GUI Data Workshop

Worksheet 4a - Family Structure –

Infant Cohort - Wave 1 (at 9 months), Wave 2 (at 3 years) and Wave 3 (at 5 years)

This document provides worked examples of some very basic commands which can be used to explore and analyse the GUI data using SPSS drop-down menus. It includes detailed screen shots of how the run the analysis using SPPS menus.

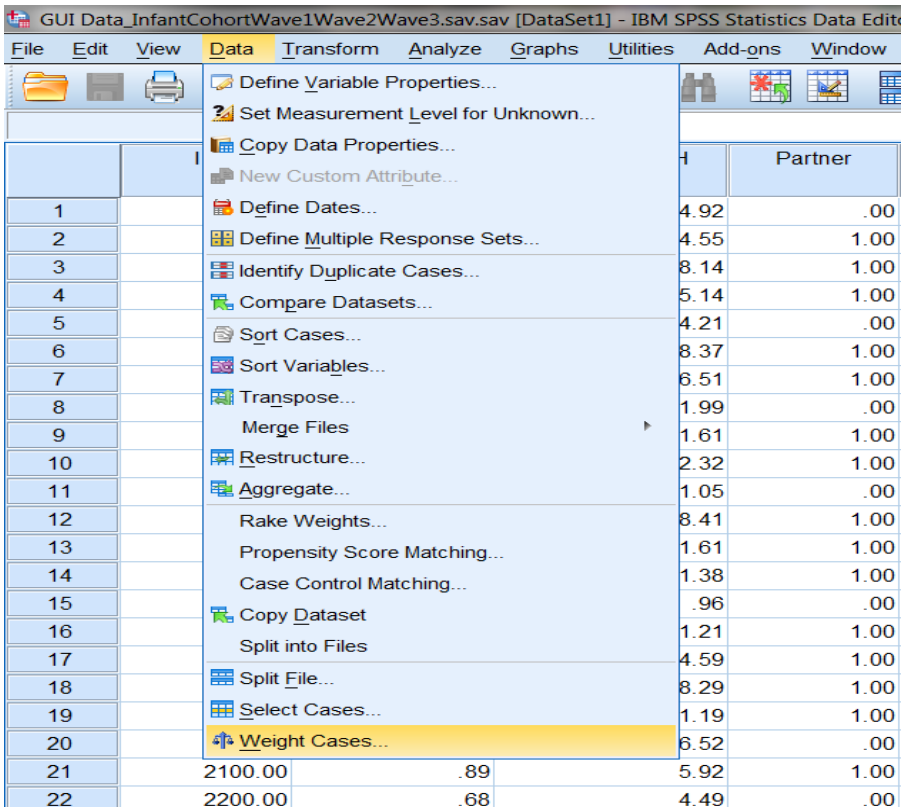
This worksheet is based on the matched Wave 1 (at 9 months), Wave 2 (at 3 years) and Wave 3 (at 5 years) files – please see Information Sheet 4c for details on how to match the files.

Please note this worksheet is based on SPSS Version 22.

Convention A naming – drop down menus[1]

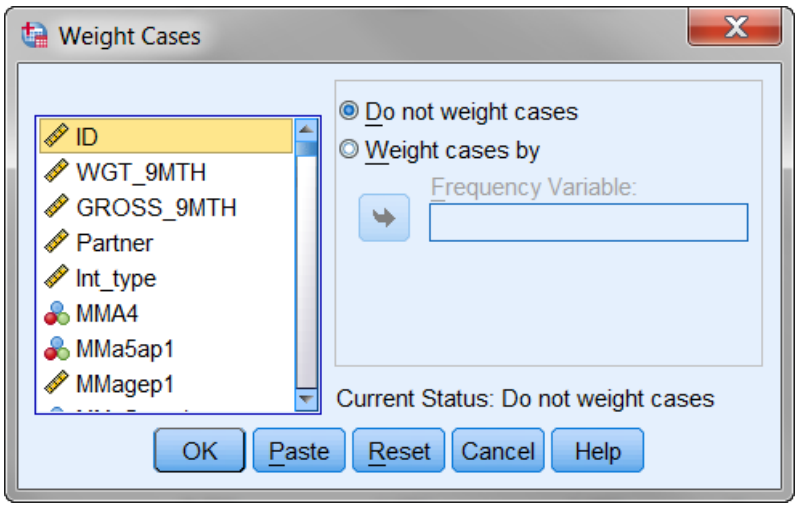
Exercise 1: Cross-sectional - Family Structure at Wave 1 (at 9 months)

