

## GUI Data Workshop

### Worksheet 4b - Family Structure –

#### Child Cohort - Wave 1 (at 9 years) and Wave 2 (at 13 years)

This document provides worked examples of some 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 to run the analysis using SPSS menus.

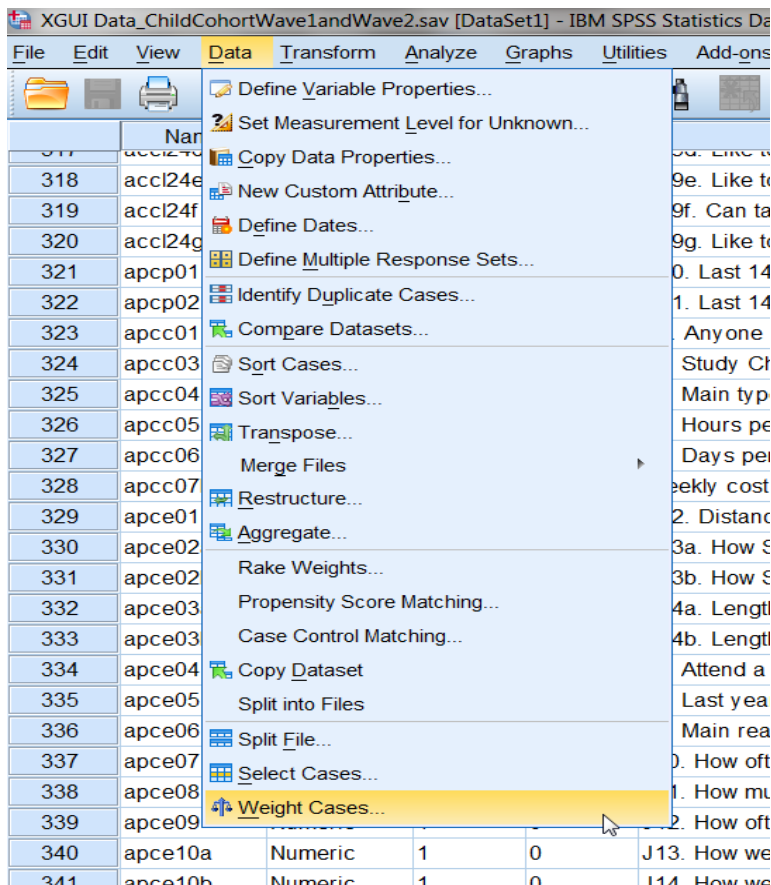
This worksheet is based on the matched Wave 1 (at 9 years) and Wave 2 (at 13 years) files – please see Information Sheet 4 for details on how to match the files.

Please note this worksheet is based on SPSS Version 22.

#### Convention B naming – drop down menus<sup>1</sup>

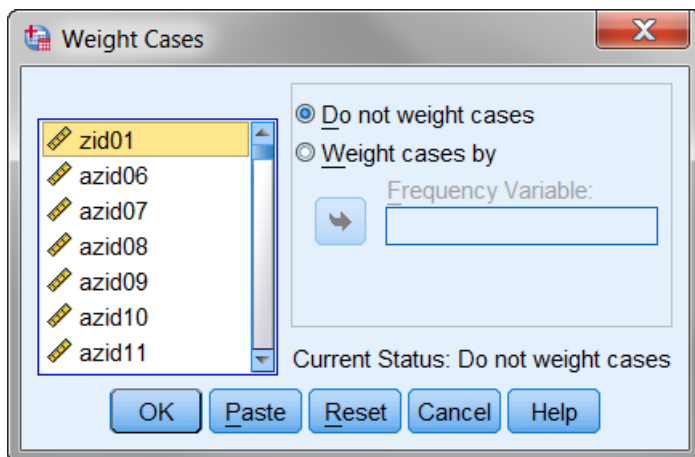
#### Exercise 1: Cross-sectional - Family Structure at Wave 1 (at 9 years)

