

## Chapter 4

### Results

This research was made to compare the effectiveness between combination treatments of electroconvulsive therapy (ECT) and atypical neuroleptics with atypical neuroleptics alone by assessing 22 schizophrenic patients. From conducting this study, the researcher was able to collect the following data :

**Part I** : The Comparisons of general information in schizophrenic patients who received combination treatments of electroconvulsive therapy and atypical neuroleptics with schizophrenic patients who received single treatment of atypical neuroleptics alone.

**Part II** : The Comparisons of psychopathology between combination treatments of electroconvulsive therapy (ECT) and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patients.

**Part III** : The Comparisons of side effects between combination treatments of electroconvulsive therapy (ECT) and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patients.

**Part IV** : The Comparison of quality of life between combination treatment of electroconvulsive therapy (ECT) and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patients.

Part I : The Comparisons of general information in schizophrenic patients who'd received combination treatments of electroconvulsive therapy (ECT) and atypical neuroleptics with schizophrenic patients who'd received single treatment of atypical neuroleptics alone.

Table 5 : Comparison of General Information between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group

GENERAL INFORMATION	ECT & Atypical Neuroleptics Group		Atypical Neuroleptics Group		Total	
	n	%	n	%	n	%
Age :						
15 - 30	5	45	4	36	9	41
31 - 45	6	55	7	64	13	59
Sex :						
male	5	45	6	55	11	50
female	6	55	5	45	11	50
Status :						
married	0	0	2	18	2	9
single	11	100	9	82	20	91
Employment :						
employed	1	9	2	18	3	14
unemployed	10	91	9	82	19	86

Table 5 shows that schizophrenic patients in both groups have similar proportion of age. By which, ECT & Atypical Neuroleptics Group have 5 schizophrenic patients in the range of 15 -30 years of age, and 6 schizophrenic patients in the range of 31 - 45 years of age. As for Atypical Neuroleptics Group, there are 4 schizophrenic patients in the range of

15 -30 years of age, and 7 schizophrenic patients in the range of 31 - 45 years of age. In overall view, there are 41 percent of 15 -30 age's group and 59 percent of 31 - 45 age's group. There are 5 male schizophrenic patients and 6 female schizophrenic patients of ECT & Atypical Neuroleptics Group. As for Atypical Neuroleptics Group, there are 6 male schizophrenic patients and 5 female schizophrenic patients. Where all of the schizophrenic patients in ECT & Atypical Neuroleptics Group are single. However two of schizophrenic patients in Atypical Neuroleptics Group are married and the others are single. In conclusion, 91 percent of schizophrenic patients in this study are not married. ECT & Atypical Neuroleptics Group have 10 schizophrenic patients of unemployment and 1 schizophrenic patient who are able to work. As for Atypical Neuroleptics Group, there are 2 employed schizophrenic patients and 9 schizophrenic patients who are not able to earn salary.

**Table 6 : Comparison of Clinical History between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group**

CLINICAL HISTORY	ECT & Atypical Neuroleptics Group		Atypical Neuroleptics Group	
	$\bar{x}$	s.d.	$\bar{x}$	s.d.
Duration of illness (years)	10.09	6.07	13.36	8.19
Number of hospital admission	3.09	1.04	3.09	1.45
BPRS scores during recruitment	40.55	7.65	41.45	7.06

Table 9 shows the history of illness in both groups combination treatments of ECT & Atypical Neuroleptics and single treatment of Atypical Neuroleptics. The duration of illness in ECT & Atypical Neuroleptics Group are about 10.09 years and 13.36 years for Atypical Neuroleptics Group. In average, schizophrenic patients of ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group have 3.09 times of hospital admission. At the inclusion point, the schizophrenic patients of ECT & Atypical Neuroleptics Group have approximately 40.55 BPRS scores and Atypical Neuroleptics group have 41.45 BPRS scores.

**Part II :** The Comparisons of psychopathology between combination treatments of electroconvulsive therapy (ECT) and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patients.

**Table 7 :** Comparison of BPRS between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group

week	ECT & Atypical Neuroleptics Group (n=11)		Atypical Neuroleptics Group (n=11)		t <sup>1</sup>	P
	x	s.d.	x	s.d.		
0	40.55	7.65	41.45	7.06	-0.290	NS
1	26.73	5.02	33.75	5.98	-2.972	0.01
2	20.82	3.74	29.09	4.57	-4.647	0.01
3	19.27	3.20	26.27	4.31	-4.323	0.01
4	18.36	2.98	23.00	3.19	-3.523	0.01
5	17.36	2.42	19.82	2.71	-2.239	0.05
6	16.91	2.34	17.55	1.51	-0.757	NS

1. two - tailed test.

