CHAPTER III
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CHAPTER - III

THE PLAN OF RESEARCH

3.01 INTRODUCTION

The title of the research shows that the researcher was interested in - IDENTIFYING THE ABILITY OF DECISION-MAKING IN SOCIAL SITUATIONS AMONG YOUNG ADOLESCENTS.

It was therefore, imperative to study and define the three important elements namely - decision-making ability, social situations and young adolescents. These are defined in the following paragraphs.

3.02 DEFINITIONS

3.02.1 Decision-Making Ability

Here decision-making was referred as 'an act of choosing' - as reported by other researchers mentioned in Chapter I. Hence, the decision-making ability could be defined as an ability to make the choice or ability to select the alternative. It consists of -

- the proper understanding of the problem,
- the perception of available information and making proper use of it,
- the tendency to face the situation rather than running away or getting paralysed due to the problem,
- the selection of appropriate alternative taking into account the implications of the choices, and
- the readiness to accept the risk if felt suitable.

Secondly, it depends on the general mental ability, verbal and behavioural reasoning and thirdly, it is also influenced by the personality traits and the adjustments at home and school.

In the present study, 'mental ability' was referred as "the capacity for observation and clear thinking" (Raven, 1960).

Verbal reasoning was pointed out with the help of 5 factors from SI model (Guilford, 1967) measuring -
- cognition of semantic systems,
- evaluation of semantic systems and implications,
- the convergent production of semantic systems and implications.
The behavioural reasoning was estimated with the help of cognition of behavioural relations and systems.

The personality describes the uniqueness of individual and determines his adjustment to his environment. According to Cattell "Personality is that which permits a prediction of what a person will do in a given situation" (Cattell, 1950, p.2).

Hjelle and Ziegler (1981) studied 'Personality' with reference to various definitions. Personality was defined in terms of 'self, and organised, permanent, subjectively perceived entity' (Rogers, 1951); 'a unique way of making sense out of life experiences' (Kelley, 1955) and 'an internal 'something' that guides and directs all human activity' (Allport, 1968).

Among the four view-points viz. biological, experimental, social and psychometric - trait, the last one was followed in the present work. This approach explains personality in terms of 'attributes which reflect underlying trait organisations'. A trait may be thought of as any distinguishable, relatively enduring
way in which one individual differs from others' (Wiggins, Renner, Clore and Rose, 1976, p.92). These traits could be measured with the help of mathematical rules. In the present study, 10 traits out of 14 were used as defined by Cattell.

We also know about a person on the basis of his adjustments with the environment. Adjustment consists of the psychological processes with the help of which the individual tries to cope with various demands or pressures influencing him (Lazarus, 1961). In this study home and school adjustment of the individual were taken into account. It consisted of -

- individual's relations with his parents, siblings, teachers, colleagues,
- their attitudes towards the individual,
- his position in the family and at school, and
- whether he is satisfied with his home or school.

3.02.2 Social Situations

The situations mentioned in the present research work were 'social' in nature, in the sense that when an
individual arrives at a decision or selects his course of action, he takes into account not only his benefits and gains but also the opinions, actions and expectations of others.

3.02.3 Young Adolescents

The children in the age group of 12 years to 13 years and 6 months old \(^1\) both boys and girls were considered as young adolescents in the present study.

In order to define 'young adolescents', it was tried to locate the adolescent period. It was revealed that there is disagreement about the period of adolescence. Hurlock (1956) divided this period into three stages - pre-adolescent, early adolescent and late adolescent - beginning at the age of 10 and ending at 21. Holmes (1964) defined it as the period from 12 to 18 years. Gardner (1957) said that this period starts from 11 or 12 years of age and comes to an end at 17 or 18 years of age. Helms and Turner (1976) pointed out that

\[^1\] Here onwards, this age group would be called as the 'desired age group'.
beginning of adolescent period could be 12 to 13 years of age. Hence the children in the early adolescent period of 12 years to 13 years and 6 months of age were considered as 'young adolescents' in the present study.

3.03 **SPECIFICATION OF THE PROBLEM**

After studying various definitions as reviewed earlier, it was strongly felt that the problem needs to be pursued in **TWO PARTS** - one dealing with the construction of tool and the second to determine the nature of decision-making ability. It was, therefore, clearly specified in two parts for further studies:

**PART I** - Constructing a tool for measuring decision-making ability of children - boys and girls of age 12 years to 13 years and 6 months, in social situations.

**PART II** - Correlating various cognitive and non-cognitive factors with the decision-making measured by the constructed tool and determining the nature of decision-making ability.
3.04 PROCEDURE

Highlights of the procedure are given below in brief, whereas the details are given in the following chapters.

3.04.1 PART I

Construction of a tool measuring decision-making ability.

