintaxis SAS que aparece más adelante facilita el cálculo de los identificadores de la discapacidad mediante diferentes conjuntos de esferas de la lista ampliada de preguntas sobre funcionamiento del Grupo de Washington con el punto de corte recomendado para las comparaciones internacionales (descrito a continuación).

Para cada uno de los identificadores de la discapacidad descritos, el nivel de inclusión es al menos una esfera/pregunta codificada como TIENE MUCHA DIFICULTAD o LE RESULTA IMPOSIBLE, o en las esferas de Ansiedad, Depresión, Dolor y Cansancio, el nivel de dificultad más alto en una escala de cuatro puntos.

Cada uno de los cuatro identificadores de la discapacidad descritos en este documento se define según la elección de esferas de funcionamiento incluidas:

**WG-SS:** *Lista breve:* 6 esferas, 6 preguntas.

**WG-ES 1:** *Lista ampliada:* 11 esferas, 25 preguntas.

**WG-ES 2:** *Lista ampliada modificada* (la lista ampliada MENOS las esferas de Dolor y Cansancio): 9 esferas, 20 preguntas.

**WG-ES 3:** *Lista breve mejorada* (lista breve MÁS las esferas Parte superior del cuerpo, Ansiedad y Depresión): 9 esferas, 12 preguntas.

**NOTA:** para el análisis de los datos, utilice sus técnicas de ponderación y estimación habituales.

Los documentos sobre implementación del Grupo de Washington comprenden las herramientas desarrolladas por el Grupo de Washington sobre Estadísticas de la Discapacidad con el objeto de recopilar datos sobre la discapacidad internacionalmente comparables a través de censos y encuestas. En los documentos se abordan las mejores prácticas en materia de ejecución de la lista breve, la lista ampliada, la lista breve mejorada, los módulos del Grupo de Washington y el Fondo de las Naciones Unidas para la Infancia (UNICEF) sobre el funcionamiento en niños y niñas de 2 a 4 años y de 5 a 17 años, y el módulo sobre discapacidad para encuestas de población activa del Grupo de Washington y la Organización Internacional del Trabajo (OIT), así como otras herramientas del Grupo de Washington. Entre muchos otros temas, se tratan la traducción, las especificaciones de las preguntas, las directrices analíticas, los códigos de programación para los análisis, y el uso de las herramientas con fines de desglose.

Para consultar otros documentos sobre implementación del Grupo de Washington y obtener información adicional, visite su sitio web:

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

La sintaxis SAS se basa en las *etiquetas de variable* indicadas en la tabla que aparece más adelante. El módulo completo de la lista ampliada de preguntas sobre funcionamiento del Grupo de Washington comprende más preguntas de las incluidas en esta tabla. El estado de discapacidad se determina según la dificultad para realizar actividades básicas universales *sin* el uso de tecnología de apoyo ni ningún otro tipo de asistencia. Hay varias preguntas sobre movilidad, por ejemplo, que hacen referencia a la dificultad para caminar *sin* el uso de asistencia. Aunque tales preguntas no se incluyen en el plan analítico facilitado aquí, se pueden utilizar en otros análisis que examinen más detenidamente el efecto de la tecnología de apoyo (facilitadores ambientales) en el funcionamiento.

Al determinar los identificadores de la discapacidad, solo se utilizan las preguntas o variables que figuran abajo.

**Asegúrese de utilizar las mismas *etiquetas de variable* O BIEN de revisar la sintaxis SPSS con el fin de que refleje las *etiquetas de variable* de su base de datos.**

La lista breve de preguntas sobre funcionamiento del Grupo de Washington se aplica como parte de la Encuesta Nacional de Entrevistas de Salud (NHIS) de los Estados Unidos. Los datos utilizados para elaborar estas directrices proceden de la encuesta de 2013.

*Nota dirigida a los usuarios de la Encuesta Nacional de Entrevistas de Salud: los nombres de variable del archivo de datos de dicha encuesta y la documentación pueden diferir de los indicados en este documento, p. ej., la esfera de cuidado personal indicada como SC\_SS, es UB\_SS en el archivo de datos y la documentación de la Encuesta Nacional de Entrevistas de Salud.*

*El código SAS utilizado para elaborar los productos de este documento se incluye íntegramente en el apéndice 1.*

Preguntas o esferas de la lista ampliada del Grupo de Washington	Etiqueta de variable	Patrón de respuesta
<b>VISIÓN</b>		
<b>1. ¿Tiene dificultad para ver, incluso cuando usa lentes?</b>	VIS_SS	1
<b>COMUNICACIÓN</b>		
<b>2. Cuando emplea su lenguaje habitual, ¿tiene dificultad para comunicarse —por ejemplo, para entender a los demás o para que lo entiendan—?</b>	COM_SS	1
<b>AUDICIÓN</b>		
<b>3. ¿Tiene dificultad para oír, incluso cuando usa un audífono?</b>	HEAR_SS	1
<b>4. ¿Tiene dificultad para oír una conversación con otra persona en una habitación sin ruido?</b>	HEAR_3	1
<b>5. ¿Tiene dificultad para oír una conversación con otra persona en una habitación con ruido?</b>	HEAR_4	1
<b>COGNICIÓN</b>		
<b>6. ¿Tiene dificultad para recordar o concentrarse?</b>	COG_SS	1

