CHAPTER-III

Method and Procedure of The Study
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3.1 Method of the study
This chapter deals with Method and Procedure of the study. The method consists of research design, population, sample, variables, and tools of the study.

3.1.1 Research Design
Experimental method was used in the study.

 Paradigm for Design: Non-randomized Control-group, Pre-test-Post-test Design

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test</th>
<th>Independent variable</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>T1</td>
<td>Experimental treatment</td>
<td>T1</td>
</tr>
<tr>
<td>Control</td>
<td>T2</td>
<td>Controlled condition</td>
<td>T2</td>
</tr>
</tbody>
</table>

3.1.2 Population
Students of class IX and X under the West Bengal Board of Secondary Education having Bengali as the medium of instruction were taken as the population for the present study.

3.1.3 Sample of the study
In the present study 600 (six hundred) students consisting 300 boys and 300 girls were selected for the experiment.

i) Six schools were purposively selected for the experiment from the three districts of West Bengal (i.e. South 24 Pgs., East Midnapur and West Midnapur).

ii) The schools were selected: (Appendix-B)

(a) East Midnapur; Paramanandapur J. Institution (School No. 6) and Donachak D.D.M. High school (School No. 2);

(b) West Midnapur; Jalchak N.N. Vidyayatan (School No. 4) and Jalchak Balika Vidyalaya (School No.3);
iii) One hundred students (boys) from Paramanandapur J. Institution, one hundred students (girls) from Donachak D.B.M High School, one hundred students (boys) from Jalchak N.N. Vidyayatan, one hundred students (girls) from Jalchak Balika Vidyalaya, one hundred students (boys) from Vidyanagar M.P. High School and one hundred students (girls) from Vidyanagar Balika Vidyalay was selected as a sample for this experiment.

Order of Schools-

i) School No. 1, Vidyanagar Balika Vidyalaya;

ii) School No. 2, Donachak D.B. M.High School;

iii) School No.3, Jalchak Balika Vidyalaya;

iv) School No. 4, Jalchak N.N. Vidyayatan;

v) School No. 5, Vidyanagar M.P. High School;

vi) School No. 6, Paramanandapur J. Institution

3.1.3.1 Sampling Distribution Table

<table>
<thead>
<tr>
<th>District</th>
<th>School</th>
<th>Group</th>
<th>No. of Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Midnapore</td>
<td>School No. 6</td>
<td>Experimental</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Paramanandapur J. Int.</td>
<td>Control</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>School No. 2</td>
<td>Experimental</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Donachak D.B.M. H.S.</td>
<td>Control</td>
<td>50</td>
</tr>
<tr>
<td>West Midnapore</td>
<td>School No. 4</td>
<td>Experimental</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Jalchak N.N. Vidyayatan</td>
<td>Control</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>School No.3</td>
<td>Experimental</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Jalchak H.S.(Girls')</td>
<td>Control</td>
<td>50</td>
</tr>
<tr>
<td>South 24 Pgs.</td>
<td>School No. 5 Vidyanagar M.P.H.S.(Boys')</td>
<td>Experimental</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>School No. 1 Vidyanagar Balika Vidyalaya</td>
<td>Experimental</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control</td>
<td>50</td>
</tr>
<tr>
<td>Three</td>
<td>Six</td>
<td>Total</td>
<td>600</td>
</tr>
</tbody>
</table>
3.1.4 Variables of the study

Three types of variables were used in the present study— independent, dependant and intervening.

Independent variable – the main independent variable in this study was Yoga and Pranayama Package (YPP) treatment.

Dependent variable – the dependent variable in this study was mental health.

Intervening variable – there were some variables which could not be measured directly but that might have important effects upon the exercise on Yoga. The intervening variables were considered –

i) Socio-economic status of the students;
ii) Teacher;
iii) School;
iv) Learner and
v) Physical environment of the class room.

3.1.5 Tools

The researcher used two types of Tools (i) Learning Tool and (ii) Assessment Tool.

i) Learning Tool: Yoga and Pranayama Package (YPP) with various Yoga posture (Appendix-A) such as Padma Asana, Vajra Asana, Matsyendra Asana, Bhujanga Asana etc. and seven types of sahaja pranayama were performed only with the help of Purak and Rechak (Purak means sit in any of the asana inhale fully through both nostril and Rechak means exhale air through the mouth) were used in this study.

ii) Assessment Tool: a) Description of the test:- The researcher prepared a questionnaire (Appendix-C) on mental health. According to Ebel, the tests should be short enough, in relation to the time available, so that almost all students able to attempt all of the items.