1. First you will need to weight the data. Select Data → Weight Cases

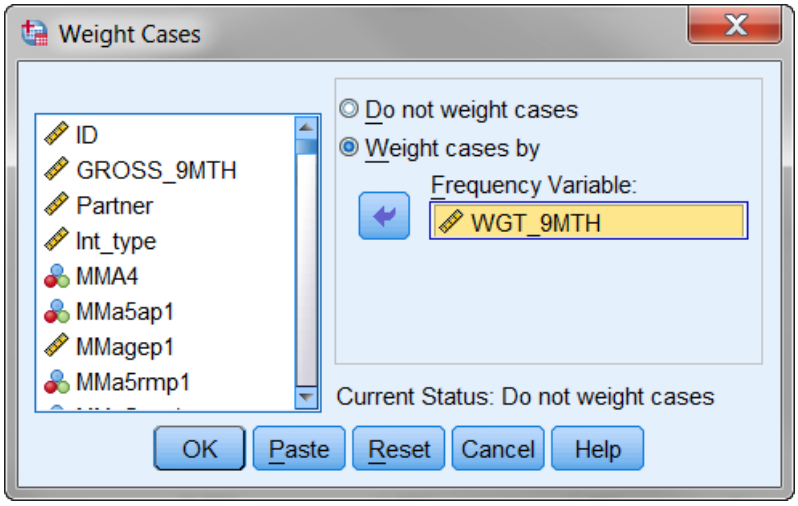


[1] [1] See *Variable Naming Conventions And Longitudinal Data Dictionary For Wave 1 And Wave 2 Of The Infant Cohort Of Growing Up In Ireland* document for further details on variable naming conventions.

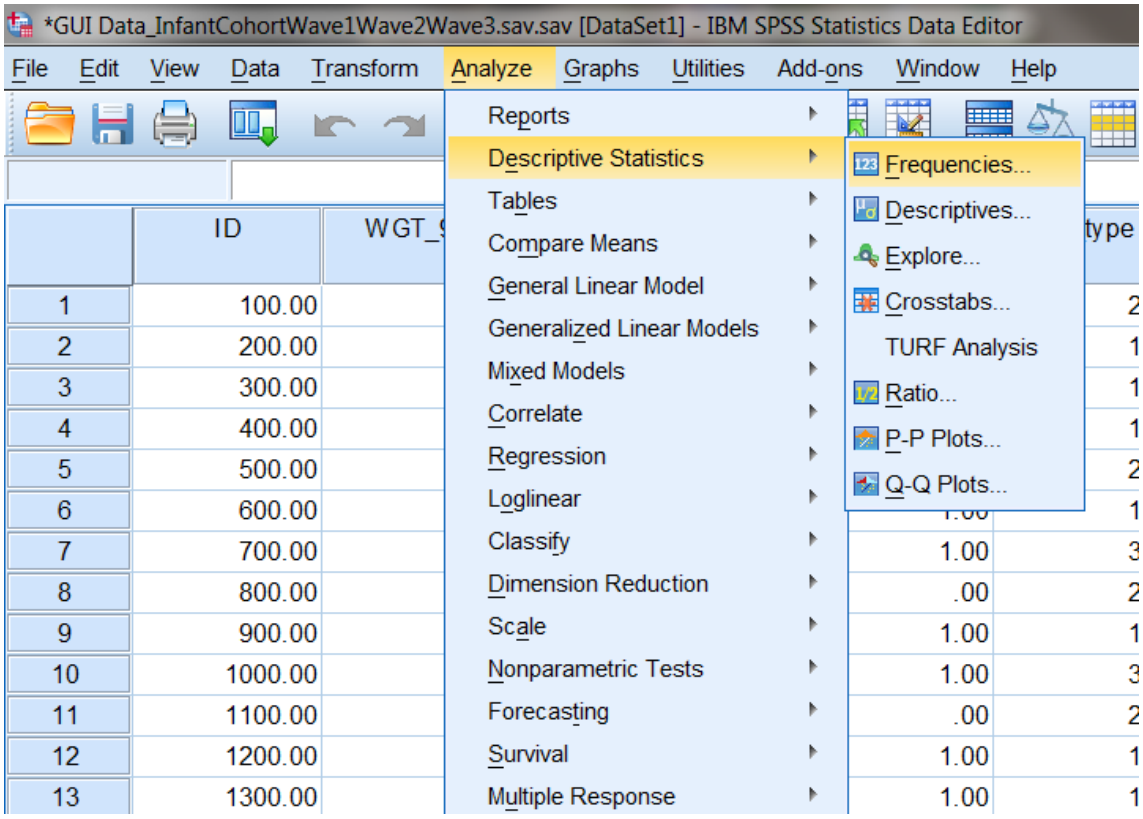
2. The following dialog box will appear.



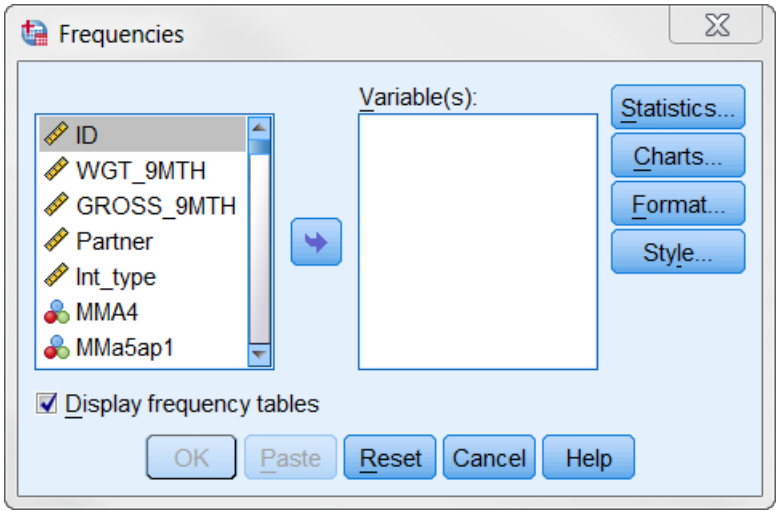
3. Click on 'Weight cases by'. Browse through the list of variables on the left and highlight the one you want (*'WGT_9MTH')* and click on the arrow in the middle. Click on 'OK'. Note that this is a cross-sectional analysis of the 11,134 cases in Wave 1 so we use the Wave 1 weight.



