Chapter - V

SUMMARY AND CONCLUSIONS
Chapter - V

SUMMARY AND CONCLUSIONS

6.1 INTRODUCTION:

The purpose of the present research investigation was to study the effectiveness of Cognitive Behavior Therapy with pharmacotherapy on Obsessive Compulsive Disorder patient with different symptom patterns. This chapter contains a summary of the total investigation activities, i.e. the problem, objectives, hypotheses, sample as well as tool used in this research. It also includes the main findings of the study, conclusion, implications and suggestions for further research in this area. Later part includes limitation of the study and other explanations for the results obtained and lastly the future directions this research indicates.

6.2 Statement of the Problem

“To study the effectiveness of Cognitive Behavior Therapy and Pharmacotherapy on Obsessive Compulsive Disorder patient with different Symptom patterns.”

6.3 Objectives

Considering the variables measured in the research, the t test used for analyzing the data. Following objectives were formed.

1. To study the effectiveness of Cognitive Behavior Therapy and Pharmacotherapy on Contamination Symptom Pattern in Obsessive Compulsive Disorder Patient as against only pharmacotherapy.

2. To study the effectiveness of Cognitive Behavior Therapy and Pharmacotherapy on Pathological Doubt Symptom Pattern in Obsessive Compulsive Disorder Patient as against only pharmacotherapy.
3. To study the effectiveness of Cognitive Behavior Therapy and Pharmacotherapy on **Intrusive Thoughts** Symptom Pattern in Obsessive Compulsive Disorder Patient as against only pharmacotherapy.

4. To study the effectiveness of Cognitive Behavior Therapy and Pharmacotherapy on **Symmetry** Symptom Pattern in Obsessive Compulsive Disorder Patient as against only pharmacotherapy.

5. To study the effectiveness of Cognitive Behavior Therapy and Pharmacotherapy on **Other** Symptom Pattern in Obsessive Compulsive Disorder Patient as against only pharmacotherapy.

6. To study the effectiveness of Cognitive Behavior Therapy and pharmacotherapy among **different symptom patterns** of Obsessive Compulsive Disorder Patients as against only pharmacotherapy.

### 6.4 Hypotheses

Following are the hypotheses formulated considering the objectives of the study and the general direction of the findings of earlier research.

1. Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in **Contamination** Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

2. Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in **Pathological Doubt** Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

3. Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in **Intrusive Thoughts** Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.
4. Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Symmetry Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

5. Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Other Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

6. There is a difference in the effectiveness of Cognitive Behavior Therapy and pharmacotherapy in Obsessive Compulsive Disorder Patients among Different Symptom Patterns than only pharmacotherapy.

6.5 Operational Definition of Variables

Independent Variable:

1) Cognitive Behavior Therapy - Cognitive Behavior Therapy is one kind of psychotherapy invented by Dr. Aaron T Beck.

2) Only Pharmacotherapy - Medications prescribed by psychiatrist.

Dependent Variable:

1. Obsessive Compulsive Disorder Symptom Patterns – The score on Yale Brown Obsessive Compulsive Scale by Wayne Goodman has been used for diagnosis of Obsessive compulsive Disorder and then with the help of Obsessive Compulsive Inventory by Foa et al 1998 the person was categorized under the Obsessive compulsive Disorder Symptom Patterns.

a. Contamination – The score on Obsessive Compulsive Inventory by Foa et al 1998 were treated as the Contamination category of the person.

b. Pathological Doubt - The score on Obsessive Compulsive Inventory by Foa et al 1998 were treated as the Pathological Doubt category of the person.
c. **Intrusive Thoughts** - The score on Obsessive Compulsive Inventory by Foa et al 1998 were treated as the Intrusive Thoughts category of the person.

d. **Symmetry** - The score on Obsessive Compulsive Inventory by Foa et al 1998 were treated as the Symmetry category of the person.

e. **Other** - The score on Obsessive Compulsive Inventory by Foa et al 1998 were treated as the other category of the person.

### 6.6 Research Design

Pretest-Posttest experimental design is used in the research.

### 6.7 Sample Distribution

The sample of study was from the population of the Maharashtra Region, state of India. The purposive sampling technique was used for selecting the sample which consists of 300 Obsessive Compulsive Disorder patients between the age group of 18 to 55yrs old and was equally distributed among male and female, urban and rural area and among different symptom patterns of Obsessive Compulsive Disorder. The patient having co-morbid psychiatric illness and other medical condition was excluded.