Table 10 shows the comparison of BPRS score between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group, at week 0 and 6 are not statistically significant but during week 1-4 have a statistic significant at  $P < 0.01$ . Whereas, during week 5, the difference of these 2 groups have a statistic significant at  $P < 0.05$ .

**Table 8 : Rate of Improvement in BPRS within the Groups**

week	<u>ECT &amp; Atypical Neuroleptics Group</u>				<u>Atypical Neuroleptics Group</u>			
	Mean difference	Standard error of difference	t <sup>1</sup>	P	Mean difference	Standard error of difference	t <sup>1</sup>	P
0 - 1	13.82	1.58	8.761	0.01	7.73	0.63	12.193	0.01
1 - 2	5.91	1.33	4.439	0.01	4.64	0.69	6.708	0.01
2 - 3	1.55	0.28	5.487	0.01	2.82	0.55	5.096	0.01
3 - 4	0.91	0.16	5.590	0.01	3.27	0.56	5.871	0.01
4 - 5	1.00	0.23	4.282	0.01	3.18	0.58	5.440	0.01
5 - 6	0.45	0.16	2.887	0.05	2.27	0.43	5.306	0.01

1. two-tailed test

Table 11 shows that the rate of improvement in BPRS score of both groups, ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group have a statistic significant at  $p < 0.01$ . However, between week 5 - 6 of ECT & Atypical Neuroleptics Group, the statistic significant is at  $P < 0.05$ . The rate of improvement in both groups, decreases as time passed. For example, during the time between week 0 -1, the rate of improvement is 13.82 in ECT & Atypical Neuroleptics Group and 7.73 in Atypical Neuroleptics Group. But during week 5 - 6, the rate of improvement goes down to 0.45 in ECT & Atypical Neuroleptics Group and 2.27 in Atypical Neuroleptics Group.

Figure 4 : Comparison of BPRS

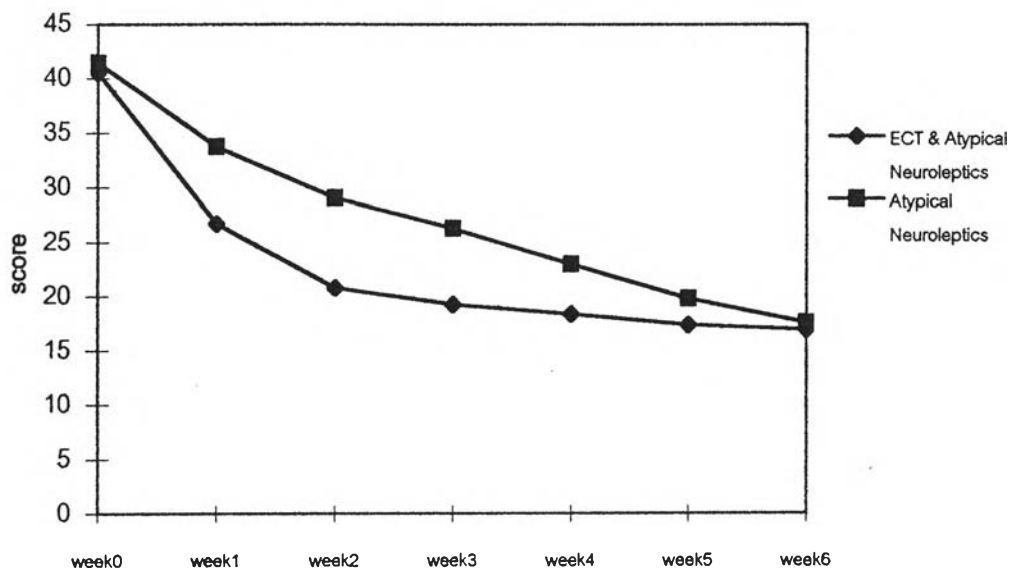


Figure 4 shows that the BPRS of ECT & Atypical Group decrease in a more rapid rate than Atypical Neuroleptics Group. However, the decreasing rate starts to slow down at the 2nd week of the experiment. Whereas BPRS of Atypical Neuroleptics Group decrease with a constant rate throughout the experimental period. At the 6th week, BPRS scores are approximately the same in both groups.

