CHAPTER III
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Research in psychology is in fact a very difficult task, the reason is every phenomenon is influenced by several other variables. Secondly it is rather very difficult to keep control on many variables, hence, while carrying out psychological studies, one has to take utmost care while deciding the topic and finalizing the research design. Many times one has to assume that other factors are kept controlled or they are constant. Since, the dependent variables are influenced by many factors, while carrying out psychological studies, the researcher has to take care right from selecting the sample, tools etc. in short, the whole methodology. Present study deals with self concept. Self concept is shaped by a good number of factors. In a small study like the present one, it is not possible to incorporate all the factors, but some important factors were used as the independent variables. These factors are sex, intelligence, sex role and ego strength status. While selecting the sample also, appropriate care was taken and the subjects were selected by using random sampling technique. In addition to this, standardized tools were used for collecting data and the results were treated by employing appropriate statistical techniques.

Sample:

Sample of the study was selected from two cities namely Mumbai and Aurangabad. For selecting the sample, first a heuristic survey of the colleges in south Mumbai, and Aurangabad was done, and a few colleges were selected on the basis of the kind of students enrolled in those educational institutions. The major criterion of selecting a college was, the students enrolled in it must represent the middle and lower socio-economic strata. After selecting the colleges separate lists of male and female students were prepared. These students were all under graduate students. Once the lists of males and females were prepared, random number tables were used and a total sample of 558 subjects was selected. Of these 558 Ss 179 girls were selected from Mumbai,
also 172 boys were selected from Mumbai, and 112 girls and 95 boys were selected from Augangabad. Thus, in the total sample, there were 291 females & 267 males. They all were studying at undergraduate level & their age range was 19 to 23 years. This total sample was used for examining the effect of culture on the six different types of self concept.

When the Ss were distributed into sixteen classified groups, to meet the requirements of a $2 \times 2 \times 2 \times 2$ factorial design several Ss were deleted for not fulfilling the required criteria. Here the effective sample was 400 Ss only. It was so, because when the total sample was classified into sixteen groups, there were unequal cell frequencies, which might have created difficulties in computational work. To simplify computational work frequency of each cell was kept 25 only. Those groups which were having more than 25 cell frequencies, from them, the extra number of Ss were deleted randomly. Thus, the effective sample was, for factorial design, 400 Ss only and the male female ratio was 1:1.

**Tools Used for Data Collection:**

Following tools were used for data collection.

**Barron’s Ego Strength Scale:**

This scale was developed by Barron. Barron selected statements from MMPI and constructed this scale. There are sixty seven statements which are related to various factors which comprise of ego strength. For example, ten statements are related to physical functioning and physical stability, six are related to psychasthenia and seclusiveness, eleven are related to attitude towards religion, and eight are associated with moral posture. The other three factors, to which some statements are related, refer to sense of reality, personal adequacy and ability to cope, and phobias and infantile anxieties. Last seven statements are miscellaneous. Each statement is associated with
two alternatives true and false. The S has to select the appropriate response. There is no time limit. Highest reliability was .86, and validity was .84.

Ben Sex-Role Inventory:

The inventory was developed and standardized by Sandra Bem. It was designed to implement empirical research on psychological androgyny. It contains sixty personality characteristics. Twenty of the characteristics are stereotypically feminine (e.g. affectionate, gentle) and twenty are stereotypically masculine (e.g. assertive, self-reliant). The BSRI also contains twenty characteristics that serve as filler items (e.g. truthful, happy). When taking the BSRI, a person is asked to indicate on a 7 point scale how well each of the 60 characteristics describes herself or himself. The scale ranges from 1 (never or almost never true) to 7 (always or almost always true) and is labeled at each point. The BSRI treats feminity and masculinity as two independent dimensions. Test - retest reliability indexes ranged from .82 through .94. Validity indexes were also high .85 to .87.

Culture Fair Test of Intelligence:

This test was constructed and standardized by R.B. Cattell and E.K.S. Cattell. The Culture Fair Tests of Intelligence measure individual intelligence in a manner designed to reduce as much as possible, the influence of verbal fluency, cultural climate, and educational level. There are Scale 2 and Scale 3 designed for adults. Each of these scales have two forms, Form A or B. In present study Scale 2, Form A was used. This scale consists of four subtests. Subtest 1 is based on series; there are 12 items in subtest 1. Second subtest contains 14 items based on the principle of classifications. The third subtest consist of 12 problems based on matrices; and the fourth subtest comprises of 8 problems based on the principle of conditions. Thus, there are 46 items in the Scale 2 Form A. Each subtest has a time limit and within that time limit the S has to solve the
problems. Total time required to solve the test is 12 min. 30 sec. Reliability values range from .67 to .87; and validity coefficients range from .70 to .85.

