CONTENTS

Variable View

- 1. How to enter data to do a Mann-Whitney U test test.
- 2. How to do a Mann-Whitney U test test.

1. How to enter data to do a Mann-Whitney U test test.

For general advice on data entry see the "How to enter data into SPSS" help sheet.

Mann-Whitney U test tests are used on unrelated data: Data for the dependent variable go in one column and data for the independent variable goes in another. In this example, the dependent variable is *BMD* and the independent variable is *SEX*. *BMD* is bone-density measurement measured in grams per square centimetre of the neck of the femur which is a scale level of measurement). *SEX* is measured at the nominal level: either 1 (value label = female) or 2 (value label = male).

🍓 4e_Chapter08_bones.sav [DataSet1] - IBM SPSS Statistics Data Editor									-		×			
Elle	Edit	View D	ata <u>T</u> ransform	Analyze	Direct Market	ing <u>G</u> raphs <u>U</u>	tilities Extens	ions <u>W</u> indow	v <u>H</u> elp					
😑 🗏 🖨 📭 🖝 🦘 🎬 📥 🗐 📑 🚹 📓 📓 📟 🐴 🛗 🚚 🔕 🌑 и														
		Name	Туре	Width	Decimals	Label	Values	Missing	Columns	Align	Measure		Role	
	1	BMD	Numeric	8	3	Bone Density	None	None	8	Right	Scale Scale	0	Target	*
	2	SEX	Numeric	8	0	Sex	{1, female}	None	8	a Right	🚓 Nominal	>	Input	+
		4								<i>h</i> .				F
Data	Data View Variable View													
	IBM SPSS Statistics Processor is ready Unicode ON													

Data View (View – Value Labels off)

🍓 4e_Chapter08_bones.sav [DataSet1] - IB 🛛 🗆 🗙										
Eile Ed Viei Dat Transf Anal, Direct Ma Grap Utiliti Extens Wind Hel										
😑 🖩 🖨 🛄 🗠 🛥 📓 📥 🛢										
Visible: 2 of 2 Variables										
	🛷 BMD	💰 SEX	var	var						
1	.972	1		-						
2	.732	1								
3	.874	1								
4	.943	1								
5	1.024	1								
6	.755	1								
7	.779	1								
8	1.007	1								
9	.816	1		*						
Data View Variable View										
IBM SPSS Statistics Processor is ready Unicode:ON										

Data View (View – Value Labels on)

🍓 4e_Chapter08_bones.sav [DataSet1] - IB 🗆 🗙										
Eile Ed Viel Dat Transf Analy Direct Ma Grap Utiliti Extens Wind Hel										
😑 🖩 🖨 🔲 🖙 🛥 🌃 📥 🚍										
			Visible: 2 of	2 Variables						
	🛷 BMD	💰 SEX	var	var						
1	.972	female		-						
2	.732	female								
3	.874	female								
4	.943	female								
5	1.024	female								
6	.755	female								
7	.779	female								
8	1.007	female								
9	.816	female		*						
Data View Variable View										
IBM SPSS Statistics Processor is ready Unicode:ON										

2. How to do a Mann-Whitney U test test...

To get SPSS to conduct a Mann-Whitney U test

test : Open your data file.

Select: Analyze – Nonparametric Tests – Legacy Dialogs - 2 Independent Samples... This will bring up the **Two-Independent-Samples Tests** window.

Select the variable that you want to analyse, and send it to the **Test Variable List** box (in the example above this is *Bone Density Measurement*). Select the independent variable, and send it to the **Grouping Variable** box (in the example above this is *Sex*). Press the **Define Groups** button to bring up the Define Groups window (above right). Under **Group** 1 type the number code for the first sample (in the example above this is 1). Under **Group 2** type the number code for the first sample (in the example above this is 2). Click **Continue** and then **OK**.



This will produce the following in

the Output window.





NB: Using this route, the U value that SPSS reports is lower value.

In summary the key information from the test is U_{lower}=120.5, n₁=20, n₂=20, P=0.032