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

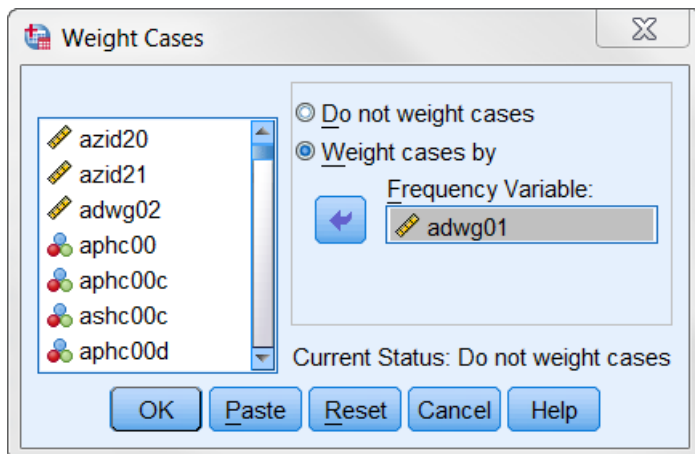


<sup>1</sup> See *Variable Naming Conventions And Longitudinal Data Dictionary For Wave 1 And Wave 2 Of The Child Cohort Of Growing Up In Ireland* document for further details on variable naming conventions.

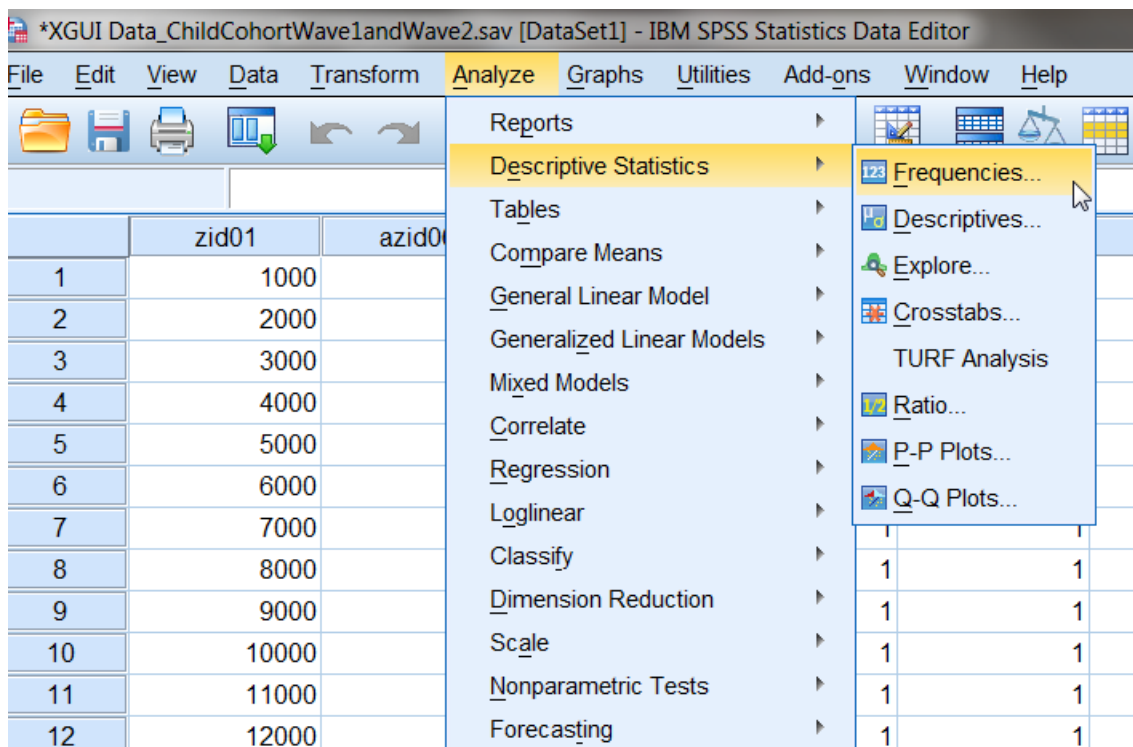
2. The following dialog box will appear.



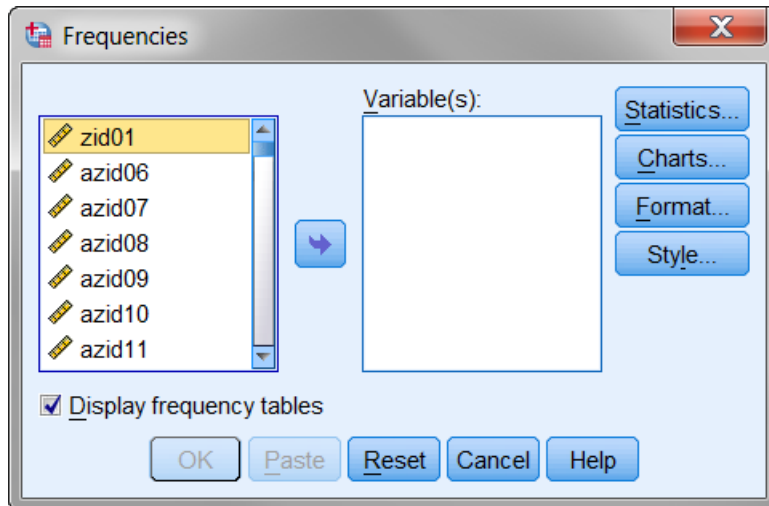
3. Click on 'Weight cases by'. Browse through the list of variables on the left and highlight the one you want ('adwg01') and click on the arrow in the middle. Click on 'OK'. Note that this is a cross-sectional analysis of the 8,568 cases in Wave 1 so we use the Wave 1 weight.