7. ¿Tiene dificultad para recordar, concentrarse o ambos?	COG_1	2
8. ¿Con qué frecuencia tiene dificultad para recordar?	COG_2	3
9. ¿Cuántas cosas tiene dificultad para recordar?	COG_3	4
<b>CUIDADO PERSONAL / PARTE SUPERIOR DEL CUERPO</b>		
10. ¿Tiene dificultad para lavarse o vestirse (gestionar su autosuficiencia para el cuidado personal)?	SC_SS	1
11. ¿Tiene dificultad para levantar una botella de 2 litros de agua desde la cintura hasta la altura de los ojos?	UB_1	1
12. Grado de dificultad para usar las manos y los dedos.	UB_2	1
<b>MOVILIDAD</b>		
13. ¿Tiene dificultad para caminar o subir escalones?	MOB_SS	1
14. ¿Tiene dificultad para caminar 100 metros por terreno llano sin ayuda o sin un dispositivo?	MOB_4	1
15. ¿Tiene dificultad para caminar 500 metros por terreno llano sin ayuda o sin un dispositivo?	MOB_5	1
16. ¿Tiene dificultad para caminar 12 pasos sin ayuda o un dispositivo?	MOB_6	1
<b>AFECTO (ANSIEDAD)</b>		
17. ¿Con qué frecuencia se siente preocupado, nervioso o ansioso?	ANX_1	5
18. ¿Cuál fue el nivel de sus sentimientos la última vez que se sintió preocupado, nervioso o ansioso?	ANX_3	6
<b>AFECTO (DEPRESIÓN)</b>		
19. ¿Con qué frecuencia se siente deprimido?	DEP_1	5
20. ¿Cuál fue el nivel de depresión que experimentó la última vez que se sintió deprimido?	DEP_3	6
<b>DOLOR</b>		
21. ¿Con qué frecuencia sintió dolor en los últimos tres meses?	PAIN_2	7
22. ¿Cuánto dolor sintió la última vez que sintió dolor?	PAIN_4	6
<b>CANSANCIO</b>		
23. ¿Con qué frecuencia se ha sentido muy cansado o exhausto en los últimos 3 meses?	TIRED_1	7
24. ¿Durante cuánto tiempo se sintió cansado o exhausto la última vez que se sintió así?	TIRED_2	8
25. ¿Cómo fue su nivel de cansancio la última vez que se sintió muy cansado o exhausto?	TIRED_3	6

**NOTA:** Las preguntas en **rojo** pertenecen a la lista breve de preguntas sobre funcionamiento del Grupo de Washington.

El conjunto de 25 preguntas está incluido en la lista ampliada.

Las preguntas en **rojo**, **azul** y **verde** están incluidas en la lista ampliada modificada. Las preguntas en **rojo** y **verde** están incluidas en la lista breve mejorada.

**Patrones de respuesta:**

	<b>Patrón 1</b>	<b>Patrón 2</b>	<b>Patrón 3</b>	<b>Patrón 4</b>
1	No tiene ninguna dificultad	Solamente tiene dificultad para recordar	A veces	Algunas cosas
2	Sí, tiene cierta dificultad	Solamente tiene dificultad para concentrarse	Con frecuencia	Muchas cosas
3	Sí, tiene mucha dificultad	Tiene dificultad tanto para recordar como para concentrarse	Siempre	Casi todo
4	Le resulta imposible			
7	No contesta			
8	No comprobado			
9	No sabe			

	<b>Patrón 5</b>	<b>Patrón 6*</b>	<b>Patrón 7</b>	<b>Patrón 8</b>
1	Todos los días	Un poco	Nunca	Parte del día
2	Cada semana	Mucho	Algunos días	La mayor parte del día
3	Cada mes	Ni poco ni mucho	Casi todos los días	Todo el día
4	Algunas veces al año		Todos los días	
5	Nunca			
7	No contesta			
8	No comprobado			
9	No sabe			

**\* ADVIÉRTASE QUE, EN LA SINTAXIS QUE APARECE MÁS ADELANTE, LOS ELEMENTOS CON EL PATRÓN DE RESPUESTA 6 (ANX\_3, DEP\_3, PAIN\_4 Y TIRED\_3) SE RECODIFICAN PARA COLOCAR NUMÉRICAMENTE “NI POCO NI MUCHO” ENTRE “UN POCO” Y “MUCHO”.**

La lista breve de preguntas sobre funcionamiento del Grupo de Washington se encuentra integrada en la lista ampliada.

La lista ampliada de preguntas sobre funcionamiento del Grupo de Washington se complementa con:

- preguntas adicionales para las 6 esferas existentes y
- esferas adicionales (varias con múltiples preguntas).

La sintaxis SAS presentada a continuación incluye un par de elementos específicos del contenido de la lista ampliada.