Figure 5 : BPRS of ECT & Atypical Neuroleptics Group

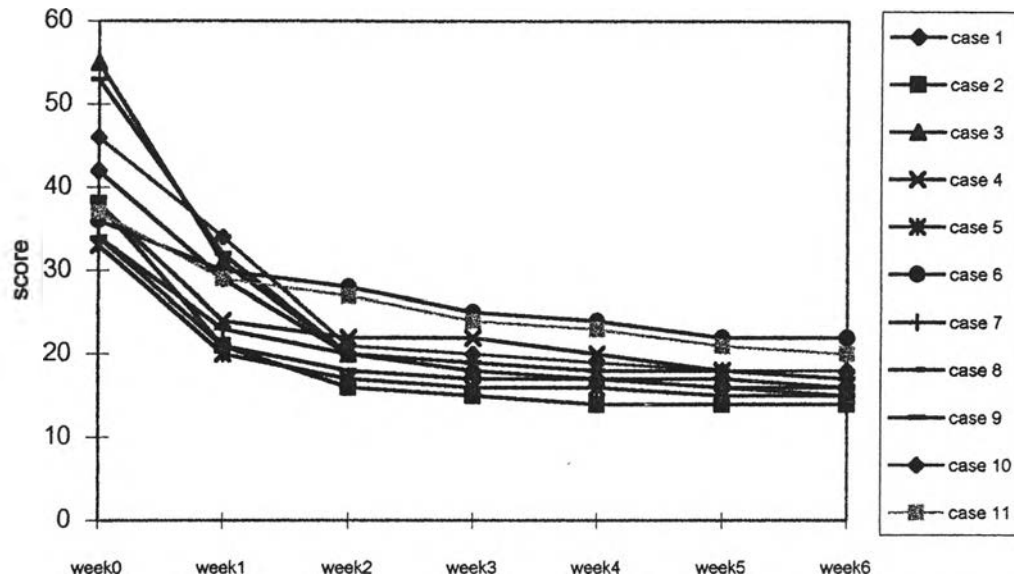


Figure 5 shows that all schizophrenic patients in ECT & Atypical Neuroleptics Group have the similar pattern of BPRS scores. However, the schizophrenic patients who start out with a higher score, have a faster rate of decreasing during the first two weeks. After the second week, every patients have a constant rate of scores.



Figure 6 : BPRS of Atypical Neuroleptics Group

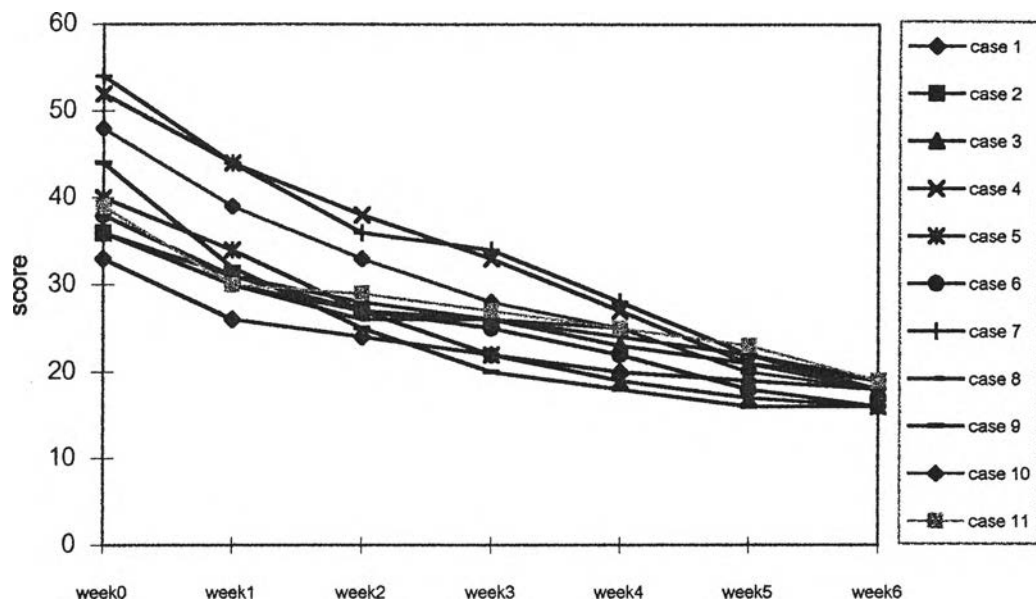


Figure 6 shows the pattern of BPRS score in Atypical Neuroleptics Group. The decreasing rate of BPRS score in every schizophrenic patients are constant throughout the experimental period. At the 6th week, every patients end up at the same level of score.

