

EXERCISES USING SPSS

1.

```

NPAR TESTS
  /M-W= share BY group(1 2)
  /MISSING ANALYSIS.
    
```

NPar Tests

Mann-Whitney Test

Ranks

GROUP	N	Mean Rank	Sum of Ranks
SHARE 1.00	7	4.57	32.00
2.00	6	9.83	59.00
Total	13		

Test Statistics^b

	SHARE
Mann-Whitney U	4.000
Wilcoxon W	32.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.014 ^a

a. Not corrected for ties.

b. Grouping Variable: GROUP

EXAMINE

```

VARIABLES=share BY group /PLOT=BOXPLOT/STATISTICS=NONE/NOTOTAL
/MISSING=REPORT.
    
```

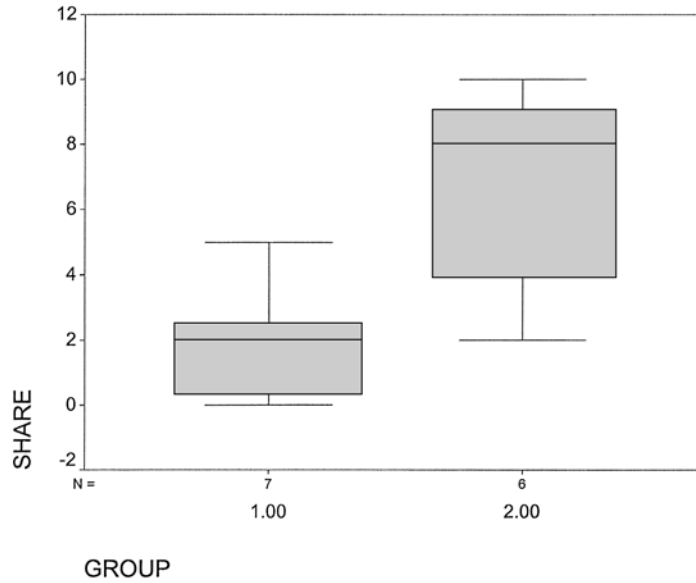
Explore

GROUP

Case Processing Summary

GROUP	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
SHARE 1.00	7	100.0%	0	.0%	7	100.0%
2.00	6	100.0%	0	.0%	6	100.0%

SHARE



The results were that the group of children with siblings indicated more willingness to share toys than the group of only children, $U = 4.0, p = .014$.

2. NPAR TEST
 /WILCOXON=schizo WITH nonschiz (PAIRED)
 /MISSING ANALYSIS.

NPar Tests

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
NONSCHIZ - SCHIZO	Negative Ranks	5 ^a	5.30	26.50
	Positive Ranks	6 ^b	6.58	39.50
	Ties	1 ^c		
	Total	12		

a. NONSCHIZ < SCHIZO

b. NONSCHIZ > SCHIZO

c. SCHIZO = NONSCHIZ

Test Statistics^b

	NONSCHIZ - SCHIZO
Z	-.582 ^a
Asymp. Sig. (2-tailed)	.560

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

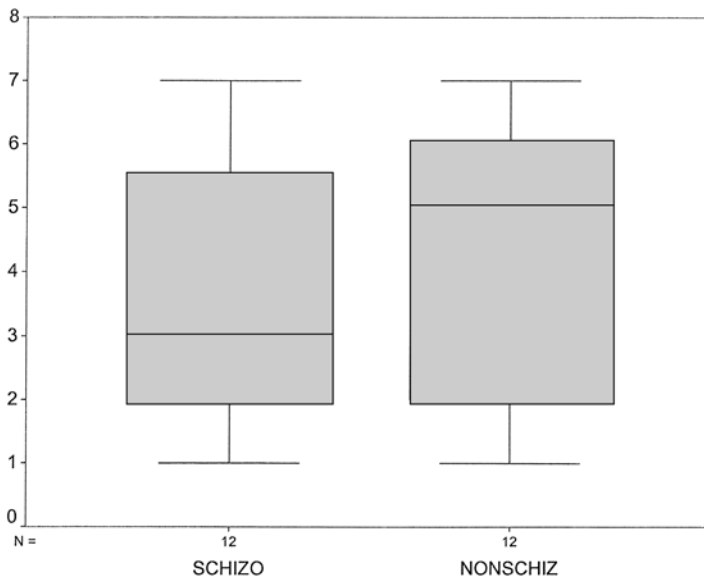
EXAMINE

```
VARIABLES=schizo nonschiz /COMPARE VARIABLE/PLOT=BOXPLOT/STATISTICS=NONE  
/NOTOTAL  
/MISSING=LISTWISE .
```

Explore

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
SCHIZO	12	100.0%	0	.0%	12	100.0%
NONSCHIZ	12	100.0%	0	.0%	12	100.0%



The results indicated that there were no differences in ratings of incompatible ideas and feelings in letters from parents of schizophrenic versus nonschizophrenic children by the Wilcoxon test, $T = 26.50$, $p = .56$.

