

## Displaying Bi-Variate Data in IBM SPSS versions 21-22

In version 20 of IBM's SPSS, there is an option to create charts showing the relationships of two variables from the Crosstabs screen.

Using the **Homicide 2005.sav** file, below are the steps to display the homicide cases showing the gender and the type of weapon that was used by the offender.

Step 1. Select the variables for the table. You will see that I have selected Recoded Gender (GENDER2) as the independent variable and WEAPON or Recoded WEAPON as the dependent variable. The question to be explored here is whether the gender of the victim influences the type of weapon used in the homicide.

The screenshot displays the IBM SPSS Statistics Data Editor interface. The main window shows a data table with columns: PCT, PTRBORO, HOMDATE, HOMMONTH, HOMDAY, HOMYEAR, HOMTIME, Location, LandUse, InsideOutsi..., and Motive. The data rows are numbered 1 through 36. Overlaid on the data table are two dialog boxes. The 'Crosstabs' dialog box is open, showing 'WEAPONrec' in the 'Row(s):' list and 'GENDER2' in the 'Column(s):' list. The 'Display clustered bar charts' checkbox is checked and highlighted with a red arrow. The 'Crosstabs: Cell Display' dialog box is also open, showing the 'Percentages' section with 'Column' selected. The 'Noninteger Weights' section has 'Round cell counts' selected. The 'z-test' section has 'Compare column proportions' selected. The 'Residuals' section has 'Standardized' selected. The 'Cells' button in the Crosstabs dialog is highlighted.

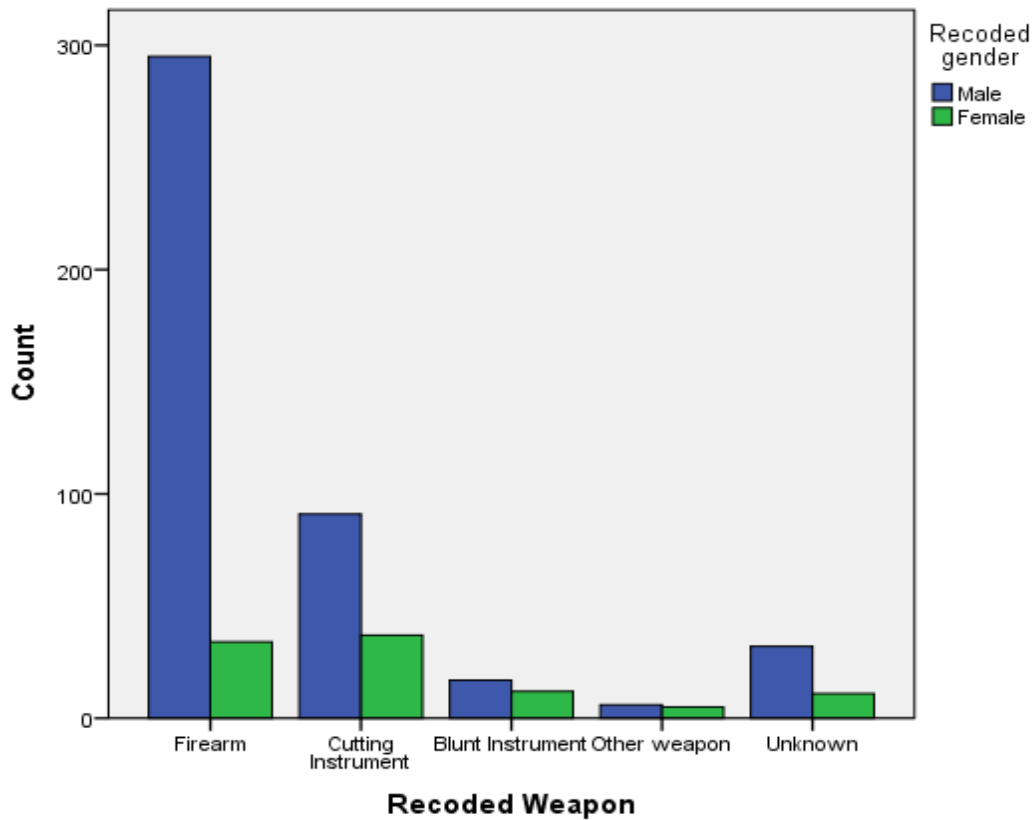
Make sure to use the CELLS tab to tell SPSS to display the column percentages. With your groups (males and females) in the columns, and the dependent variable, weapon the rows, you will be able to clearly see any differences in the probabilities of death from various types of weapons..

After the variables are selected, I have checked the box that allows me to display a clustered bar chart (see the red arrow). The total cases for each type of weapon will be shown – but with a bar for men and a bar for women victims in each category of the weapon variable.

**Recoded Weapon \* Recoded gender Crosstabulation**

			Recoded gender		Total
			Male	Female	
Recoded Weapon	Firearm	Count	295	34	329
		% within Recoded gender	66.9%	34.3%	60.9%
	Cutting Instrument	Count	91	37	128
		% within Recoded gender	20.6%	37.4%	23.7%
	Blunt Instrument	Count	17	12	29
		% within Recoded gender	3.9%	12.1%	5.4%
	Other weapon	Count	6	5	11
		% within Recoded gender	1.4%	5.1%	2.0%
	Unknown	Count	32	11	43
		% within Recoded gender	7.3%	11.1%	8.0%
	Total	Count	441	99	540
		% within Recoded gender	100.0%	100.0%	100.0%

**Bar Chart**



By double-clicking on the chart in SPSS, you can edit the elements. To edit the chart, double-click it to open the Chart Editor window. The elements I changed were:

- 1 - The legend - increased the text size (by double-clicking it)
- 2 - Added a Chart Title - from the Options menu.
- 3 - Added the data labels so the actual counts of victims would show up - from the Elements menu.
- 4 - Go to File, the CLOSE, to save your edits to the chart.

The edited chart is below ...

