CHAPTER – III

PROCEDURE

Before collecting the data research has to be very careful to design the study properly for its successful completion. The planning of present study has been described in this chapter. In this chapter selection of subject, selection of test, reliability of test, collection of data, procedure of administering the test items and techniques employed for data analysis has been described.

DESIGN OF THE STUDY

A survey type study has been designed to study the health related fitness status of the elderly people belonging to Chandigarh. It also included the development of norms for future use.

SAMPLE

306 elderly people ranging between the Age of 65 to 80 years were pricked up from Chandigarh to act as subjects.

The break up of subject has been given in table 3.1

<table>
<thead>
<tr>
<th>Age</th>
<th>No. of Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 to 69</td>
<td>104</td>
</tr>
<tr>
<td>70-75</td>
<td>108</td>
</tr>
<tr>
<td>76-80</td>
<td>94</td>
</tr>
<tr>
<td>Total</td>
<td>306</td>
</tr>
</tbody>
</table>

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TOOLS USED

AAHPER (1987) health related physical fitness test battery consisting of four test items was used.

The list of the test items has been given below:

1. 9 minutes run and walk test: To measure cardiorespiratory function.
2. Skin fold measurement: To measure body composition
4. Sit and reach: To measure the flexibility of the back and leg (hamstring) muscle.

COLLECTION OF DATA

9 minutes run/walk:

Objective: To measure cardiorespiratory function

Equipment: Stop watch, measuring tape, lime powder, clapper or whistle.

Testing procedure: This test was conducted outdoors field or any other even space was used as per availability.

One stop watch was used to record time of one subject. The subject was told to cover maximum distance in 9 minutes. They were also allowed to walk when fell tired.

Scoring: Total distance covered in 9 minutes in terms of meters was considered as actual score.

SKINFOLD MEASUREMENTS

Objective: To assess estimated body fat percentage or more specifically the level of fatness in an individual.

Equipment: Skinfold caliper.
Testing procedure: Two skin fold sites were used to measure body fat—one is triceps and other is subscapular.

For triceps: The skinfold was taken over the triceps muscle at a point half way between the tip of the shoulder (acrominal process) and the tip of the elbow (olecranon process). The point is located with forearm flexed to 90 degree; in making the measurement, however, the arm was kept hanging. The fold was lifted parallel to the long axis of the arm.

For subscapular: The skinfold was taken at the tip of the scapula (inferior angle) with the subject in a relaxed position. The fold was lifted in the diagonal plane at about 45 degrees from the vertical and horizontal planes.

Scoring: Triceps and subscapular skin folds was actual score in millimeter (mm).

Modified sit-ups

Objective: To measure trunk and hip strength/endurance

Equipment: Stop watch, mat.

Testing procedure: The arms of the subject were crossed on the chest with the hands clasping the opposing shoulders; contact of the arms with the chest was maintained throughout the test; A sit-up was completed when the elbow touched the thighs.

Scoring: The score was the number of correct sit-ups performed in one minute.

Sit and reach

Objective: To measure the flexibility of the back and leg (hamstring) muscles.

Equipment: A testing box 12 x 12 inches made from ¾ inch plywood, with a scale marked on the top of the box which extended an additional 9 inches (21 inches over all) towards the subject to be tested.
Testing procedure: The subject was asked to remove shoes and place his feet against the testing box while sitting on the floor with straight knee. The finger tips of subject were on the edge of the top plate, the subjects bend his trunk and reached forward as far as possible. The tester kept his hand on the knees of the subject to keep them straight not allowing any bending of the knees. The subject was instructed to lean forward and place his hands over the measuring scale lying on the top of the box. Then the subject was asked to slide his hands along the measuring scale as far as possible without bouncing and to hold the far as possible without bouncing and to hold the farthest position far at least one second.

Score: The lean forward was considered as score nearest to a cm. was recorded and 9 inches (12.93 cm.) subtracted from the recorded reading to obtain the flexibility scores which were in terms of cms.

STATISTICAL DESIGN

1. The raw score were converted into stranded score for the purpose of statistically application’s.
2. Descriptive analysis was carried out to assess health related fitness of elderly people.
3. Analysis of variance (ANOVA) statistical technique was used to find out significant difference in the health related physical fitness among different age group ranging between 65 to 80 years. F-test applied to the health related fitness of three groups i.e. group one 65 to 69 years of age, group two 70 to 75 years of age and group three 76 to 80 years of age.
4. T-test was also used to find out the significance difference between the paired mean of three groups.