The distributions of the effective samples were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Contamination</th>
<th>Pathological Doubt</th>
<th>Intrusive Thoughts</th>
<th>Symmetry</th>
<th>Other Symptom Patter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Behavior</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Therapy with</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacotherapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only Pharmacotherapy</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>
6.8 Procedure for the data collection

During 1st visit detailed case history, administration of Yale Brown Obsessive Compulsive Scale and Obsessive Compulsive Inventory was done and pharmacotherapy was started by Psychiatrist after diagnosis and psycho education, importance of pharmacotherapy and cognitive behavior therapy was explained to patient and informant. During 2nd visit (after 10 days from 1st visit) Cognitive Behavior Therapy was started and was administered in 15 sessions of one-hour duration over 30 weeks. At the end of therapy sessions, administration of Yale Brown Obsessive Compulsive Scale and Obsessive Compulsive Inventory was done to see the effectiveness of Cognitive Behavior Therapy. On the sample to whom only pharmacotherapy was provided pre and post test Yale-Brown Obsessive Compulsive Scale and Obsessive Compulsive Inventory was administered to find out the effect of Only Pharmacotherapy. Initially the family Members (informant) was explained the nature of the problem, and also that psychotherapy is an important adjunct to medication. The patient was explained the basic concept of Cognitive Behavior Therapy. The intervention programme was developed with the following components:

1) Detailed Case History
2) Cognitive Restructuring
3) Problem Solving
4) Graded Task Assignments
5) Exposure and Response Prevention
6) Activity scheduling
7) Introduction of Fear Thermometer
8) Cognitive Distortions
9) Giving Credit
10) Activity Monitoring
11) Thought Stopping
12) Thought Challenging
13) Relaxation Techniques (i.e. Patanjali Kriya or Jacobson Muscle Relaxation or Behavioral Relaxation or Breathing exercises or Meditation)
6.9 Measurement Tools

1) Yale Brown Obsessive Compulsive Scale by Wayne Goodman. Reliability studies of the scale show good interconsistency, interrater reliability of 0.72-0.98, and test retest reliability over a 1-week interval. An Intraclass correlation has been reported as 0.80

2) Obsessive Compulsive Inventory (Foa et al 1998). It has High test-retest reliability for the distress (Obsessive Compulsive Disorder, \(r=\ .87\); controls, \(r=\ .89\) and frequency (Obsessive Compulsive Disorder, \(r=\ .84\); controls \(r=\ .90\)) total scores. Full scales and most subscales have satisfactory internal consistency.

6.10 Analysis of data

Using ‘t’ test statistical analysis was done and the collected data was computed using SPSS software. ‘t’ test were used to assess significance between pretest and posttest groups. The mean, standard deviation and mean difference were calculated for all the variables.

6.11 Results of the present research

The data was collected and scored according to the manual. Then the raw data was taken for further analysis. As per the research design first the descriptive statistics was done i.e. Mean and Standard deviation. Then t test was used. From the received result preliminary following inference were drawn.

1. The first hypothesis is “Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Contamination Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of Cognitive Behavior Therapy and Pharmacotherapy on
Contamination Symptom Pattern was 3.86 and 0.34 and posttest was 1.10 and 0.30. Further the t value was computed i.e. 32.8.

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of only pharmacotherapy on Contamination Symptom Pattern was 3.76 and 0.43 and posttest was 1.80 and 0.40. Further the t value was computed i.e. 18.1.

The Mean Difference of Obsessive Compulsive Inventory score on Contamination symptom pattern after intervention of cognitive behavior therapy and pharmacotherapy and only pharmacotherapy was 2.76 and 1.96.

It was found that both the values were significant at 0.01 level of confidence. From the obtained Means, Standard Deviation and t value, it can be said that Cognitive Behavior Therapy and Pharmacotherapy have greater effectiveness in Contamination Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

Thus the hypothesis Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Contamination Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy supported by result and hence accepted.

2. The second hypothesis is “Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Pathological Doubt Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.”

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of Cognitive Behavior Therapy and Pharmacotherapy on Pathological Doubt Symptom Pattern was 3.80 and 0.40 and posttest was 1.23 and 0.43. Further the t value was computed i.e. 23.7.

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of only pharmacotherapy on Pathological Doubt Symptom Pattern
The Effect of Cognitive Behavior Therapy In Obsessive Compulsive Disorder.

was 3.23 and 0.43 and posttest was 1.86 and 0.43. Further the t value was computed i.e. 12.2.