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

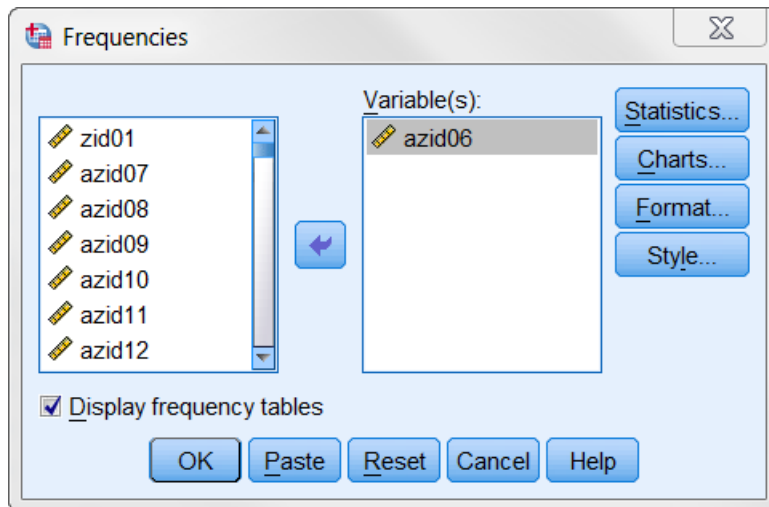


5. The following dialog box will appear:



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6. Browse through the list of variables on the left and highlight the one(s) you want ('azid06' – 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.

azid06 Partner in household					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No partner	1554	18.1	18.1	18.1
	1 Has partner	7014	81.9	81.9	100.0
Total		8568	100.0	100.0	

## Exercise 2: Cross-sectional - Family Structure at Wave 2 (at 13 years)

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

1. Data → Weight Cases → 'bdwg01'

2. Analyse → Descriptive Statistics → Frequencies → 'bzid06'

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

**bzid06 Partner in household - Wave 2**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00 No partner in household	1450	19.3	19.3	19.3
	1.00 Partner in household	6075	80.7	80.7	100.0
	Total	7525	100.0	100.0	

Note that although this frequency is run on the full matched file of 8,568 cases, results are only shown for the 7,525 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: Changes in Family Structure across Waves**

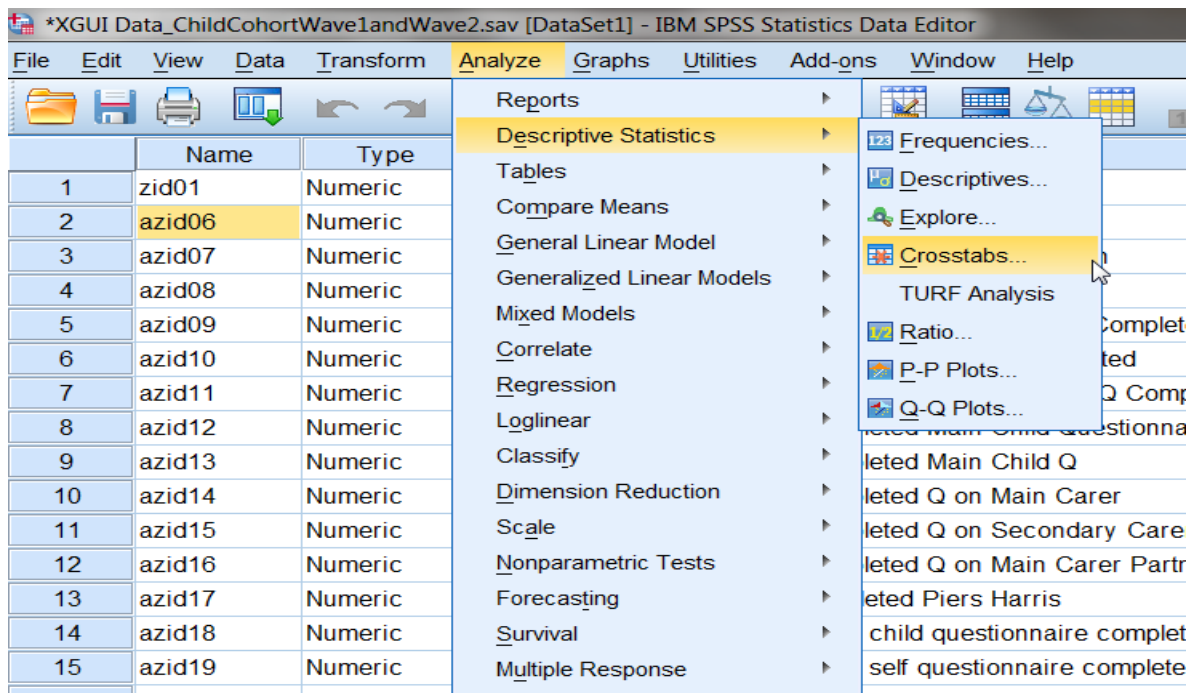
The cross-sectional analyses above show the proportions of children in one and two-parent households for each wave. A total of 18.1% of 9-year-olds were in one-parent households, and 19.3% of 13 year old children were in one parent households.