In the initial stage of test construction the researcher prepared a large number of items. The initial number of items was 20X7=140. Test items were divided in to seven subsections namely A, B, C, D, E, F and G. Each section’s content items in specific dimensions of mental health such as: Section A for Self-Confidence, B for Anxiety, C for Emotion, D for Mental Conflict, E for Frustration, F for Depression and G for
Tension. Each of the test items has five alternative answers and these five alternative answers are arranged in 5 point scale. One should select one answer from each five alternatives.

b) Opinions of the Resource Persons on Test items:- The test items developed by the researcher were then sent to six respected, well-versed Resource Persons for correction, addition, alteration etc. They were requested to consider whether the test items were too easy or too difficult for the class considered, whether the test items were selected to give a well judged reflection of the dimension of mental health. They were also asked to give suggestions they thought necessary for improvement and to judge whether the items were arranged according to the mental health dimensions. After comparing the suggestions of Resource Persons the researcher finally selected 14X7=98 items for testing.

c) List of the respected Resource Persons:- The respected Well-versed Resource Persons are as follows:-

1) Prof. R. Sinha, Ex-Dean, Calcutta University, Education Department;
2) Prof. M.K. Basu, Ex-Prof. Kalyani University, Education Department;
3) Prof. P. Banerjee, Ex-Prof. Kalyani University, Education Department;
4) Prof. S. K. Ghosh, Dean, Rabindra Bharati University, Edu. Department;
5) Dr. S. U. Chowdhuri, Rabindra Bharati University, Edu. Department;
6) Dr. (Let) S. Cakraborty, Calcutta University, Education Department.

d) It was also standardized (validated) with a standardized mental health test ('F' Inventory -Dr. J.C. Das Gupta and moderated by Prof. A.Sen- Shown in Appendix- D). The co-relation was found to be Test- - 0.876. Test-Retest reliability of the mental health test prepared by researcher was found to be - 0.881 (Table Shown in Appendix-E).

3.2 Procedure

3.2.1 Procedure of the study
The researcher conducted the experiment into the following phases:
i) In this experiment the researcher had selected two schools purposively from each districts of West Bengal.

ii) According to the experimental design the researcher initially formed two groups (50/50) on the basis of mental health test (‘F’ Inventory, Appendix-D) scores.

iii) At the beginning of the session (WBBSE) Pre-Test (Mental Health Test prepared by the researcher, Appendix-C) was administered at the same date and time on the groups (Experiment and Control).

iv) Throughout the session YPP treatment was given to the Experiment Group according to their class routine without hampering the other classes.

v) The Control Group was controlled throughout the session that means without YPP treatment.

vi) At the end of the session Post-Test (same Mental Health Test prepared by the Researcher, Appendix-C) was given to Experiment Group and Control Group at the same time and date.

3.2.2 Experimentation

The following procedural steps were taken for experimentation in each of the six schools:

a) Selection of schools: In the present investigation the schools were identified purposively. Then the researcher made contact with the head of the institution and school authority for the purpose of the experiment.

b) Selection of students: The researcher made contact with the students with the help of physical teacher of class IX & X and hundred students were selected who were willing to participate in the experiment.

c) Selection of groups: On the basis of Mental health scores (‘F’ Inventory, Appendix-D) two groups were formed (50/50). The mean scores of the two groups were approximately same. Then the Experiment group and the Control Group were identified for the purpose of experiment.

d) Selection of teachers: The researcher had made contact personally with the Physical Teacher of the school and after discussing elaborately about the
YPP Treatment, he asked them to co-operate for the YPP treatment through
Out the session without hampering the scheduled class routine.

e) Experimental treatment: YPP treatment was given only to the Experiment
Group through out the session without hampering their class routine. The
Control Group followed their own class routine that means they were in
with out YPP treatment.

f) At the end of the session data were collected by administering same Mental
Health Test (Post-Test) at the same date and time.

g) Precautionary Measures:
   i) It seems that the competence and the attitude of the experimenter may
affect the treatment effect. In order to control the inter-experimenter
variation in treatment group the researcher himself has attended the
Yoga class.

   ii) The experimental conditions are kept similar in all schools. Above
mentioned six schools are in rural area.

   iii) The students of Experiment Group are requested to maintain a good
attendance for the period of experimentation. The effect of
experimental morality is taken into account. The irregular students as
per advice of class teacher in experiment group are kept out of the
sample from very beginning.

   iv) The researcher has tried to maintain the same hypothetic and
encouraging attitude towards the all groups in order to have a constant
social and emotional climate during the experiment and testing.

3.2.3 Data collection

On the basis of testing , Pre-Test and Post-Test scores of Experiment and Control
groups were collected and Yoga performance test scores (i.e. Initial Test & Final Test)
were also collected and those scores tabulated (Table-1 to Table-24, Shown in
Appendix-F) systematically for analysis. This procedure was followed in the every
school.
Reference


Cohen, Jacob (1988). Statistical power analysis for the behavior sciences (2nd ed.).


Lentner, Marvin; Thomas Bishop (1993). Experimental design and analysis (Second ed.). P.O. Box 884, Blacksburg, VA 24063: Valley Book Company. ISBN 0-9616255-2-X.