Part III : Comparisons of side effects between combination treatments electroconvulsive therapy (ECT) and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patients.

Table 9 : The UKU Scores of ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group in Sex Differentiation

WEEK	<u>ECT &amp; Atypical</u>				<u>Atypical</u>			
	<u>Neuroleptics Group</u>				<u>Neuroleptics Group</u>			
	Male		Female		Male		Female	
	(n=5)		(n=6)		(n=6)		(n=5)	
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.
0	7.60	5.32	9.33	4.68	8.50	2.26	9.20	2.39
1	7.60	3.13	9.17	4.88	4.50	2.07	6.20	4.44
2	9.20	2.17	9.00	2.76	6.33	1.97	10.20	7.12
3	7.20	2.05	8.50	2.26	6.33	4.03	8.60	5.81
4	7.80	2.59	8.17	1.72	6.33	3.33	8.00	4.64
5	7.20	2.17	7.00	2.90	7.33	2.50	9.80	3.90
6	6.20	1.30	7.67	2.34	6.50	3.99	5.40	3.29

Table 9 shows the monitoring of side effects in both group of treatments, in which, the UKU scores of ECT & Atypical Neuroleptic Group are generally higher than Atypical Neuroleptics Group. Also in both group, the female patients have slightly higher scores than male patients.

**Table 10** : Comparison of UKU Side Effects Rating Scale between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group

week	ECT & Atypical Neuroleptics Group (n=11)		Atypical Neuroleptics Group (n=11)		t <sup>1</sup>	P
	<u>x</u>	s.d.	<u>x</u>	s.d.		
	0	8.55	4.80	8.82		
1	8.45	4.06	5.27	3.29	2.020	NS
2	9.09	2.39	8.09	5.13	0.586	NS
3	7.91	2.17	7.36	4.80	0.343	NS
4	8.00	2.05	7.09	3.86	0.690	NS
5	7.09	2.47	8.45	3.30	- 1.098	NS
6	7.00	2.00	6.00	3.55	0.814	NS

1. two-tailed test.

Table 10 shows a comparison of UKU side effects rating scale between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group have a statistic significant at  $P < 0.05$  during the starting point of the experiment.

**Table 11:** Common Side Effects Monitored in ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group

Side Effect	ECT & Atypical Neuroleptics Group ( $\bar{x}$ )	Atypical Neuroleptics Group ( $\bar{x}$ )
Fail memory	7.09	4.25
Depression	5.73	4.13
Tension / inner unrest	4.64	2.36
Increased duration of sleep	4.36	1.91
Hypokinesia / akinesia	3.75	3.70
Polyuria / polydipsia	2.91	4.38
Weight gain	4.53	4.67
Headache	6.83	3.07

Table 11 shows the most common side effects in ECT & Atypical Neuroleptics Group are fail memory and headache. And for Atypical Neuroleptics Group are weight gain and polyuria / polydipsia.