A. Item writing

The content of the decision-making test was determined by studying the UNIVERSE OF BEHAVIOUR and by getting the 'experts' opinions.

The nature of the TEST FORM was finalized.

After writing a few items, a brief EXPLORATORY TRY-OUT was taken to get the idea of the suitability of the test. The necessary modifications were made according to the experts' judgements in order to achieve the homogeneity in the test. Rest of the items were constructed accordingly, and a PRE-PILOT study was undertaken.

Brief try-outs were taken to determine the READABILITY and to set the TIME LIMIT of the test.
This was followed by the PILOT-ADMINISTRATION for the item-analysis study.

B. Item analysis

The data obtained in the Pilot Study were analysed to examine the difficulty level of items and to get the item-test correlation.

C. Final form

The final test was prepared in a parallel form.

The report of step 'A' - Item Writing - is presented in Chapter - IV and the report of steps 'B' and 'C' - Item Analysis and The Preparation of Final Forms - is presented in Chapter - V.

3.04.2 PART II

Determining the nature of decision-making ability

A. Survey of Related Tools

The search was undertaken to locate the factors that could be correlated with decision-making ability. The relevant literature was surveyed,
resource persons were interviewed and the factors were enlisted.

A survey of the available tools included tests of mental ability, verbal and behavioural reasoning, personality questionnaires and adjustment inventories. This was followed by the selection of suitable tools.

The tests of mental ability, verbal and behavioural reasoning were used in the available forms.

B. Adaptation

The selected personality questionnaires and adjustment inventories were modified or adapted wherever necessary.

The content of the adapted tools was evaluated by the experts.

The modified, adapted tools were tried out on a small sample before the actual administration. Hand-made scoring keys were prepared by consulting 11 to 13 psychologists.
C. The Correlational Analysis

The final forms of the test of decision-making ability constructed in the present study and the various selected tools were administered and a correlational analysis of these variables was worked out to determine the nature of decision-making ability.

3.05 SAMPLE

The different types of sample groups contributed for different purposes in item writing.

3.05.1 Preliminary Studies

A. A sample obtained to determine the scope of the tool consisted of -

- 140 students belonging to Std. VII and IX,
- 15 teachers and parents, and
- 11 psychologists.

Nine youth leaders and 7 students of Std. VII helped to select the content of the items.

B. One hundred and fifty students, both boys and girls from different schools participated in the
studies conducted for explorations with respect to item-form, readability and time limits.

These students belonged to Std. V through IX. No special criteria for selection of this sample was applied except that they were of atleast average intelligence *1 and secondly rather important thing - were willing to participate.

C. In order to verify the suitability of instructions and to determine the validity of the content, a sample of 26 boys and girls, attending two different schools from VIIth and VIIIth Std. was drawn for the Pre-Pilot testing.

3.05.2 Item Analysis Study

A sample of 425 boys and girls belonging to four different schools was obtained for Item Analysis Study. All these students studied in VIIIth std. and were of the desired age group.

*1 This was ascertained through discussions with teachers.
Here, efforts were made to collect the sample consisting of:

- academically superior as well as poor, *1
- socio-economically of different class, *1
- either sex, and
- poor, moderate and above average intelligence, *2

though, students of very low intelligence (Below 5 PR) were not included.

3.05.3 Correlational Analysis

For this purpose, a sample of 96 boys and girls from VIIth std. in the desired age group was obtained. They all attended the same school, belonged to different socio-economic class and were of average and above average intelligence. *2

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*1 This was clarified through discussion with the Heads of different schools before data collection.

*2 This was based on the student's performance on a standardized test of intelligence administered to them for the present study.
Though the details regarding the sample are given in the following chapters at relevant places, some points are worth mentioning here:

(a) There was no overlap regarding the students that included in different sample groups. Generally each student was tested only once except in the Exploratory Study in case of 8 students who were experimented twice.

Adults, teachers and psychologists were the same throughout the work, though, they had different types of assignments at different stages. Thus it was tried to obtain the unbiased data.

(b) It is obvious that the selected sample consisted of adults, teachers, youth leaders and children of the age from 9 years to 15 years. This was done intentionally to derive sound validity of the test. Following examples would clarify this point -

1) While item writing; parents, teachers and older children were consulted along with children in the desired age group to get the proper picture of experiences of children.
2) Students below the desired age group were used in the Readability Try-out only to ensure that the matter is really very easy to comprehend.

3.06 **TOOLS**

*1 The tools used to measure different variables were as follows -

A. General Mental Ability
   Standard Progressive Matrices - SPM by Raven (1960)

B. Verbal Reasoning Ability
   The five subtests based on J.P. Guilford's (1967) SI model -
   1. Cognition of Semantic Systems - CMS,
   2. Convergent Production of Semantic Systems - NMS,
   3. Convergent Production of Semantic Implications - NMI,
   4. Evaluation of Semantic Systems - EMS, and
   5. Evaluation of Semantic Implications - EMI.