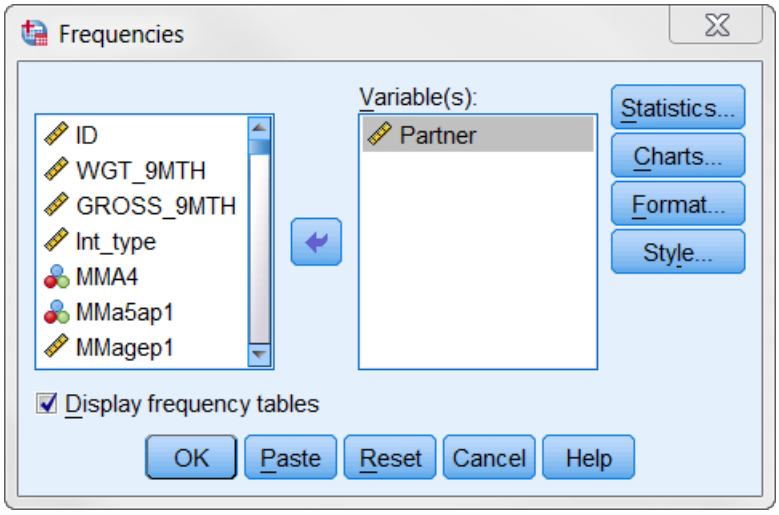
4. To run the frequency, select Analyse → Descriptive Statistics → Frequencies



5. The following dialog box will appear:



6. Browse through the list of variables on the left and highlight the one(s) you want (‘*partner*’ – partner in household) and click on the arrow in the middle.



7. Click ‘OK’ and the output will show you the frequency table for that variable.

Partner Partner in household

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00 No partner	1645	14.8	14.8	14.8
	1.00 Has partner	9489	85.2	85.2	100.0
	Total	11134	100.0	100.0	

Exercise 2: Cross-sectional - Family Structure at Wave 2 (at 3 years)

First you will need to weight the data, using the Wave 2 weight this time.

1. Data → Weight Cases → WGT_3YR

2. Analyse → Descriptive Statistics → Frequencies → b2_partner

A weighted frequency of this will give us the following output:

b2_partner PCG has spouse/partner living in the hsd at Wave 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 no	1418	14.5	14.5	14.5
	1 yes	8375	85.5	85.5	100.0
	Total	9793	100.0	100.0	

Note that although this frequency is run on the full matched file of 11,134 cases, results are only shown for the 9,793 Wave 2 cases. You will see the following warning in the output window which refers to this (if you have set SPSS to display a log. To do this, click Edit → Options → Viewer → Item → Log → Contents are initially Shown):

>Warning # 3211
On at least one case, the value of the weight variable was zero, negative, or missing. Such cases are invisible to statistical procedures and graphs which need positively weighted cases, but remain on the file and are processed by non-statistical facilities such as LIST and SAVE.

Exercise 3: Cross-sectional - Family Structure at Wave 3 (at 5 years)

First you will need to weight the data, using the Wave 3 weight this time. Note we want to analyse all 9,001 families that participated in Wave 3 (not the subset that participated at all three waves) so we use '*WGT_5Yra*'. See Information Sheet 03c for more information on the weights at Wave 3.

1. Data → Weight Cases → WGT_5YRa
2. Analyse → Descriptive Statistics → Frequencies → b3_partner

A weighted frequency of this will give us the following output:

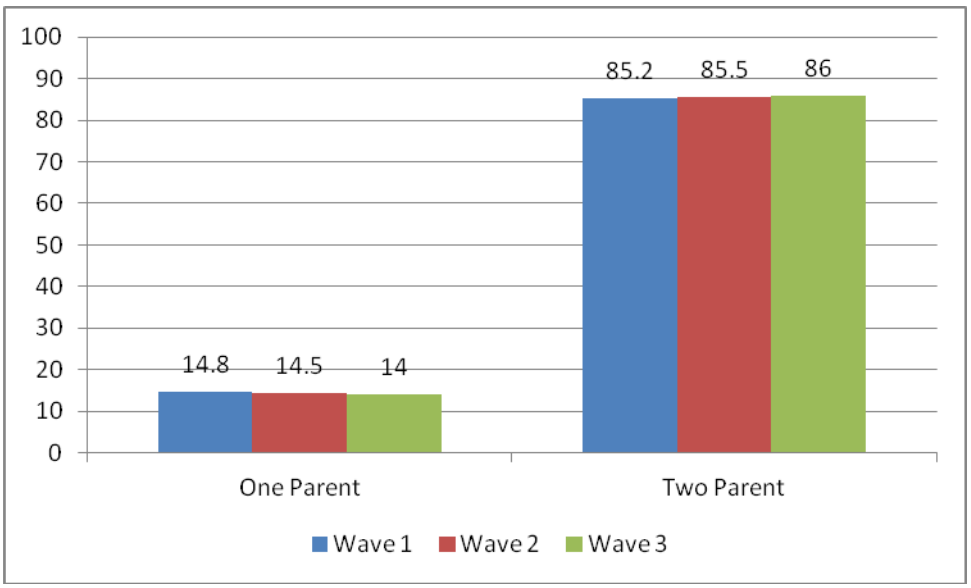
b3_partner PCG has spouse/partner living in the hsd at Wave 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00 No	1259	14.0	14.0	14.0
	1.00 Yes	7742	86.0	86.0	100.0
	Total	9001	100.0	100.0	

Exercise 4: Changes in Family Structure across Waves

The cross-sectional analyses above show the proportions of children in one and two-parent households for each wave. The results are summarized in Figure 1 below. A total of 14.8% of 9 month olds were in one parent households, 14.5% of 3 year old children were in one parent households and 14% of 5 year old children were in one parent households.