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.

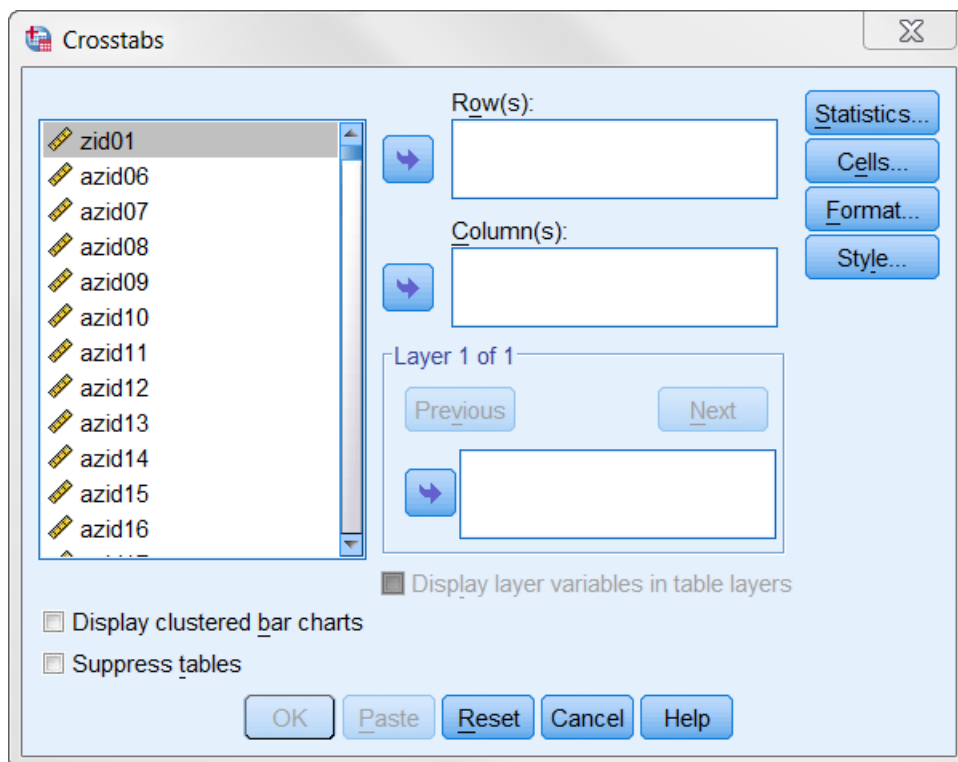
To look at changes in family structure between Wave 1 and Wave 2, we need to do a crosstabulation of the two variables in each wave. In order to do this, we will be analysing only the 7,525 cases who responded in both Wave 1 and Wave 2, and using the Wave 2 weight ('*bzwg01*'). The Wave 2 weight adjusts the data to make it representative of all nine-year-old children who were resident in Ireland at Wave 1 and who continue to be resident in Ireland at Wave 2 (accounting for those who no longer live in Ireland at 13 years of age or who have deceased since 9 years of age).

