Chapter IV

Results and Discussions
Fifth Chapter
Summary, Conclusions and Implications

In the present chapter, it is attempted to present the summary of the study, conclusions drawn and their implications as follows.

Summary

Summary of the study: The researcher has attempted to study whether biofeedback, especially five sessions of biofeedback is capable of reducing the anxiety levels and stress degrees significantly. In this context, the researcher has tempted to answer the following research questions by following the following methodology.

Research questions: The following research questions are answered in the present study.

(1) What is the extent of anxiety and stress levels experienced by the cancer patients of two stages?
(2) What is the extent of anxiety and stress levels experienced by the caregivers of cancer patients of two stages?
(3) How far biofeedback can reduce anxiety and stress level among cancer patients of two stages?
(4) How far biofeedback can reduce anxiety and stress level among caregivers of cancer patients of two stages?
(5) Has biofeedback got anything to do with gender of the cancer patients for their anxiety and stress?
(6) Has biofeedback got anything to do with gender of the caregivers of cancer patients for their anxiety and stress?
(7) Has biofeedback got anything to do with educational levels of cancer patients for their anxiety and stress?
(8) Has biofeedback got anything to do with cancer patients who have undergone number of surgeries for their anxiety and stress?
(9) Does biofeedback impact differently on cancer patients who have undergone different cycles of chemotherapy for their anxiety and stress?
Objectives:
The following objectives are achieved in the present research.

1. To assess the differential impact of biofeedback on anxiety level among cancer patients of two stages (2nd and 3rd stages).
2. To assess the differential impact of biofeedback on stress degrees among cancer patients of two stages (2nd and 3rd stages).
3. To assess the differential impact of biofeedback on anxiety level among experimental group of primary caregivers of cancer patients of two stages (2nd and 3rd stages).
4. To assess the differential impact of biofeedback on stress degrees among experimental group of primary caregivers of cancer patients of two stages (2nd and 3rd stages).
5. To study the effect of biofeedback on the gender differences among cancer patients in reducing anxiety levels of two stages. (2nd and 3rd stages).
6. To study the effect of biofeedback on the gender differences among cancer patients in reducing stress degrees of two stages. (2nd and 3rd stages).
7. To study the effect of biofeedback on the gender differences among primary caregivers of cancer patients in reducing anxiety levels of two stages. (2nd and 3rd stages).
8. To study the effect of biofeedback on the gender differences among primary caregivers of cancer patients in reducing stress degrees of two stages. (2nd and 3rd stages).
9. To compare the Cancer patients who are on different levels of education on the effect of biofeedback in reducing anxiety levels of two stages. (2nd and 3rd stages).
10. To compare the Cancer patients who are on different levels of education on the effect of biofeedback in reducing stress degrees of two stages. (2nd and 3rd stages).
11. To compare the Cancer patients who have undergone different number of surgeries on the effect of biofeedback in reducing anxiety levels of two stages. (2nd and 3rd stages).
12. To compare the Cancer patients who have undergone different number of surgeries on the effect of biofeedback in reducing stress degrees of two stages. (2nd and 3rd stages).
13. To compare the Cancer patients who have undergone different cycles of chemotherapy on the effect of biofeedback in reducing anxiety levels of two stages. (2\textsuperscript{nd} and 3\textsuperscript{rd} stages).

14. To compare the Cancer patients who have undergone different cycles of chemotherapy on the effect of biofeedback in reducing stress degrees of two stages. (2\textsuperscript{nd} and 3\textsuperscript{rd} stages).

**Hypotheses**

The researcher formulated and tested nine main hypotheses with their sub hypotheses, which are as follows.

**Hypothesis: 1:** Biofeedback would be able to reduce the levels of anxiety among cancer patients of two stages differently.

Hypothesis: 1.1: Biofeedback would be able to reduce the levels of anxiety among cancer patients of II stage

Hypothesis: 1.2: Biofeedback would be able to reduce the levels of anxiety among cancer patients of III stage

Hypothesis: 1.3: Biofeedback would be equally effective on II and III stage cancer patients in reducing anxiety levels.

**Hypothesis: 2:** Biofeedback would be able to reduce the degree of stress among cancer patients of two stages differently.

Hypothesis: 2.1: Biofeedback would be able to reduce the degree of stress among cancer patients of II stage.