3. NPAR TESTS
 /K-W=creat BY group(1 3)
 /MISSING ANALYSIS.

NPar Tests

Kruskal-Wallis Test

Ranks

	GROUP	N	Mean Rank
CREAT	1.00	10	22.70
	2.00	10	12.70
	3.00	10	11.10
	Total	30	

Test Statistics^{a,b}

	CREAT
Chi-Square	10.212
df	2
Asymp. Sig.	.006

- a. Kruskal Wallis Test
 b. Grouping Variable: GROUP

EXAMINE
 VARIABLES=creat BY group /PLOT=BOXPLOT/STATISTICS=NONE/NOTOTAL
 /MISSING=REPORT.

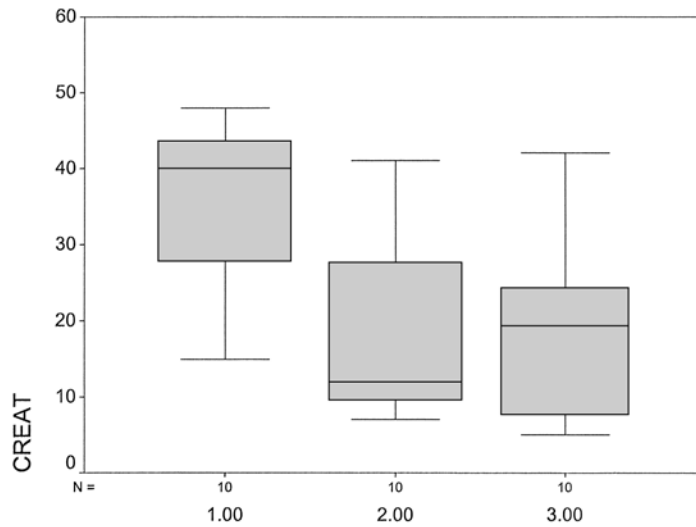
Explore

GROUP

Case Processing Summary

	GROUP	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
CREAT	1.00	10	100.0%	0	.0%	10	100.0%
	2.00	10	100.0%	0	.0%	10	100.0%
	3.00	10	100.0%	0	.0%	10	100.0%

CREAT



```

GROUP
NPAR TESTS
  /M-W= creat BY group(1 2)
  /MISSING ANALYSIS.
  
```

NPar Tests

Mann-Whitney Test

Ranks

	GROUP	N	Mean Rank	Sum of Ranks
CREAT	1.00	10	13.90	139.00
	2.00	10	7.10	71.00
	Total	20		

Test Statistics^b

	CREAT
Mann-Whitney U	16.000
Wilcoxon W	71.000
Z	-2.573
Asymp. Sig. (2-tailed)	.010
Exact Sig. [2*(1-tailed Sig.)]	.009 ^a

a. Not corrected for ties.

b. Grouping Variable: GROUP

```

NPAR TESTS
  /M-W= creat BY group(1 3)
  /MISSING ANALYSIS.

```

NPar Tests

Mann-Whitney Test

Ranks

	GROUP	N	Mean Rank	Sum of Ranks
CREAT	1.00	10	14.30	143.00
	3.00	10	6.70	67.00
	Total	20		

Test Statistics^b

	CREAT
Mann-Whitney U	12.000
Wilcoxon W	67.000
Z	-2.874
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.003 ^a

a. Not corrected for ties.

b. Grouping Variable: GROUP

```

NPAR TESTS
  /M-W= creat BY group(2 3)
  /MISSING ANALYSIS.

```

NPar Tests

Mann-Whitney Test

Ranks

	GROUP	N	Mean Rank	Sum of Ranks
CREAT	2.00	10	11.10	111.00
	3.00	10	9.90	99.00
	Total	20		

Test Statistics^b

	CREAT
Mann-Whitney U	44.000
Wilcoxon W	99.000
Z	-.454
Asymp. Sig. (2-tailed)	.650
Exact Sig. [2*(1-tailed Sig.)]	.684 ^a

a. Not corrected for ties.

b. Grouping Variable: GROUP

The three classes differed in creativity test scores overall by the Kruskal-Wallis test: $\chi^2(2, N = 30) = 10.21, p = .006$. Pairwise comparisons using the Mann-Whitney procedure indicated that Class 1 was higher than Class 2, $U = 16.0, p = .01$; Class 1 was higher than Class 3, $U = 12.0, p = .004$; and Class 2 and Class 3 were not significantly different, $U = 44.0, p = .65$. The results can be summarized in terms of creativity scores as follows: Class 3 = Class 2 < Class 1.