1. Data → Weight Cases → '*bzwg01*'
2. Analyse → Descriptive Statistics → Crosstabs

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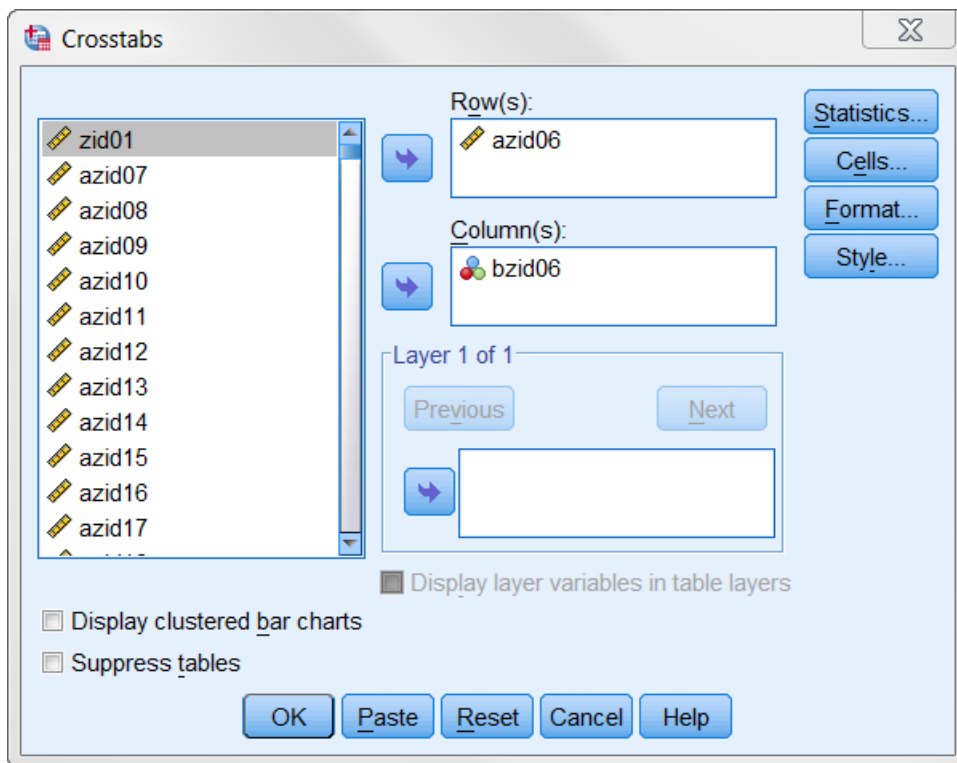


3. The following dialog box will appear.

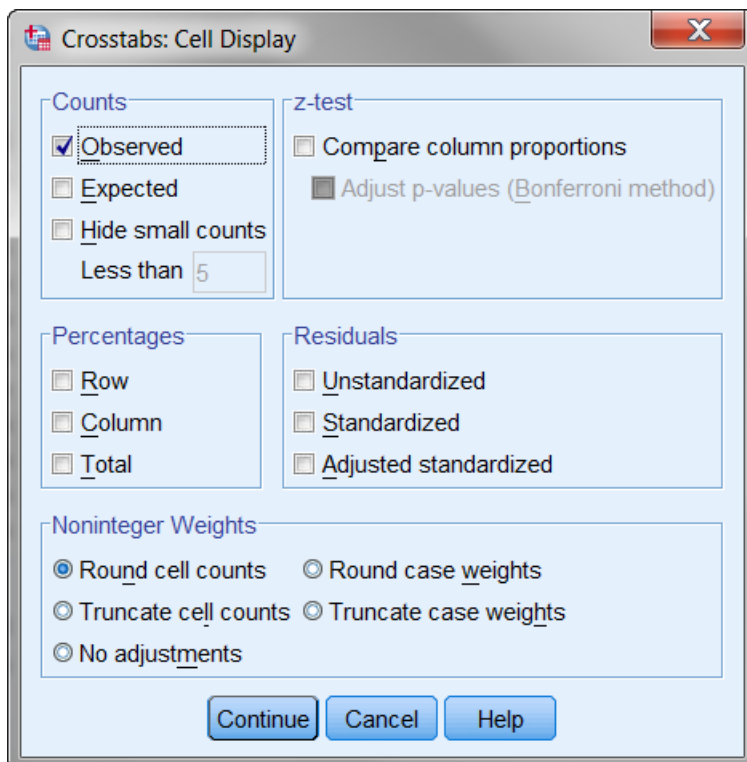


4. Browse and highlight the variables you want to cross-reference and move them to the row and column boxes as applicable. Move 'azid06' to the 'Rows' box and 'bzid06' to the 'Columns' box.