The Mean Difference of Obsessive Compulsive Inventory score on Pathological Doubt symptom pattern after intervention of cognitive behavior therapy and pharmacotherapy and only pharmacotherapy was 2.56 and 2.00.

It was found that both the values were significant at 0.01 level of confidence. From the obtained Means, Standard Deviation and t value, it can be said that Cognitive Behavior Therapy and pharmacotherapy have greater effectiveness in Pathological Doubt Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

Thus the hypothesis Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Pathological Doubt Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy supported by result and hence accepted.

3. The third hypothesis is “Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Intrusive Thoughts Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.”

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of Cognitive Behavior Therapy and Pharmacotherapy on Intrusive Thoughts Symptom Pattern was 3.13 and 0.34 and posttest was 1.10 and 0.30. Further the t value was computed i.e. 24.1.

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of only pharmacotherapy on Intrusive Thought Symptom Pattern was 3.23 and 0.43 and posttest was 1.86 and 0.43. Further the t value was computed i.e. 22.4.
The Mean Difference of Obsessive Compulsive Inventory score on Intrusive Thoughts symptom pattern after intervention of cognitive behavior therapy and pharmacotherapy and only pharmacotherapy was 2.03 and 1.36.

It was found that both the values were significant at 0.01 level of confidence. From the obtained Means, Standard Deviation and t value, it can be said that Cognitive Behavior Therapy and Pharmacotherapy have greater effectiveness in Intrusive Thoughts Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

Thus the hypothesis Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Intrusive Thoughts Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy supported by result and hence accepted.

4. The fourth hypothesis is “Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Symmetry Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.”

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of Cognitive Behavior Therapy and Pharmacotherapy on Symmetry Symptom Pattern was 3.20 and 0.40 and posttest was 1.13 and 0.34. Further the t value was computed i.e. 21.2.

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of only pharmacotherapy on Symmetry Symptom Pattern was 3.06 and 0.25 and posttest was 1.13 and 0.50. Further the t value was computed i.e. 18.6.

The Mean Difference of Obsessive Compulsive Inventory score on Symmetry symptom pattern after intervention of cognitive behavior therapy and pharmacotherapy and only pharmacotherapy was 2.06 and 1.93.

It was found that both the values were significant at 0.01 level of confidence. From the obtained Means, Standard Deviation and t value, it can be said that Cognitive Behavior
Therapy and Pharmacotherapy have greater effectiveness in Symmetry Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

Thus the hypothesis **Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Symmetry Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy** supported by result and hence accepted.

5. The fifth hypothesis is “**Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Other Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.**”

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of Cognitive Behavior Therapy and Pharmacotherapy on Other Symptom Pattern was 3.13 and 0.34 and posttest was 1.10 and 0.30. Further the t value was computed i.e. 24.1.

The Mean and Standard Deviation of pretest Obsessive Compulsive Inventory score after intervention of only pharmacotherapy on Other Symptom Pattern was 3.06 and 0.25 and posttest was 1.13 and 0.50. Further the t value was computed i.e. 18.6.

The Mean Difference of Obsessive Compulsive Inventory score on Other symptom pattern after intervention of cognitive behavior therapy and pharmacotherapy and only pharmacotherapy was 2.03 and 1.93.

It was found that both the values were significant at 0.01 level of confidence. From the obtained Means, Standard Deviation and t value, it can be said that Cognitive Behavior Therapy and Pharmacotherapy have greater effectiveness in Other Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

Thus the hypothesis **Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness in Other Symptom Pattern of Obsessive Compulsive Disorder Patients than only Pharmacotherapy** supported by result and hence accepted.
6. The sixth Hypothesis is Cognitive Behavior Therapy and Pharmacotherapy will have greater effectiveness among Different Symptom Patterns of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

The Mean difference of Obsessive Compulsive Inventory score after intervention of Cognitive Behavior Therapy and Pharmacotherapy on Contamination symptom pattern was 2.76, on Pathological Doubt symptom pattern was 2.56, on Intrusive Thoughts symptom pattern was 2.03, on Symmetry symptom pattern was 2.06 and on Other Symptom Pattern was 2.03 and mean difference on Obsessive Compulsive Inventory scale score after intervention of Only Pharmacotherapy was 1.96, 2.00, 1.36, 1.93 and 1.93.

It was found that all values were significant at 0.01 level of confidence. From the obtained Means, Standard Deviation and t value, it can be said Cognitive Behavior Therapy and Pharmacotherapy have greater effectiveness among Different Symptom Patterns of Obsessive Compulsive Disorder Patients than only Pharmacotherapy.

