CHAPTER - III

DESIGN OF THE STUDY
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In order to have a successful study the procedure adopted is of vital importance in any research study. In this chapter, the procedure for the source of data, selection of subjects, criterion measures, administration of the tests and collection of data are described.

SOURCES OF DATA

For this study 250 students from B.P.E course and 250 students from B.P.Ed. Course studying in ten Selected Physical Education colleges of Amravati University was selected. All the 500 students acted as the sources of data.

SELECTION OF SUBJECTS

250 male students studying in B.P.E. course of Shri Shivaji college of physical education, Amravati, Degree College of Physical Education, Amravati, Dr. B.N.C.P.E., Yavathmal, H.V.S.K.M. college of Physical Education, Yavathmal, college of Physical Education Umarkhed., Sarniek College of Physical Education, Wasim., Yeshwantrao Chavan college of Physical Education, Mangrupir., Bhagat Singh College of Physical Education, Amravati., Lokhit College of Physical Education, Yavatmal., Divekar college of Physical Education, Akola.,250 male students studying in B.P.Ed. Course of the above mentioned ten colleges were selected randomly as the subjects for this study. The age of the B.P.E. Students were ranging from 18 years to 24 years and the B.P.Ed. students were ranging from 21 years to 28 years.
COLLECTION OF DATA

The data pertaining to this study was collected from 500 students in selected physical education colleges by administering AAHPER Youth Physical Fitness Test and the socio-economic status scale questionnaire of Kulshrestha and say.

The criterion measures adopted for the study were:

1. Physical fitness was measured by administering AAHPDER Youth Physical Fitness Test Battery and Harvard step test.
2. Scholastic Standard was assessed on the basis of percentage of marks obtained in Secondary and Higher Secondary Examination for B.P.E students and Graduation examination plus Terminal Examination for B.P.Ed. Students.
3. Socio-economic status was measured by administering the socio-economic status scale questionnaire of Kulshrestha and Day¹.

ADMINISTRATION OF TESTS

AAHPER Youth fitness test battery was used to measure the physical fitness of the subjects. The test were conducted in two days consequently. The test items - pull-ups, bent knee sit-ups and 50 yard dash were conducted on the first day and remaining three items i.e. shuttle run, standing broad jump and 600 yards run/walk on the second day in accordance with the instructions given for AAHPER Youth fitness Test.

PULL-UP

Each subject performed as many pull-up as he could possibly do in the manner described below from a horizontal bar of enough height so that the feet of the tallest boy did not touch the floor when performing the test.

In taking the pull-up test, the subject hang from the bar by his hand with forward hand grip and chinned himself as many time as he could. In executing the movement, he pulled himself up until his chin was over straight. Swings of the body, raising of the knees and kicking of the legs were not permitted.

SCORING

The number of completed pull-ups were recorded as the scores for shoulder girdle strength.

BENT KNEE SIT-UP

Each subject was asked to do as many sit-ups as he could perform in a minute in the manner described below.

The subjects assumed a supine lying position, knee bent at an angle less then 90 degrees, and hands grasped behind the neck. The feet were held down by a partner. To perform the sit-ups the subjects brought his head and elbows towards knees. In returning to the supine position, the elbows touched the knees each time.
PULL-UP

Fig. No. – 3.1

BENT KNEE SIT-UP

Fig. No. – 3.2
SHUTTLE RUN

Fig. No. – 3.3
STANDING BROAD JUMP

A line was drawn at the edges of the take off board. The subject was asked to take position on the take-off board with toes touching on the takeoff board toes touching the line, feet slightly apart. Taking off from both feet simultaneously, he jumped to cover maximum possible horizontal distance, landing on both feet. While jumping, he crouched slightly and swings the arms to aid the jump. Three trials were given to each subject, the jumping pit was filled with fine river sand and frequently leveled with a long wooden block.

Measurement was taken from edge of the take-off board to the heel or other part of the body, that touched the pit nearest to the take-off board.

SCORING

Best of three trials was recorded in meters and centimeters as the score for explosive strength of leg muscles.

50 YARD DASH

A track of 50 yards straight was marked on the football field to conduct this test.

Two subjects selected at random were started at a time with a clapper. Two times for each subject recorded this timings with a stop watch at the finishing line.
STANDING BROAD JUMP

Fig. No. – 3.4

50 YARD DASH

Fig. No. – 3.5
SCORING

The lower timing, correct to the nearest tenth of a second was recorded as the score in speed.

600 YARD RUN-WALK

The test was conducted at the running track of the concerned colleges. The track was marked to indicate starting and finishing line for 600 yards distance.

Five runner selected at random were started off with a clapper with instruction to finished the distance of 600 yard, preferably by running through out, and when running was not possible, resorting to walking to finish the rest of the distance. Five timers at the finishing line took the timing as the runner crossed the finishing line and a recorder noted down the timings.

SCORING

The time elapsed between the start and finished was recorded correct to the nearest tenth of a second for endurance.

HARVARD STEP TEST

Equipments and Facilities:

Stop watch, Metronome, 20 inch step. up bench, score sheet.
60 YARD RUN WALK

Fig. No. – 3.6

HARVARD STEP TEST

Fig. No. – 3.7
Test Description:

The subject took the position in front of the step up bench. The starter gave the signal "Go" on the command "Up-Up" or the first sound of metronome the subject placed one foot fully on the bench with body erect, straightened his legs and back, and immediately steps down again, one foot at a time. The pace "up-2-3-4, up-2-3-4 or the tick-tick sound of metronome was followed. The subject was also restricted to repeat the stepping "up-up" and "down-down" exercise for five minutes. Exactly one minute after the exercise the tester started counting the pulse rate and recorded the same for the duration from one to one half, from two to two and one-half, and from three to three and one-half minute. Then the following formula was employed to find out the P.E.I score

SCORING

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\text{Index} = \frac{(\text{Duration of exercise in second}) \times 100}{2(\text{sum of pulse counts in recovery})}
\]

SCHOLASTIC STANDARD

The scholastic standard of the subjects was assessed by the percentage of marks secured in the secondary and higher secondary Examination for the B.P.E. Students. For the B.P.Ed student's scholastic standard was assumed by the percentage of marks obtained in graduation and terminal examination independently.
SCORING

The average marks secured in two examination respectively recorded as the score of the Scholastic standard.

SOCIO-ECONOMIC STATUS

For determining the socio-economic status of the subjects, the students were assembled in batches of 50 each in a class room and the copies of questionnaire were distributed. They were explained the purpose and method of filling in the questionnaire. Their quarries were appropriately answered. Adequate time was given to the students to fill-up the questionnaire.

Scoring was done as per instructions in the scoring key of the questionnaire and the scores entered in the spaces on the questionnaire.