Figure 1: Family Structure at each wave



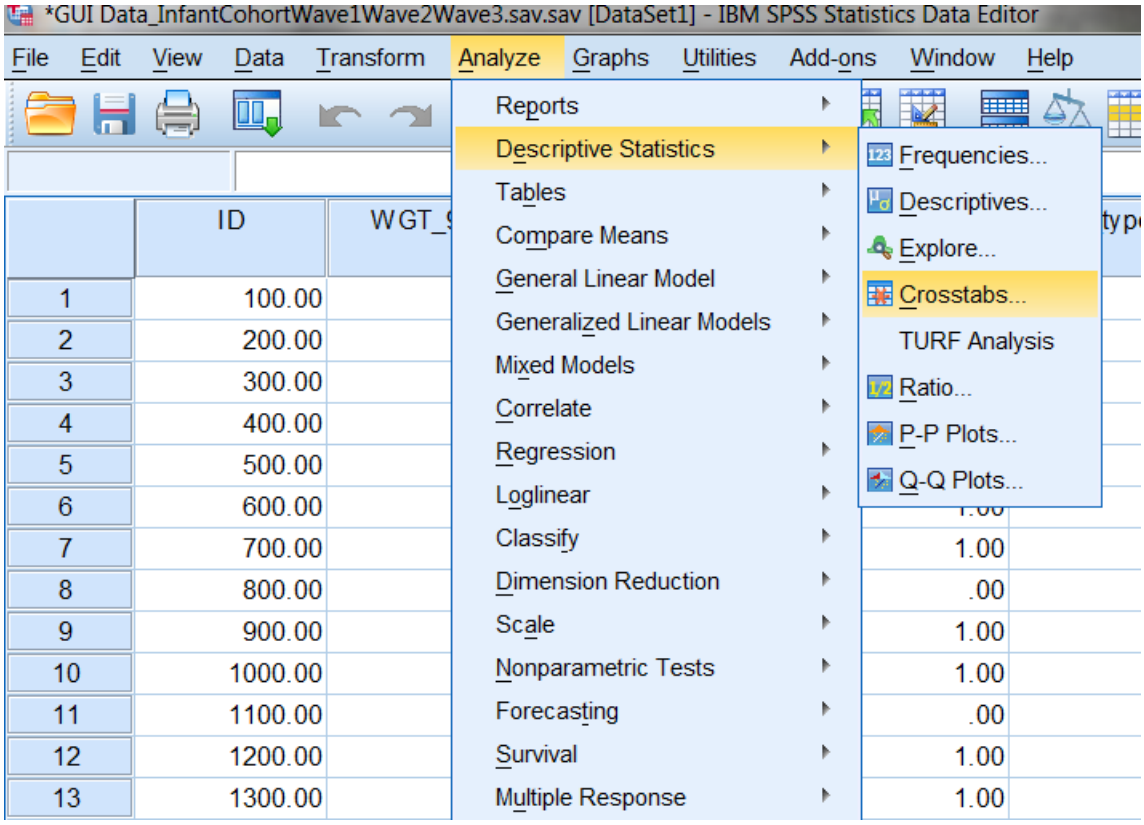
From these cross-sectional analyses it appears that family structure is reasonably stable across waves with similar proportions of children in one parent households at each wave. However, these are separate analyses and do not tell us anything about changes in family structure from wave to wave.

To look at changes in family structure between Wave 1 and Wave 3, we need to do a crosstabulation of the two variables in each wave. In order to do this, we will be analysing only the 9,001 cases who responded in both Wave 1 and Wave 3, and using the Wave 3 a weight (‘*WGT_5Yra*’). The Wave 3 a weight adjusts the data to make it representative of all children who were resident in Ireland at Wave 1 and who continue to be resident in Ireland

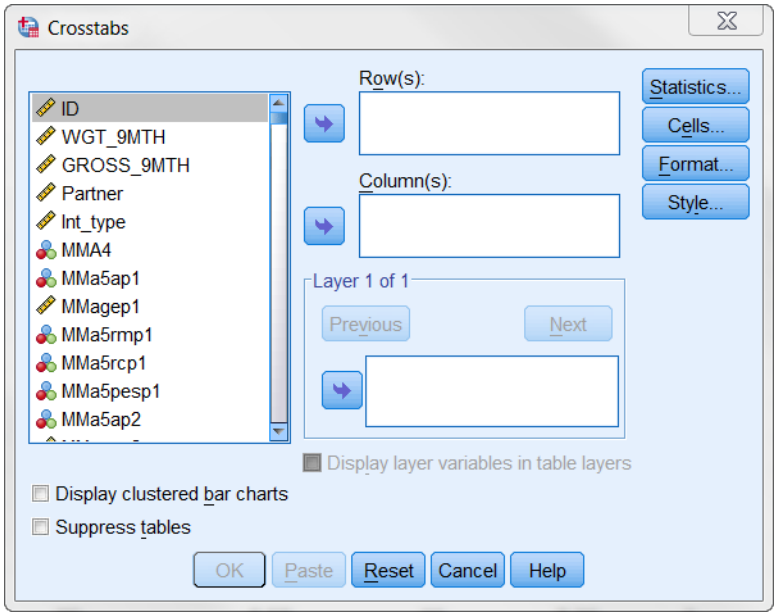
at Wave 3 (accounting for those who no longer live in Ireland at 5 years of age or who have deceased since 9 months of age).