Thus the hypothesis, There is a difference in the effectiveness of Cognitive Behavior Therapy and pharmacotherapy in Obsessive Compulsive Disorder Patients among Different Symptom Patterns than only pharmacotherapy supported by result and hence accepted.

6.12 Conclusion:

1. There was significant Mean Difference between Cognitive Behavior Therapy and Pharmacotherapy and only Pharmacotherapy in Contamination Symptom Pattern of Obsessive Compulsive Disorder Patients. So it reveals that Cognitive Behavior Therapy and Pharmacotherapy is more effective than only pharmacotherapy in Contamination symptom pattern.

2. There was significant Mean Difference between Cognitive Behavior Therapy and Pharmacotherapy and only Pharmacotherapy in Pathological Doubt Symptom Pattern of Obsessive Compulsive Disorder Patients. So it can be said
that Cognitive Behavior Therapy and Pharmacotherapy is more effective than only pharmacotherapy in **Pathological Doubt** symptom pattern.

3. There was significant Mean Difference between Cognitive Behavior Therapy and Pharmacotherapy and only Pharmacotherapy in **Intrusive Thoughts** Symptom Pattern of Obsessive Compulsive Disorder Patients. So it reveals that Cognitive Behavior Therapy and Pharmacotherapy is more effective than only pharmacotherapy in **Intrusive Thoughts** symptom pattern.

4. There was significant Mean Difference between Cognitive Behavior Therapy and Pharmacotherapy and only Pharmacotherapy in **Symmetry** Symptom Pattern of Obsessive Compulsive Disorder Patients. So it reveals that Cognitive Behavior Therapy and Pharmacotherapy is more effective than only pharmacotherapy in **Symmetry** symptom pattern.

5. There was significant Mean Difference between Cognitive Behavior Therapy and Pharmacotherapy and only Pharmacotherapy in **Other** Symptom Pattern of Obsessive Compulsive Disorder Patients. So it can be said that Cognitive Behavior Therapy and Pharmacotherapy is more effective than only pharmacotherapy in **Other** symptom pattern.

6. There was significant mean difference between Cognitive Behavior Therapy and Pharmacotherapy and only Pharmacotherapy among **Different Symptom Pattern** of Obsessive Compulsive Disorder Patients. So it reveals that Cognitive Behavior Therapy and Pharmacotherapy is more effective than only pharmacotherapy among Different symptom pattern.

**6.13 Limitations: -**

1) Statistical Analysis could have been done more broadly rather than using simple t test.

2) Study population, socio economic status, age group was limited.
3) Adherence to Cognitive Behavioral sessions was very less, patient used to drop out from the session due to various reasons such as social stigma, side effects of medicines, low family support, low understanding of illness, long distances to come from, severity of illness, low motivation, low readiness to help self.

4) No broad generalizations could be drawn from this study as it included only hospital sample, which are already diagnosed.

5) Other variables also could have been studied, for eg:- age, rural and urban area.

6) More Standardized scale for symptom pattern could be used if available in future.

7) Also due to secret nature of disease many people refuse to take treatment for the same.

8) People are reluctant to come only for cognitive behavior therapy due to various reasons.

6.14 Suggestions: -

1) Study of Obsessive Compulsive Disorder with other mental illness would also have been carried out such as Depression, Anxiety, Schizophrenia, etc.

2) Among Symptom Patterns of Obsessive Compulsive Disorder one could study one specific symptom pattern broadly considering each and every obsession and compulsions of that specific symptom pattern.

3) One could also do Comparative Study to find out which therapy shows more improvement in patient, whether it is Cognitive Behavior Therapy or Pharmacotherapy.

4) The effect of various other cognitive behavioral techniques could be studied on Obsessive Compulsive Disorder patient.
5) One could study the reduction in symptom of Obsessive Compulsive Disorder patient by using Exposure and Response Prevention technique.

6) Similar study could be carried out on different area, socio-economic status, population and age group.

7) Correlation study among Obsessive Compulsive Disorder with anxiety Disorder could be studied.

8) One could do longitudinal study on obsessive-compulsive disorder patient.

9) Study on Obsessive Compulsive Disorder in Children could be carried out.

10) Study on Hoarding Disorder could also have been carried out.

11) One could study the effect of Group therapy in Obsessive Compulsive Disorder patient.

12) The role of family history, support of family, marital adjustment in Obsessive Compulsive Disorder could also have studied.

13) Test development, construction and standardization for Obsessive-compulsive disorder symptom pattern could be carried out.