*1 All these tools are produced fully or partially in Appendix - I except SPM.
These subtests (कालमाला) *1 were constructed and standardized at JPIP (1984).

C. Behavioural Reasoning Ability

The two subtests based on J.P. Guilford's SI model.
1. Cognition of Behavioural Relations - CBR, and
2. Cognition of Behavioural Systems - CBS.

These subtests (CBR and CBS) were also constructed and standardized at JPIP (1984).

D. Personality

1. The adapted version (शाळेया विद्यार्थ्यांचे व्यक्तित्ववा) of the Jr. Sr. High School Personality Questionnaire constructed by Cattell and Cattell (1969), specially prepared by the researcher for the present study.

2. The version specially modified (व्यक्तित्वशोधनिका) for the present study by the researcher, of the already adapted version (Khire, 1971) of the Personality Inventory

*1 The names given in the brackets were used during the test administration.

*2 This is the short form of ज्ञान प्रबोधिनी's Institute of Psychology.
prepared by Bernreuter (1938).

3. The adapted scale (MEE KASA MÅGATO)
prepared by the researcher of the Gough - Sanford Rigidity Scale constructed by Gough and Sanford (1952).

E. Adjustment

1. Home Inventory (TUMACHYA KUTUMBAVISHAYEE THODESE) and

2. School Inventory (SHALEYA JEEWAN PRASHNAWALI).

Both these questionnaires were originally adapted by JPIP and were further modified by the researcher suitably for the present purpose.

F. Decision-Making Ability

The tool specially constructed (ASHA ARASANGI MEE KAYA KAREEN ?) for the present study by the researcher.

3.07 HYPOTHESES

1. Decision-making ability would be positively correlated with -
   - high mental ability,
- high verbal reasoning ability, and
- behavioural ability

2. A high positive correlation between problem understanding and the selection of correct alternative would be obtained. In other words, those who have perceived the problem accurately, would tend to arrive at the proper solution.

3. The inappropriate solution to the problem would be selected by those who have either perceived the problem partially or in a distorted manner.

4. Those who are unable to make a choice or take the decision, would tend to select the category three response more often.

5. The good and poor decision-makers will show different profiles.

6. The good decision-makers would be emotionally stable, confident, self-sufficient, tough-minded and relaxed.

7. The good decision-makers would be flexible in their thinking.
9. The good decision-makers would be well-adjusted at home and at school.

9. There will be no sex difference regarding the decision-making ability.

3.08 DATA COLLECTION

All the necessary precautions to collect the unbiased data were taken care of. The details are given at relevant places in the following chapters. Some of the common points observed at the time of data collection are enumerated below.

3.08.1 Preliminary Study

In the preliminary study, where the 'universe of behaviour' was to be tapped, data were collected in a tension-free, play-like situation. Adults were interviewed in their leisure time with prior intimation. All the details were jotted down immediately.

Raters worked independently in the presence of the researcher, received the clarifications in case of doubt though no communication and discussion among the raters was allowed while working.
Due respect was given to the experts' opinions and to the raters' judgements.

The researcher tried to collect the data with proper motivation and necessary response set in the preliminary studies. This was followed by the introspective reports.

Most of the items were constructed by the researcher alone, though the help was received from teachers and psychologists for the preparation of raw material.

Each item was presented separately, thus each item had each positioning.

3.08.2  **Item Analysis and Correlational Study**

In both these studies, special attention was given towards -

- the physical environment of the school, e.g. the availability of quiet, isolated, airy and well-lit classrooms;

- the sitting arrangements of all the students in the class — only one student sat on each bench and all were seated specifically in five rows.
the plan of testing programme, and

- the prior training and practice of the test administrators.

3.09 **DATA ANALYSIS**

The analysis included mainly the statistics essential in test-construction. Means and Standard Deviations of the total score on Decision-Making Test were calculated during the preparation to study the sex, school and content differences. Appropriate statistics were calculated for the study of internal consistency and validity. It comprised of item-pass percentage, item-test correlation and the distractor strength. The comparison of the High-Low groups was made with the external criteria by using Mean and Standard Deviation in one study and 'G' Index of Agreement in the other.

For deeper explorations into the nature of decision-making ability as measured by the test, Decision-Making Test was divided into two parts, each further divided into 3 areas. The six area scores and two total scores based
on two parts were correlated separately with other cognitive and non-cognitive variables. The correlation matrix was further analysed by the Principal Component Method.

3.10 SUMMARY

The important elements in the study were defined; and the plan of research - such as procedure, sample, tools and the statistical analysis - was specified.