

## CHAPTER 6

### DATA EXTRACTION

#### Key Messages

- Participants were assessed individually by the trained investigating team under the supervision of investigator.
- Verbal instruction and tactile model were used to make them understand about the test.
- Data were extracted by following the standard procedure of each variable.
- Data scoring and entry were completed according to the guidelines of the assessment tools.
- Categorical variables were analyzed using Chi square tests.
- Repeated measures ANOVAs followed by post hoc analyses with Bonferroni adjustment was performed to determine significant differences relative to the intervention.

## **6.0 DATA EXTRACTION**

### **6.1 DATA COLLECTION**

As intimated in the previous chapter, all data were collected from participants by trained persons from SVYASA University during the days immediately pre and post the intervention period. A semi-structured interview was administered to obtain their general information such as demographic and anthropometric data, whereas information related to their family and social background was taken from school records. All participants were examined individually, while investigators were available to answer questions, and provide any necessary guidance.

For accurate testing, it was important for participants to fully understand testing procedures. Outcomes measured were of three types; physical performance tests, instrumental assessment and questionnaires. The following procedures were adopted to help participants understand.

**Physical performance tests:** a demonstrator demonstrated each test-item to participants who were instructed to touch the demonstrator's body and limb positions before performing the test themselves.

**Instrumental assessments:** each participant was given the opportunity to become comfortable with each task and instrument before commencing the final test. They were given trial sessions before each test until they were familiar with the processes involved.

**Psychological assessments:** participants were asked each question individually by a member of the trained investigating team working under the supervision of a trained psychologist. Both the Kannada and English version of questionnaires were used for all the psychological variables. Mostly the English version of all questionnaires was used for this study if any term was not clear to a participant, in such a case, to help them understand, the Kannada version of the questionnaire was used instead. As stated in Chapter 5, participants' responses were written on the answer sheets for them by their examiner.

To minimize error, verbal instruction and tactile modelling were used where necessary to help participants understand what a test required. In all other respects, tests were administered according to standard procedures with no warming-up period prior to the test.

### **6.1.1 Details of the Data Extraction Organisational Procedure**

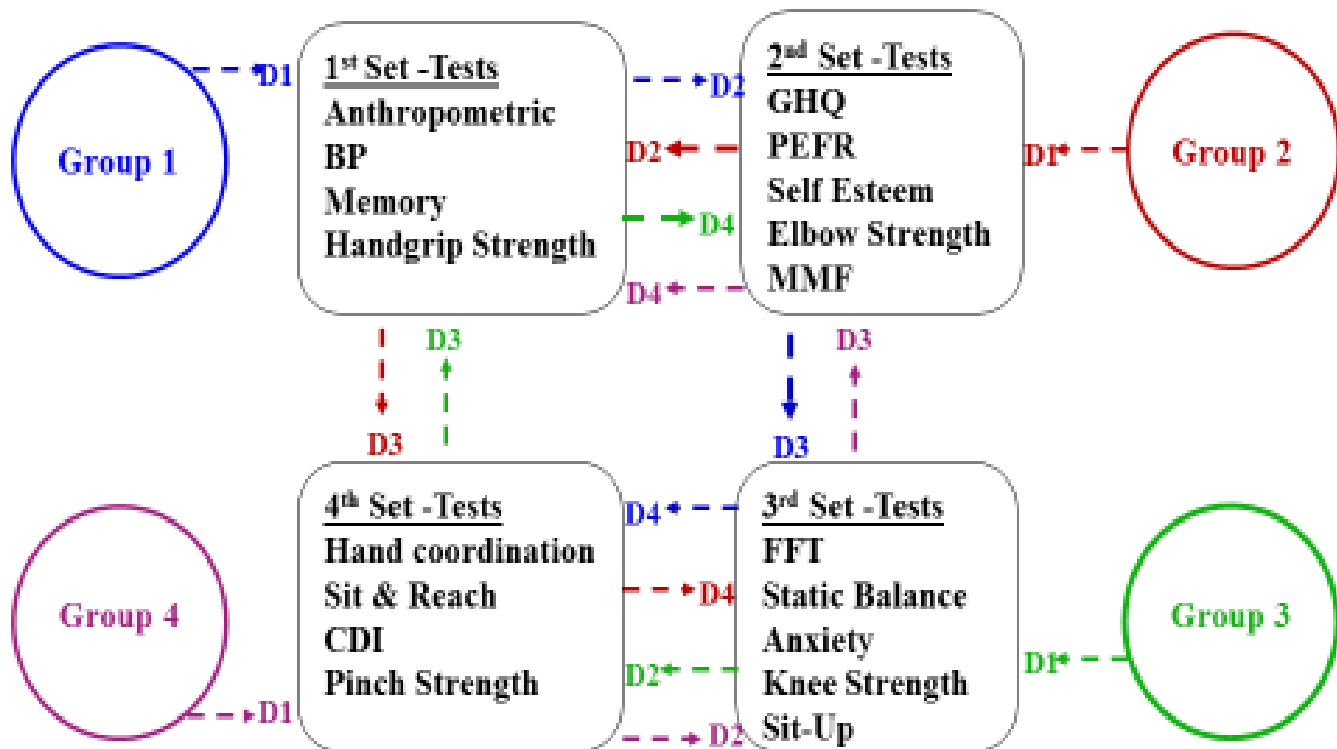
Data acquisition took place all seven days of the week, for two hours each day, from 7.00am to 9.00am before participants' breakfast, which were allotted for data taking. On any day, students could comfortably finish 4-5 tests taking 10 to 15 mins per test, with the rest of the time required for explanation. Each participant took 4 days to complete all the tests, with about 20 being measured on various tests each day. In this way, about two whole weeks were required before and after the study period for data extracting on all study variables.