Figure 7 : Comparison of UKU Side Effects Rating Scale

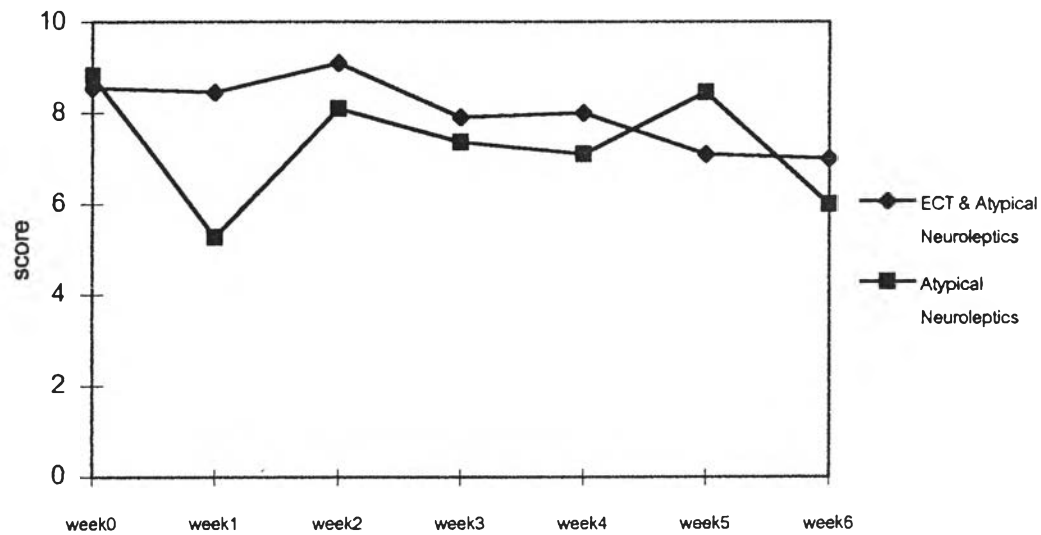


Figure 7 shows that the score of UKU side effects rating scale in Atypical Neuroleptics Group are a bit higher at the starting point (week 0), but after that, the score fluctuate throughout experimental period. As for ECT & Atypical Neuroleptics Group, UKU score remain more constant and higher then Atypical Neuroleptics Group.

**Part IV :** The Comparison of quality of life between combination treatment of electroconvulsive therapy (ECT) and atypical neuroleptics with single treatment of atypical neuroleptics in schizophrenic patients.

**Table 12 :** Rate of Improvement in QL-Index within ECT & Atypical Neuroleptic Group

<u>ECT&amp; Atypical Neuroleptics Group</u>					
mean of pre-test	mean of post-test	mean difference	standard error of difference	t <sup>1</sup>	P
6.99	8.19	1.18	0.33	- 3.634	0.01

1. two-tailed test.

Table 12 shows the difference of pre -post test of QL-Index score. ECT & Atypical Neuroleptics Group have 1.18 rate of improvement which have statistic significant at  $P < 0.01$ .

Table 13 : Rate of Improvement in QL-Index within Atypical Neuroleptic Group

<u>Atypical</u> <u>Neuroleptics Group</u>					
mean of pre-test	mean of post-test	mean difference	standard error of difference	t <sup>1</sup>	P
6.73	7.73	1.0	0.27	-3.708	0.01

1. two-tailed test.

Table 13 shows Atypical Neuroleptics Group's rate of improvement is 1.0 and have a statistic significant at  $P < 0.01$ .

**Table 14** : Rate of Improvement in QL-Index between ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group

	mean difference	standard error of difference	t <sup>1</sup>	P
ECT & Atypical Neuroleptics Group	1.30	0.33	0.171	NS
Atypical Neuroleptics Group	1.20	0.29		

Table 14 shows the rate of improvement in quality of life between two groups of treatments to be different insignificantly.



**Figure 8** : Comparison of QL-Index

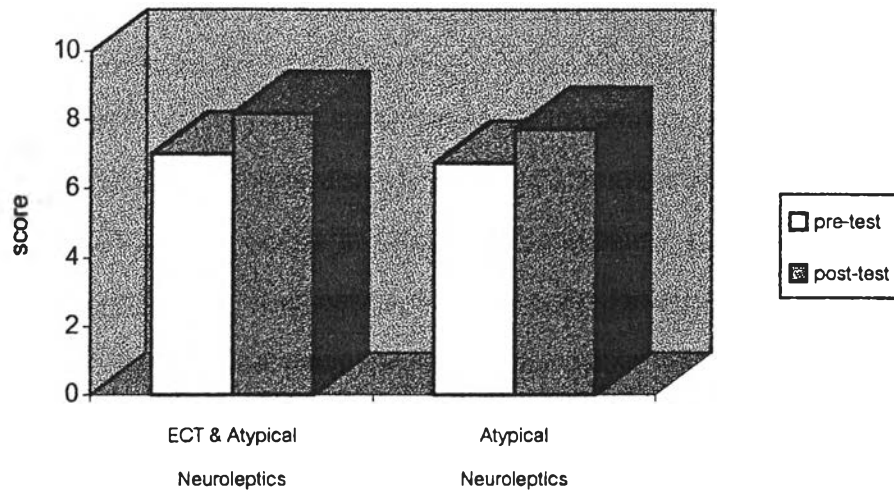


Figure 8 shows that, when measure before and after the experiment, the score of QL-Index increases similarly for ECT & Atypical Neuroleptics Group and Atypical Neuroleptics Group.