En primer lugar, era importante establecer identificadores únicos de esferas específicas para las esferas de funcionamiento que incluían varias preguntas. Por ejemplo, el funcionamiento de la parte superior del cuerpo incluye dos preguntas y cada una hace referencia a acciones específicas y únicas, a saber: la dificultad para levantar una botella de agua desde la cintura hasta la altura de los ojos (brazos u hombros), y la dificultad para usar las manos y los dedos. Esas dos preguntas se analizaron y combinaron para producir un solo indicador para la parte superior del cuerpo con cuatro niveles de dificultad que van de 1, dificultad baja, a 4, dificultad alta, de manera semejante a las categorías de respuesta de las preguntas únicas de la lista breve de preguntas sobre funcionamiento del Grupo de Washington, a saber: no tiene ninguna dificultad; tiene cierta dificultad; tiene mucha dificultad; y le resulta imposible. Como en la esfera Parte superior del cuerpo, las esferas Cognición, Ansiedad, Depresión, Dolor y Cansancio de la lista ampliada tienen patrones de respuesta diferentes que no se “traducen” de manera inmediata al patrón de respuesta habitual del Grupo de Washington. Para estas esferas del funcionamiento, se elaboró y registró un patrón de respuesta similar en forma de escala de cuatro niveles, del 1 al 4, donde 1 representa el nivel más bajo de dificultad y 4 el más alto.

En segundo lugar, se evaluaron juntos los indicadores de esferas individuales con el fin de determinar el punto de corte apropiado para la inclusión en un identificador de la discapacidad general —con el propósito de estimar la prevalencia y desglosar los indicadores de resultados según el estado de discapacidad—.

### **NOTA:**

para todas las variables, los códigos 7) *No contesta*, 8) *No comprobado* y 9) *No sabe*, se recodifican como *Falta*.

## **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_4_X (Difficulty hearing in a Noisier room)		HEAR_3_X : Difficulty hearing conversation with one person in quiet room				Total
		No difficulty	Some difficulty	A lot of difficulty	Cannot do at all	
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	Cumulative Percent
Valid	.00	580	3.3	3.3	3.3
	1.00	13719	79.2	79.2	82.5
	2.00	2172	12.5	12.5	95.1
	3.00	197	1.1	1.1	96.2
	4.00	270	1.6	1.6	97.8
	5.00	388	2.2	2.2	100.0
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_2_R: Difficulty using hands and fingers		UB_1_R: Diff raising 2 liter bottle of water from waist to eye level				
		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					
		Frequency	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	<b>623</b>	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				Total
	No difficulty	Some difficulty	A lot of difficulty	Cannot do at all	
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;
```

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

<b>MOB_IDICATOR</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<b>1.00</b>	13697	79.1	83.8	83.8
	<b>2.00</b>	1192	6.9	7.3	91.1
	<b>3.00</b>	516	3.0	3.2	94.2
	<b>4.00</b>	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;

```

		<b>DEP_INDICATOR</b>			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<b>1.00</b>	13927	80.4	83.7	83.7
	<b>2.00</b>	1929	11.1	11.6	95.3
	<b>3.00</b>	400	2.3	2.4	97.7
	<b>4.00</b>	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**

		Frequency	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 TIREDD\_3 into TIREDD\_3Y to place “SOMEWHERE BETWEEN” numerically in-between “A LITTLE” and “A LOT”.

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

```
If TIREDD_3 =1 then TIREDD_3Y=1;
Else If TIREDD_3 =2 then TIREDD_3Y=3;
Else If TIREDD_3 =3 then TIREDD_3Y=2;
Else If TIREDD_3 in (7, 8, 9) then TIREDD_3Y=.;
```

```
If TIREDD_1=1 then TIREDD_3Y=0;
```

```
Proc Freq Data=SS. ExtendedSets2013;
Tables TIREDD_3Y;
Run;
```

**TIREDD\_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: TIREDD\_1\_R, TIREDD\_2\_R and TIREDD\_3Y.

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

```
Proc Freq Data=SS. ExtendedSets2013;
Tables TIREDD_3Y*TIREDD_2_R*TIREDD_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
<b>TOTAL</b>		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	Cumulative
		Frequency	Percent	Percent	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		

**APOSTILLA: ¿Por qué excluir el Dolor y el Cansancio?**

Cabe desatacar la exclusión de las esferas de Dolor y Cansancio de varios identificadores de la discapacidad anteriores. Estas esferas han sido objeto de extensos debates en el Grupo de Washington. No son, en sentido estricto, esferas del funcionamiento, y nuestros análisis indicaron que ambas se correlacionaban estrechamente con otras esferas, y que si se incluyen en las tasas de discapacidad pueden dar lugar a valores muy altos. Por último, desde el punto de vista de la comparabilidad internacional, estas esferas son menos universales, es decir, son más susceptibles a las influencias locales socioculturales que otras esferas del funcionamiento.

Por estos motivos, se decidió excluir dichas esferas de algunos de estos análisis, aunque se pueden incluir en análisis complementarios llevados a cabo por oficinas nacionales de estadística en el plano 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 indicator, Fatigue indicator, Anxiety indicator, 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 indicator 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 indicator 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;

```