1. Data → Weight Cases → WGT_5YRa

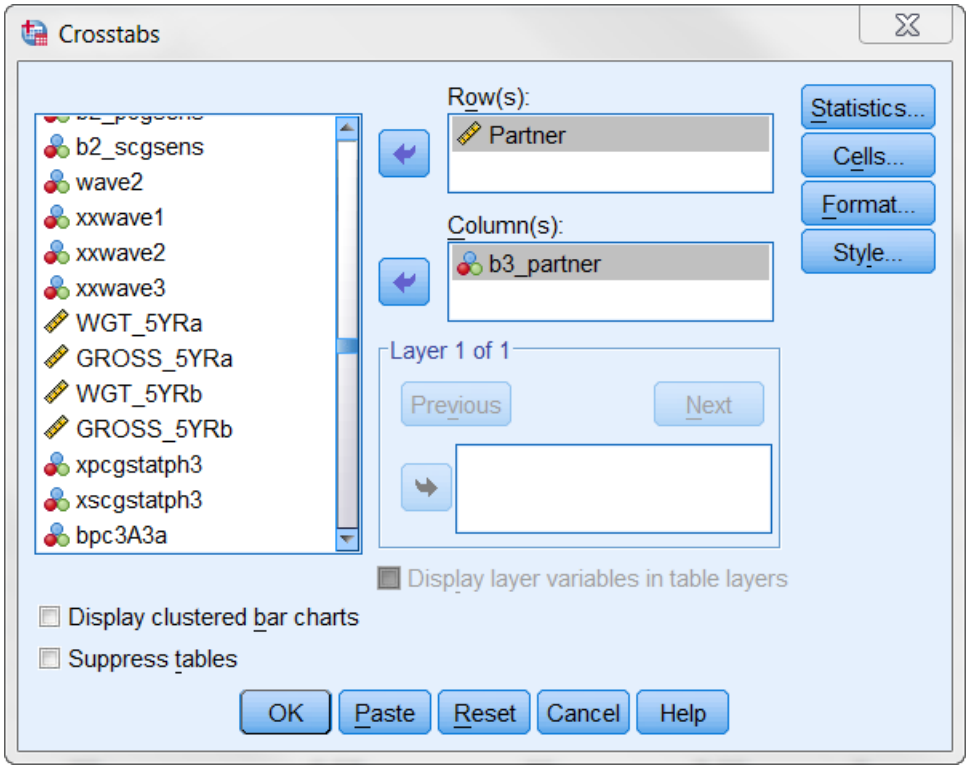
2. Analyse → Descriptive Statistics → Crosstabs



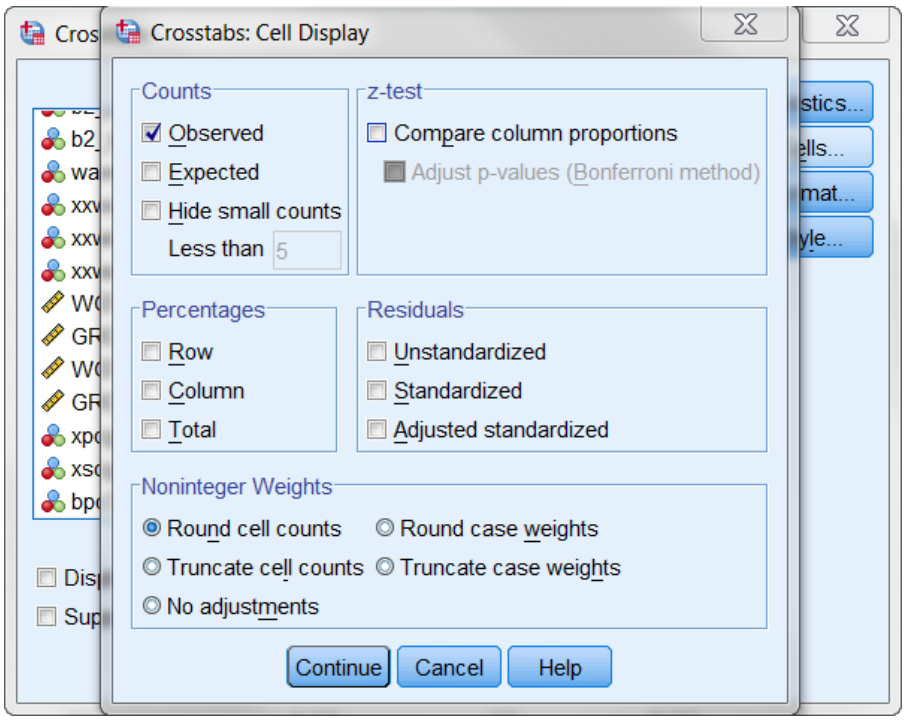
3. The following dialog box will appear.