A team of 18 including; 1 doctor, 5 psychologists, and 12 yoga trainers participated in data collection. Each team member was assigned a single test, there being 5 psychological tests, and 12 physiological tests, while the team doctor measured blood pressure. Prior to the data extraction period, all team members underwent a one week long training program on the data extraction procedure, instrument information, and explanation procedures required for children with VI. The team of examiners was divided into 4 groups according to the four groupings of tests set out in Figure 6.1.1. Each group consisted of 1 or 2 psychologists, 2 to 4 physical trainers, while the doctor, who only measured blood pressure, was part of Group 1, but was also required to be present throughout the data extraction periods in case some medical emergency arose (which did not happen). The 83 participants were divided into 16 groups of 5 participants, and one group of 3, with both experimental subjects and controls in every small group, in order to blind the examiners to experimental status of each participant.

Of the 19 tests, the dynamic balance test was conducted individually on two consecutive days for all participants, while the remaining 18 tests were divided into four sets of tests, as set out

in Figure 6.1.1. Each set of tests was organised to contain one psychological questionnaire (one set had two), one instrument based test (one set contained 2), and two non-instrument tests. At the beginning, 4 groups of students started the 4 sets of tests. The same 4 groups rotated each day round all 4 sets of tests until they had completed all tests; the last group of 3 participants was fitted in during time on other days, and similar time saving efficiency permitted all data extraction to be complete in 14 days. Details are presented in Figure 6.1.1.

**Figure 6.1.1: Detail of data taking procedure**



## **6.2 DATA SCORING**

Research staff completed data scoring and entry according to assessment tools' guidelines. All forms were thoroughly screened for completeness of responses. Details of data extraction and scoring procedures for each variable were explained in Section 5.4.

## **6.3 DATA ANALYSIS**

Data were analyzed using the Statistical Package for Social Science Version 20.0 (SPSS-20.0). Categorical variables were analyzed using Chi square tests. Independent samples 't' tests were used to check differences between groups for demographic measures. Repeated Measures Analysis of Variance (RM-ANOVA) followed by post hoc analyses with Bonferroni adjustment was performed to compare differences between mean values of post-intervention data with pre-intervention data and assess their significance. There was one within subject factor (Time with two levels [pre and post]) and one between subjects factor (Groups with 2-levels [yoga and control]). Required statistical significance was set at  $p < 0.05$ . Repeated measures ANCOVA (analysis of covariance) was used for those variables where a significant difference between groups was observed at baseline.