Chapter III

PROCEDURE

This chapter contains the description of subjects, criterion measure, procedure for administration of tests and collection of data, procedure of the experiment, experimental design and statistical treatment of data.

Subjects

Subjects for this study were one hundred elementary school children studying in classes 4, 5 and 6 in St. Michael's School, Madras. A stratified random sample with proportionate number of subjects from each class was obtained using a table of random numbers. Table 1 presents the classwise division of the subjects.

TABLE 1
CLASSWISE DIVISION OF SUBJECTS USING STRATIFIED RANDOM SAMPLING

<table>
<thead>
<tr>
<th>Class</th>
<th>Total number of students</th>
<th>Number of students selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>48</td>
<td>36</td>
</tr>
<tr>
<td>V</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>VI</td>
<td>45</td>
<td>34</td>
</tr>
</tbody>
</table>
The average age of the subjects was 7.8 years, ranging from 7 to 9 years.

**Criterion Measure**

The Criterion Measures in the present study were the scores of the subjects in the Tanner Movement Satisfaction Scale, Childern's Attitude Towards Physical Activity Scale and How-I-See-Myself Scale.

**Administration of Tests and Collection of Data**

All the three tests involved in the present study being based on self-report questionnaires, were administered in a classroom of the school by the investigator himself. The subjects were called in four groups of twenty five each to the classroom and were given preliminary instructions. All the four groups were administered the test for one of the criterion measures on the same day, thereby completing the pre-test data collection in three days. The procedure for administration of the tests was as follows:

**Movement Satisfaction**

When the subjects reported for the test, the investigator showed them a series of face drawings depicting reactions from very happy to very sad. He explained to the children, with suitable examples, the
procedure for answering the questions comprising the movement satisfaction scale. The questions pertained to the way children felt about various movement experiences. The five possible responses to the questions were Very Happy, Happy, Undecided, Sad and Very Sad. Each of the subjects was given a copy of the questionnaire and an answer sheet accommodating thirty sets of face drawings. The subjects were asked to read each of the questions and give their response by colouring the face which showed best the way they felt about the movement experience described. They were told that they did not have to please anyone by their answers; that there was no correct or incorrect answer and that they were just to show how they felt about the questions.

The scale comprises thirty questions, each question receiving a possible 5 points for Very Happy, 4 points for Happy, 3 for Undecided, 2 for Sad and 1 for Very Sad. The responses of the subjects were scored on a separate sheet of paper. The scores of all the thirty responses of each subject were added to obtain his final score in Movement Satisfaction. The scale has a possible range of scores from 30 to 150, with the large number representing more movement satisfaction.

A specimen copy of the questionnaire is
presented in Appendix A-1.

Attitude Towards Physical Activity

When the subjects reported for the test they were asked to be seated and each of them was given a copy of the 'Children's Attitude Towards Physical Activity' questionnaire with the instruction not to open it. The investigator told them that he was interested to know what they thought about different types of physical activities such as sports, games and dancing. The format of the questionnaire and the procedure of answering it was explained to them. The questionnaire comprises six ideas which deal with physical activity as a social experience, physical activity for health and fitness, physical activity as a thrill but involving some risk, physical activity as the beauty in human movement, physical activity for the release of tension and physical activity as long and hard training. Each of the ideas is followed by eight pairs of words each of which encompasses a 7-point rating scale, the positive word of the pair scoring seven and the negative word scoring one. The pairs of words are good-bad, of no use-useful, not pleasant-pleasant, bitter-sweet, nice-awful, happy-sad, dirty-clean and steady-nervous. The subject indicates his response on the 7-point scale for each of the pairs of words separately, as to how he feels
about the idea.

The score is subtotalled for each idea and then totalled for all the six ideas, 56 being the highest score per idea and 336 being the highest possible total score.

A specimen copy of the questionnaire is presented in Appendix A-2.

Self-Concept

When the subjects reported for the test, they were given a copy of the questionnaire each. It was explained to them that the purpose of the test was to find out as to what idea they had of themselves and that it was not to test their knowledge or to find as to how their parents or friends wanted them to be. The procedure for indicating their responses on the questionnaire was explained to them. The questionnaire comprises forty pairs of statements dealing with a child's view of its body, of its peers, of its teachers, of its school and of its own emotional control. One of the statements in each pair represents an extreme negative view of oneself and the other an extreme positive view. Each of the pairs is accompanied by numbers from 1 to 5, and the subject indicates his response by circling a number according to the intensity of his response.
Items on this scale have been randomly reversed so that there would be a decrease in the tendency of a subject to simply go down the 5 column in giving his responses. Therefore, before scoring the test, the investigator converted the items so that the number 5 always represented the positive end of the scale. The scores for the forty items are added to obtain the total self-concept score. The higher the score the more positive the child's report on itself.

A specimen copy of the questionnaire is presented in Appendix A-3.

Procedure of the Experiment

Subjects from each class were randomly divided into two groups, and one group from each class was randomly assigned to Movement Education Programme and the other to Traditional Physical Education Programme. The Movement Education group (ME group) was administered a programme of physical activities based on the principles of Movement Education, while the Traditional Physical Education group (TPE group) continued to participate in the regular physical education programme of the school. Before starting the experiment, the investigator held orientation discussions with the physical education teacher of the school, visiting
British teachers working at the school and one of the classroom teachers. The two British teachers, having been involved in physical education programmes in their country, were well acquainted with Movement Education. The school physical education teacher and the classroom teacher also understood the principles and methods of Movement Education, and demonstrated their ability to use the Movement Education programme effectively.

The investigator gave a copy of the detailed Movement Education programme to each of the four teachers and explained the various stages of the programme, including the chronology of progression. A copy of the outline of the Movement Education programme is presented in Appendix B.

Movement Education and Traditional Physical Education classes were scheduled at the same hour but on different days of the week alternately, each class meeting three days a week for a total duration of twelve weeks. The duration of each class was forty five minutes. The TPE group participated in the physical education programme comprising minor games, tag games and relays being offered by the school. The Traditional Physical Education programme was administered by the school physical education teacher with the assistance
of one classroom teacher as had been the practice in the school.

**Experimental Design**

A random group design with pre and post tests on the three criterion variables, namely, Movement Satisfaction, Attitude Towards Physical Activity and Self-Concept was used in this study. Comparisons were made between the pre test scores of the two groups, the post test scores of the two groups and between the pre and post test scores of each group separately.

**Statistical Analysis of Data**

The pre and post test scores in each variable, that is, Movement Satisfaction, Attitude Towards Physical Activity and Self-Concept were compared for the ME and TPE groups, separately, using the mean differences method (t-test, correlated data). Comparison of the two groups on pre and post tests was made using the mean differences method (t-test, uncorrelated data).