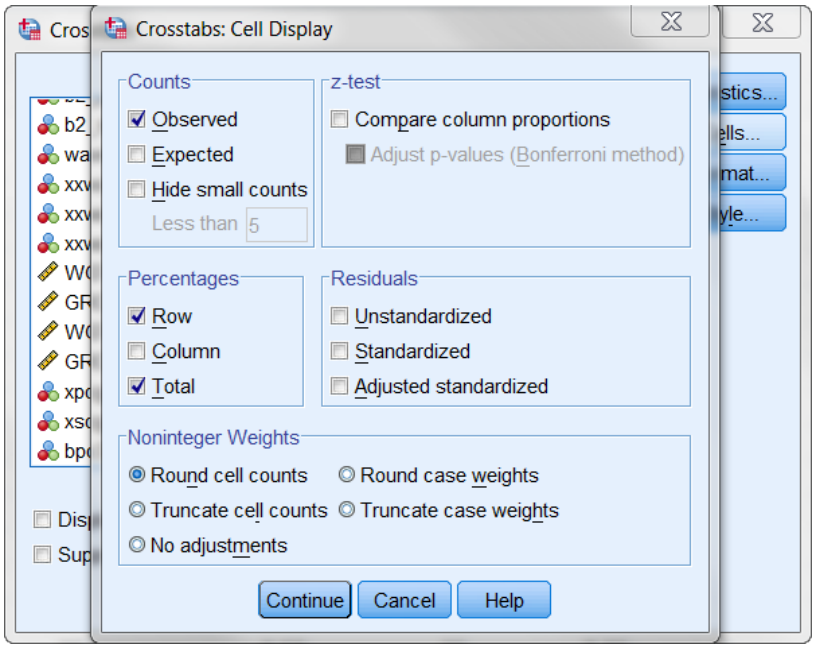
4. Browse and highlight the variables you want to cross-reference and move them to the row and column boxes as applicable. Move '*partner*' to the 'Rows' box and '*b3_partner*' to the 'Columns' box.



5. Select 'Cells' and the following dialog box will appear



6. Under ‘Percentages’, click row and total



7. Click ‘Continue’ and then ‘OK’ and you will get the following output:

Partner Partner in household * b3_partner PCG has spouse/partner living in the hsd at Wave 3 Crosstabulation

			b3_partner PCG has spouse/partner living in the hsd at Wave 3		
			.00 No	1.00 Yes	Total
Partner Partner in household	.00 No partner	Count	A 881	412	1293
		% within Partner Partner in household	68.1%	B 31.9%	100.0%
		% of Total	9.8%	4.6%	C 14.4%
	1.00 Has partner	Count	377	7330	7707
		% within Partner Partner in household	4.9%	95.1%	100.0%
		% of Total	4.2%	81.4%	85.6%
Total		Count	1258	7742	9000
		% within Partner Partner in household	14.0%	86.0%	100.0%
		% of Total	14.0%	86.0%	100.0%

Note:

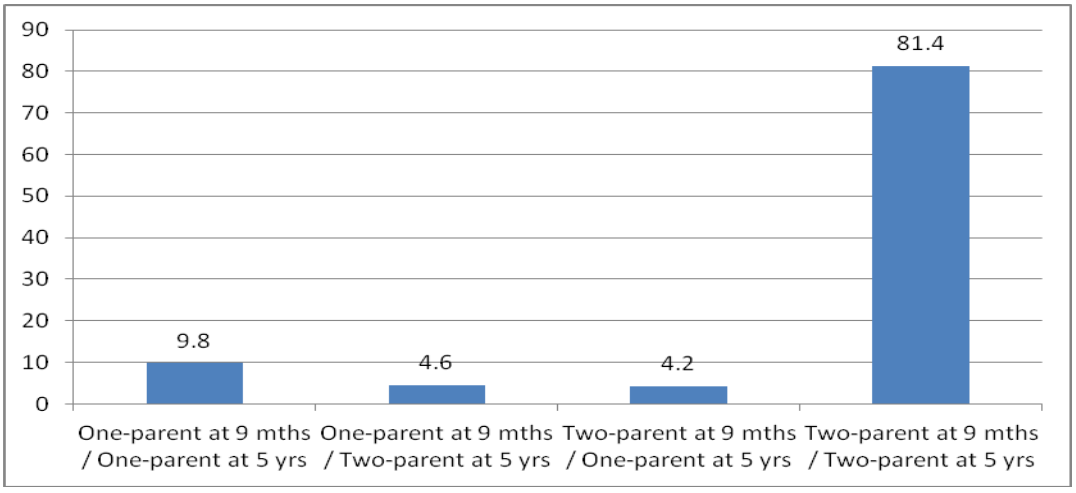
A. The first row of information shows the number of children in each of the cells. For e.g. 881 children were in one parent households at Wave 1 and also at Wave 3
B. The second row of information shows the percentage of children in each one parent household status category at Wave 1 who are in each of the Wave 3 one parent household status categories. For e.g. 31.9% of children who were in one parent households at Wave 1 were in two parent households at Wave 3.
C. The third row of information shows the percentage of all children in each of the cells. For e.g. the category of children who were in one parent households at Wave 1 and were in two parent households at Wave 3 accounts for 4.6% of all children.