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



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6. Under 'Percentages', click row and total

**Crosstabs: Cell Display**

**Counts**

☒ Observed

☐ Expected

☐ Hide small counts

Less than

**z-test**

☐ Compare column proportions

☒ Adjust p-values (Bonferroni method)

**Percentages**

☒ Row

☐ Column

☒ Total

**Residuals**

☐ Unstandardized

☐ Standardized

☐ Adjusted standardized

**Noninteger Weights**

☒ Round cell counts ☐ Round case weights

☐ Truncate cell counts ☐ Truncate case weights

☐ No adjustments

**Continue** **Cancel** **Help**

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

azid06 Partner in household \* bzid06 Partner in household - Wave 2 Crosstabulation

			bzid06 Partner in household - Wave 2		Total
			.00 No partner in household	1.00 Partner in household	
azid06 Partner in household	0 No partner	Count	1101	239	1340
		% within azid06 Partner in household	82.2%	17.8%	100.0%
		% of Total	14.6%	3.2%	17.8%
	1 Has partner	Count	350	5835	6185
		% within azid06 Partner in household	5.7%	94.3%	100.0%
		% of Total	4.7%	77.5%	82.2%
Total	Count	1451	6074	7525	
	% within azid06 Partner in household	19.3%	80.7%	100.0%	
	% of Total	19.3%	80.7%	100.0%	

Note:

A. The first row of information shows the number of children in each of the cells. For e.g. 1,101 children were in one parent households at Wave 1 and also at Wave 2

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- 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 2 one parent household status categories. For e.g. 17.8% of children who were in one parent households at Wave 1 were in two parent households at Wave 2.
- 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 2 accounts for 3.2% 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 2. The easiest way to do this is using SPSS syntax and the code to do so is displayed below.

```
COMPUTE famstructure = 0.
IF azid06 = 0 and bzid06 = 0 famstructure = 1.
IF azid06 = 0 and bzid06 = 1 famstructure = 2.
IF azid06 = 1 and bzid06 = 0 famstructure = 3.
IF azid06 = 1 and bzid06 = 1 famstructure = 4.
VARIABLE LABELS famstructure "Changes in family structure from Wave 1 to Wave 2".
VALUE LABELS famstructure
1 "One-parent at 9 yrs / One-parent at 13 yrs"
2 "One-parent at 9 yrs / Two-parent at 13 yrs"
3 "Two-parent at 9 yrs / One-parent at 13 yrs"
4 "Two-parent at 9 yrs / Two-parent at 13 yrs".
FREQUENCIES famstructure.
```

This gives the following output:

famstructure Changes in family structure from Wave 1 to Wave 2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00 One-parent at 9 yrs / One-parent at 13 yrs	1101	14.6	14.6	14.6
	2.00 One-parent at 9 yrs / Two-parent at 13 yrs	239	3.2	3.2	17.8
	3.00 Two-parent at 9 yrs / One-parent at 13 yrs	350	4.6	4.6	22.5
	4.00 Two-parent at 9 yrs / Two-parent at 13 yrs	5835	77.5	77.5	100.0
	Total	7525	100.0	100.0	