Hypothesis: 2.2: Biofeedback would be able to reduce the degree of stress among cancer patients of III stage

Hypothesis: 2.3: Biofeedback would be equally effective on II and III stage cancer patients in reducing the degree of stress
Hypothesis: 3: Biofeedback would be able to reduce the levels of anxiety differently among primary caregivers of cancer patients of two stages

Hypothesis: 3.1: Biofeedback would be able to reduce the levels of anxiety among primary caregivers of cancer patients of II stage

Hypothesis: 3.2: Biofeedback would be able to reduce the levels of anxiety among primary caregivers of cancer patients of III stage

Hypothesis: 3.3: Biofeedback would be equally effective in reducing the levels of anxiety among primary caregivers of II and III stage cancer patients

Hypothesis: 4: Biofeedback would be able to reduce the degree of stress differently among primary caregivers of cancer patients of two stages

Hypothesis: 4.1: Biofeedback would be able to reduce the degree of stress among primary caregivers of cancer patients of II stage

Hypothesis: 4.2: Biofeedback would be able to reduce the degree of stress among primary caregivers of cancer patients of III stage

Hypothesis: 4.3: Biofeedback would be equally effective among primary caregivers of II and III stage cancer patients in reducing the degree of stress

Hypothesis: 5: The male and female cancer patients do not differ significantly on the effect of bio feedback.

Hypothesis: 5.1: The male and female cancer patients do not differ significantly on the effect of bio feedback in reducing the levels of anxiety

Hypothesis: 5.2: The male and female cancer patients do not differ significantly on the effect of bio feedback in reducing the degree of stress
Hypothesis: 6: The male and female Primary caregivers of cancer patients do not differ significantly on the effect of biofeedback

Hypothesis: 6.1: The male and female Primary caregivers of cancer patients do not differ significantly on the effect of biofeedback in reducing the anxiety levels

Hypothesis: 6.2: The male and female Primary caregivers of cancer patients do not differ significantly on the effect of biofeedback in reducing the degree of stress

Hypothesis: 7: Cancer patients who are on different levels of education will not differ significantly on the effect of biofeedback

Hypothesis: 7.1: Cancer patients who are on different levels of education will not differ significantly on the effect of biofeedback in reducing the anxiety levels

Hypothesis: 7.2: Cancer patients who are on different levels of education will not differ significantly on the effect of biofeedback in reducing the degree of stress

Hypothesis: 8: Cancer patients who have undergone different number of surgeries will not differ significantly on the effect of biofeedback

Hypothesis: 8.1: Cancer patients who have undergone different number of surgeries will not differ significantly on the effect of biofeedback in reducing anxiety levels

Hypothesis: 8.2: Cancer patients who have undergone different number of surgeries will not differ significantly on the effect of biofeedback in reducing the degree of stress

Hypothesis: 9: Cancer patients who have undergone different cycles of chemotherapy will not differ significantly on the effect of biofeedback.

Hypothesis: 9.1: Cancer patients who have undergone different cycles of chemotherapy will not differ significantly on the effect of biofeedback in reducing levels of anxiety.
Hypothesis: 9.2: *Cancer patients who have undergone different cycles of chemotherapy will not differ significantly on the effect of biofeedback in reducing the degree of stress.*

They were tested. Based on the findings, the conclusions are drawn in the present chapter.

Methodology

**Research Design:** The research work had two treatment groups one comprising the cancer patients and the other the caregivers of cancer patients. The single group pretest-posttest design was used to study the effect of biofeedback on the cancer patients. While, it was attempted to study how biofeedback could be of any use to the caregivers of cancer patients of two stages, by comparing the effectiveness using the two group experimental - control group design on them.

**Population and Sample:** The populations comprised cancer patients of two stages, i.e., stage two and stage three of cancer condition, and their caregivers who were attended Bharat Cancer Hospital located at Mysore, irrespective of whether the patients belonged to Mysore or not, they were studied as patients of Mysore Hospital.

**Criteria for inclusion of the sample:** The criteria used for inclusion of the sample were as follows. (1) The patients’ sample comprised those who were either stage II or III cancer patients as diagnosed by the Bharat Cancer Hospital, Mysore. (2) The caregivers’ sample comprised those very primary care givers of those patients only.

The sampling frame was as follows.

<table>
<thead>
<tr>
<th>I Cancer patients</th>
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</thead>
<tbody>
<tr>
<td><strong>Cancer Patients (40)</strong></td>
</tr>
<tr>
<td>Stage II Patients 20 patients</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>
II Cancer Patient’s Caregivers

<table>
<thead>
<tr>
<th>Caregivers of cancer patients (40)</th>
<th>Caregivers of stage II</th>
<th>Caregivers of stage III</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td>10 Caregivers</td>
<td>10 Caregivers</td>
</tr>
<tr>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

In total there were 80 subjects comprising 40 cancer patients and 40 primary caregivers of those very cancer patients comprised the total sample of the study.

**Tools and Techniques:** The following tools and techniques were used in the study.

1. GSR Biofeedback equipment
2. Taylor’s Manifest Anxiety Scale
3. Perceived Stress Scale
4. Personal and Clinical data sheet

**Treatment of data:** The researcher used descriptive statistics to describe the scores in the pre and post intervention phases. Apart from that different inferential statistics were also used.