8. A new variable can be created to classify children according to their status with regards to changes in family structure between Wave 1 and Wave 3. The easiest way to do this is using SPSS syntax and the code to do so is displayed below.

```
COMPUTE famstructure = 0.
IF partner = 0 and b3_partner = 0 famstructure = 1.
IF partner = 0 and b3_partner = 1 famstructure = 2.
IF partner = 1 and b3_partner = 0 famstructure = 3.
IF partner = 1 and b3_partner = 1 famstructure = 4.
VARIABLE LABELS famstructure "Changes in family structure from Wave 1 to Wave 3".
VALUE LABELS famstructure
1 "One-parent at 9 mths / One-parent at 5 yrs"
2 "One-parent at 9 mths / Two-parent at 5 yrs"
3 "Two-parent at 9 mths / One-parent at 5 yrs"
4 "Two-parent at 9 mths / Two-parent at 5 yrs".
FREQUENCIES famstructure.
```

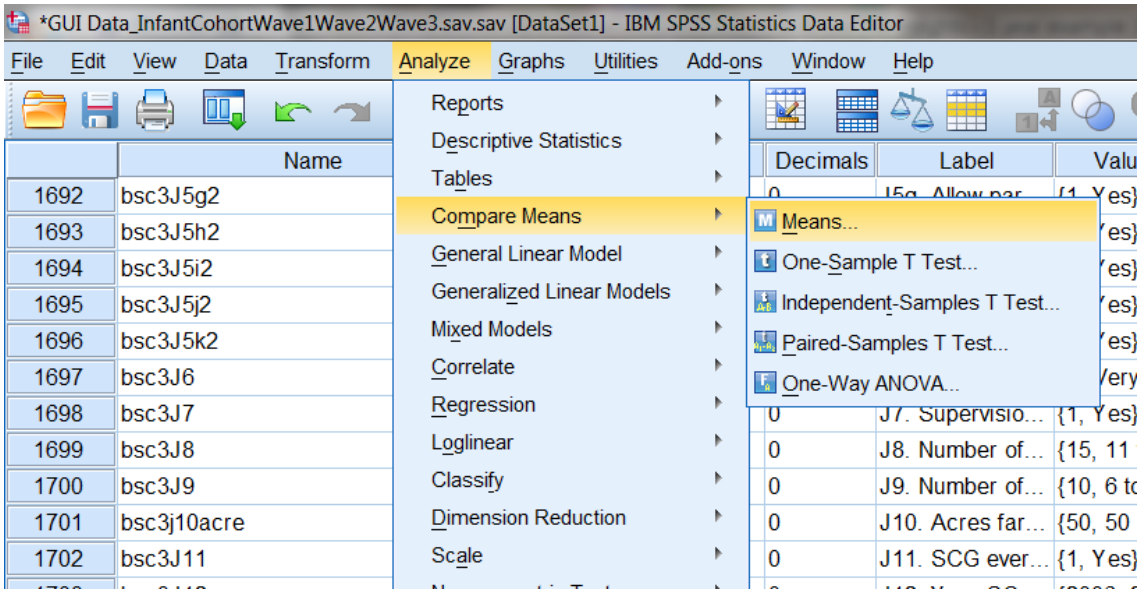
These changes in family structure from Wave 1 to Wave 3 are summarized in Figure 2 below. Although the previous cross-sectional results shown in Figure 1 above suggest that there is little variation in family structure across waves, the longitudinal results in Figure 2 show that 4.6% of children who were in one parent households at Wave 1 were in two parent households at Wave 3 and 4.2% of those in two-parent households at Wave 1 were in one-parent households at Wave 3. These changes in family structure may be an important consideration when looking at outcomes at Wave 3.

Figure 2: Changes in Family Structure from Wave 1 to Wave 3

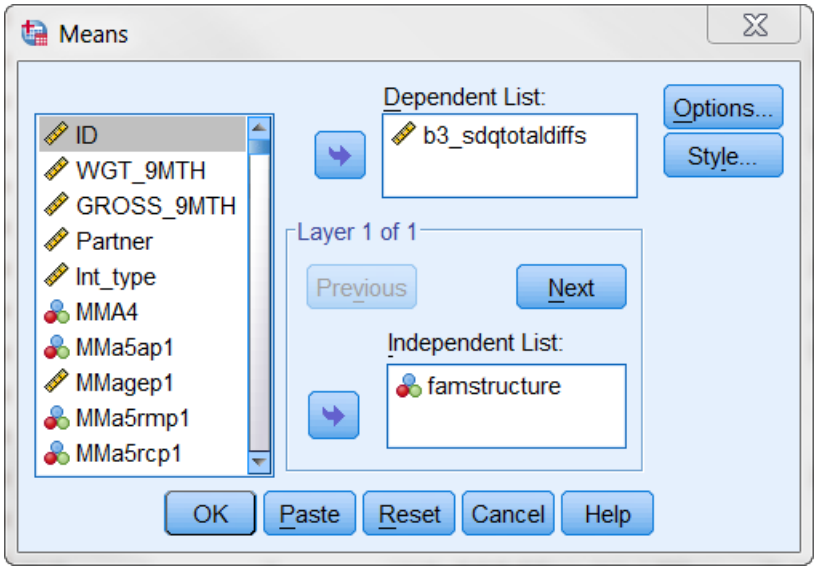


9. As just one example of how children's outcomes may vary according to changes in family structure across waves we can look at the mean SDQ Total Difficulties score at 5 years across each of the four categories of family structure.