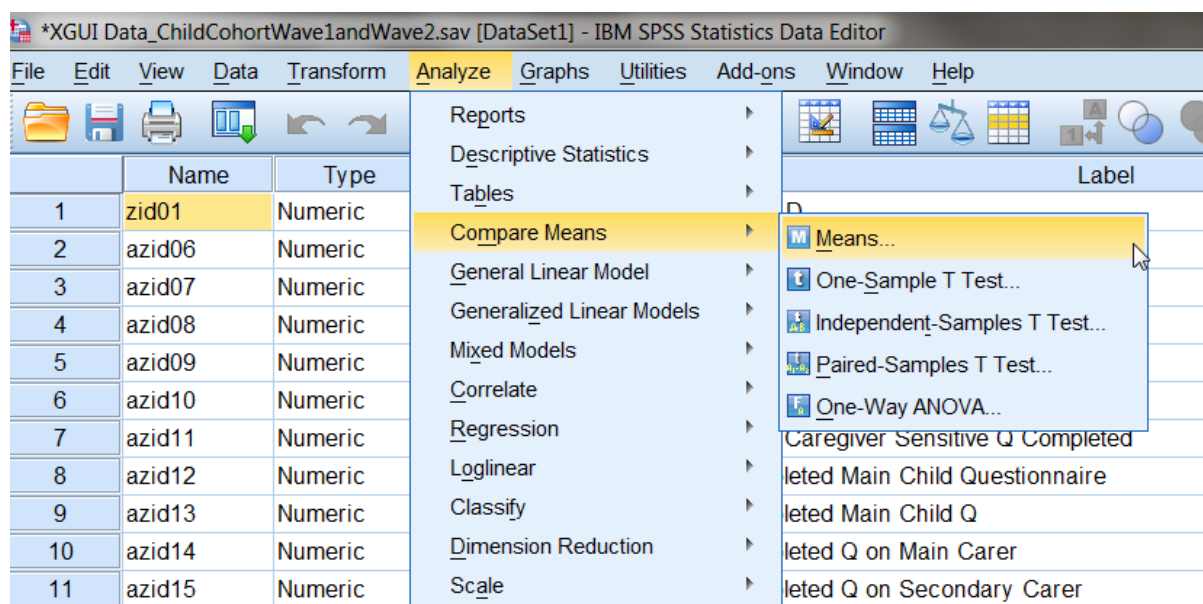
Although the previous cross-sectional results shown above suggest that there is little variation in family structure across waves (18.1% at wave 1 and 19.3% at wave 2 were in one-parent households), the longitudinal results show that 3.2% of children were in one parent households at Wave 1 and in two parent households at Wave 2, and 4.6% were in

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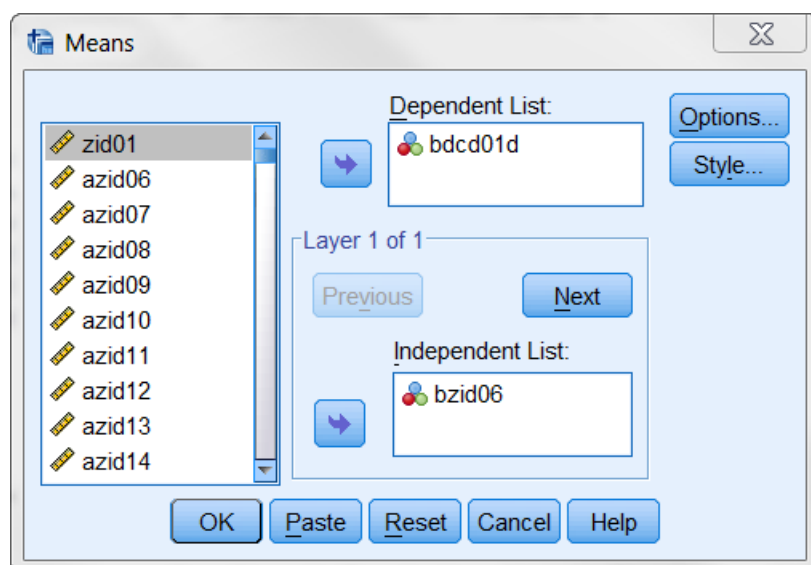
two-parent households at Wave 1 and in one-parent households at Wave 2. These changes in family structure may be an important consideration when looking at outcomes at Wave 2.

#### Exercise 4: Drumcondra Verbal Reasoning scores by family structure

1. 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 Drumcondra Verbal Reasoning Test score at 13 years across family structure.
2. Firstly if we just look at family structure at wave 2.
3. Analyze → Compare Means → Means



4. Move 'bdc01d' into the Dependent List box and move 'bzid06' into the Independent List box. Click 'ok'.



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5. This will give the following results.

#### Report

bdcd01d Drumcondra Verbal Reasoning test - percentage correct

bzid06 Partner in household - Wave 2	Mean	N	Std. Deviation
.00 No partner in household	54.9561	1345	24.01644
1.00 Partner in household	61.4629	5754	22.57198
Total	60.2297	7099	22.99290

6. We can see that children in two parent families score higher than children in one parent families. But we know that two parent households are not all the same (see '*famstructure*' variable above). Some of them are stable two-parent households (were two-parent at Wave 1) and some were one parent households at Wave 1.