10. Analyze → Compare Means → Means



11. Move 'b3_sdqtotaldiffs' into the Dependent List box and move 'famstructure' into the Independent List box. Click 'ok'.



12. This will give the following results.

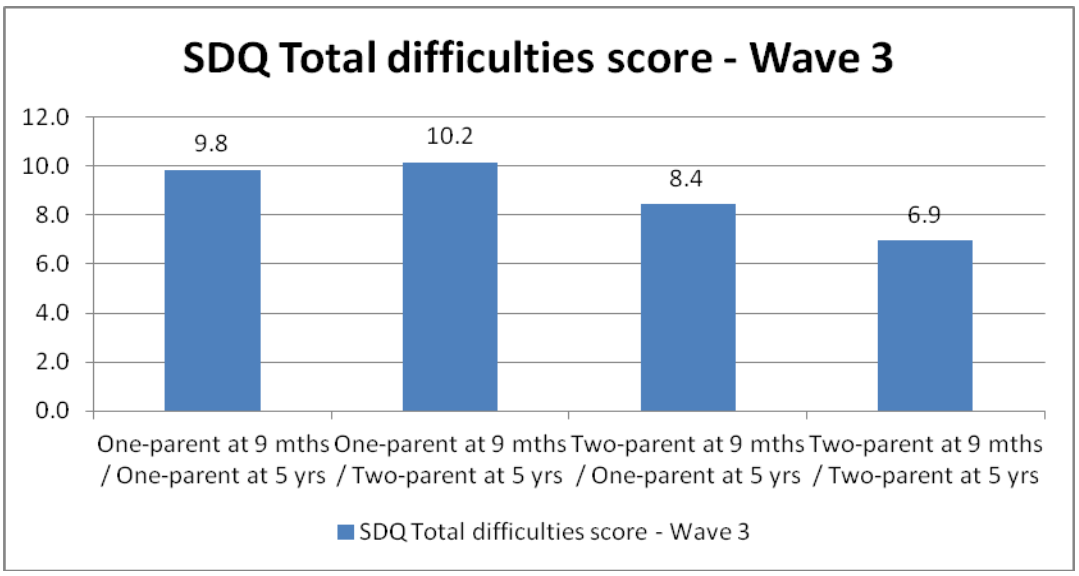
Report

b3_sdqtotaldiffs SDQ Total difficulties score - Wave 3

famstructure Changes in family structure from Wave 1 to Wave 3	Mean	N	Std. Deviation
1.00 One-parent at 9 mths / One-parent at 5 yrs	9.8342	879	5.59772
2.00 One-parent at 9 mths / Two-parent at 5 yrs	10.1501	412	5.83796
3.00 Two-parent at 9 mths / One-parent at 5 yrs	8.4332	377	5.03921
4.00 Two-parent at 9 mths / Two-parent at 5 yrs	6.9493	7327	4.60224
Total	7.4399	8995	4.90551

These results are summarized in Figure 3 below which shows the mean SDQ Total Difficulties score of 5 year old children across the four categories of changes in family structure between Wave 1 and Wave 3. We can see from this that the lowest scores (fewest problems) are experienced by children in stable two parent families (two parent at Wave 1 and Wave 3). The highest scores (most problems) are experienced by those who change from being in a one parent family at Wave 1 to a two parent family at Wave 3. Obviously, more investigation is needed into this before conclusions could be made but it nicely demonstrates the value of using longitudinal data to examine children's outcomes.

Figure 3: SDQ Total Difficulties score by changes in family structure from Wave 1 to Wave 3



Convention A naming – SPSS syntax

```
WEIGHT by WGT_9MTH.
FREQUENCIES partner.

WEIGHT by WGT_3YR.
FREQUENCIES b2_partner.

WEIGHT by WGT_5YRa.
FREQUENCIES b3_partner.

WEIGHT by WGT_5YRa.
CROSSTABS TABLES partner by b3_partner / CELLS count row total.

COMPUTE famstructure = 0.
IF partner = 0 and b3_partner = 0 famstructure = 1.
IF partner = 0 and b3_partner = 1 famstructure = 2.
IF partner = 1 and b3_partner = 0 famstructure = 3.
IF partner = 1 and b3_partner = 1 famstructure = 4.
VARIABLE LABELS famstructure "Changes in family structure from Wave 1 to Wave 3".
VALUE LABELS famstructure
1 "One-parent at 9 mths / One-parent at 5 yrs"
2 "One-parent at 9 mths / Two-parent at 5 yrs"
3 "Two-parent at 9 mths / One-parent at 5 yrs"
4 "Two-parent at 9 mths / Two-parent at 5 yrs".
FREQUENCIES famstructure.

MEANS TABLES b3_sdqtotaldiffs by famstructure.
```

Convention B naming

To conduct the above analysis using the Convention B naming files, replace the following variables:

Convention A naming	Convention B naming
WGT_9MTH	azwg01
WGT_3YR	bzwg01
WGT_5YRa	czwg01
partner	azID04
b2_partner	bzID04
b3_partner	czID04
b3_sdqtotaldiffs	cdED20f