7. Analyze → Compare Means → Means

Move '*bzid06*' out of the Independent List

Move '*famstructure*' into the Independent List

We get the following output:

#### Report

bdcd01d Drumcondra Verbal Reasoning test - percentage correct

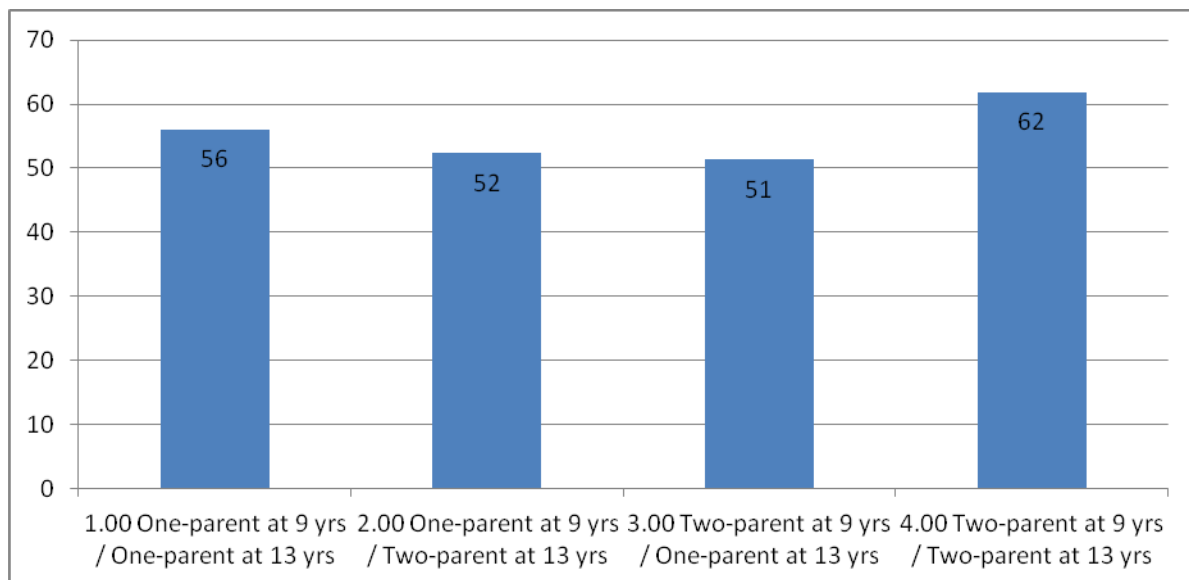
famstructure Changes in family structure from Wave 1 to Wave 2	Mean	N	Std. Deviation
1.00 One-parent at 9 yrs / One-parent at 13 yrs	56.0840	1025	23.77798
2.00 One-parent at 9 yrs / Two-parent at 13 yrs	52.3569	210	21.05626
3.00 Two-parent at 9 yrs / One-parent at 13 yrs	51.3438	320	24.45396
4.00 Two-parent at 9 yrs / Two-parent at 13 yrs	61.8075	5544	22.55704
Total	60.2297	7099	22.99290

These results are summarized in Figure 1 below which shows the mean Drumcondra Verbal Reasoning Test score of 13 year old children across the four categories of changes in family structure between Wave 1 and Wave 2. We can see from this that the highest scores (62) are experienced by children in stable two parent families (two parent at Wave 1 and Wave 2). The lowest scores are experienced by those who have experienced some form of change in family structure – either moving from one-parent to two-parent (52) or moving from two-

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parent to one-parent (51). 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 1: Drumcondra Verbal Reasoning Test score by changes in family structure from Wave 1 to Wave 2



### Convention B naming – SPSS syntax

WEIGHT by adwg01.  
FREQUENCIES azid06.

WEIGHT by bdwg01.  
FREQUENCIES bzid06.

WEIGHT by bdwg01.  
CROSSTABS azid06 by bzid06.

COMPUTE famstructure = 0.  
IF azid06 = 0 and bzid06 = 0 famstructure = 1.  
IF azid06 = 0 and bzid06 = 1 famstructure = 2.  
IF azid06 = 1 and bzid06 = 0 famstructure = 3.  
IF azid06 = 1 and bzid06 = 1 famstructure = 4.  
VARIABLE LABELS famstructure "Changes in family structure from Wave 1 to Wave 2".  
VALUE LABELS famstructure  
1 "One-parent at 9 yrs / One-parent at 13 yrs"  
2 "One-parent at 9 yrs / Two-parent at 13 yrs"  
3 "Two-parent at 9 yrs / One-parent at 13 yrs"  
4 "Two-parent at 9 yrs / Two-parent at 13 yrs".  
FREQUENCIES famstructure.

MEANS TABLES bdcd01d by bzid06.  
MEANS TABLES bdcd01d by famstructure.

### Convention A naming

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

Convention A naming	Convention B naming
Wgt_9yr	adwg01
wgt_13yr	bdwg01
partner	azid06
w2partner	bzid06
vrpct	bdcd01d

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