Self Evaluation Scale:

This scale was constructed and developed by Beena Awasthi. Bipolar adjectives depicting behavioural characteristics were selected. For example, Honest - Dishonest, Dull - Bright etc. These objectives were classified into six categories by judges coming from different fields of life. After the classification some of the pairs of adjectives were deleted as they were classified into more than one category. In the final form of the scale only 52 bipolar adjectives were retained. The Self Evaluation Scale is useful in measuring six different kinds of self concept. There is no time limit to the scale, but the S has to write the responses quickly without wasting time in thinking for a long period. Each bipolar adjective is provided with a FIVE point scale, and the job of the S is to rate himself/herself on the five point scale. A high reliability coefficient has been reported by the author. Test-retest reliability was .84, validity was .80.

Procedure of Data Collection:

Barron’s Ego Strength Scale:

For administering the scale, first the subjects were called in small group, their seating arrangement was made in a class-room. Sufficient space between the two Ss was kept, so that one cannot peep into the answers written by the other Ss. When the Ss took their respective seats copies of Barron’s Ego Strength Scale were distributed among them. They were instructed not to open the booklet. They were told that, the information they were providing or the responses they were giving will be treated as strictly confidential. Hence, while writing the responses, they should not hesitate themselves.
A few general points were discussed and appropriate rapport was formed. Immediately after that, they were instructed as follows.

"Here you will find some statements regarding ones physical well-being, thinking, feeling, attitude etc. All of the statements may not be true about you. Please read each statement carefully, decide whether it is true or false in your case, if it is true, put a circle around ‘T’ if false put a circle around ‘F’; here ‘T’ stands for true and ‘F’ stands for false. You will find ‘T’ & ‘F’ printed against each statement number, on the answer sheet. Please give the immediate response, that comes to your mind, to each statement, go fast so as to avoid too much thinking”.

Taking a few examples, the procedure was explained on the blackboard. When it was confirmed that, the Ss had followed the instructions, they were asked to write the responses to the scale. The Ss were told not to leave any statement unanswered. There was no time limit to the scale. Sufficient time was given to write the responses and filled copies were collected at the end. Immediately after the completion of Barron’s Ego Strength Scale, Cattell’s Culture Fair Test of Intelligence was administered on the Ss.

The Ss were told that through this test their intellectual ability will be measured. Copies of Culture Fair Intelligence Test were distributed among the Ss. They were told to put down the pencil. First you have to write down the name and other information on the front page; once they have written or filled the information, they were instructed as follows,

"In this booklet there are four tests, which are like four different games or puzzles, there are no words in them, only drawings. Each of the test has some examples for you to practice on, so that you can see how to do it. First we shall look at the example, and then you will be asked to go ahead on your own. Some of the questions at
the end of each test may be quiet hard to do, but try as many as you can. Even when you are not sure mark the answer, you think might be right, rather than none. It is perfectly allright to guess if you don’t know the answer. You don’t lose point for wrong guesses.

Please don’t turn any page until I tell you. You are to mark all the answers, on the answersheet you have been given and not in the text booklet. Now read the instructions on the answersheet and see if you understand them, then we shall go over the examples together & you will have a chance to mark some answers for practice. If you have any question raise your hand.

“Now open the booklet at the first page Test 1. At the top of the page there are three examples, look at the first example, notice that the first three boxes have black lines, that keep getting longer, then there is a dotted empty box followed by five more boxes; of the five, choose the one that would be right to put into the empty box. For this example, the correct answer has been given to you, it is 1. Look at your answer sheet.”

Look at the second example see how the little curved line bends to the left, then to the right, then to the left. What will it do at the next step? Yes, it will bend to the right. No. 3 is correct, so write 3 at the appropriate place. Now the third example, see how the black part moves. It begins at the top and moves around the circle, look at the five choices for the right answer, yes it is No.1 write No. 1 at appropriate place.

You can see that none of the other choices in all three examples would have been quite right. Now you have been understood the instructions, so start writing answers to the problems, at this moment the stop watch was started and exactly after three minutes the Ss were told to put the pencil down.
Now turn to test 2, look at the first example, there are five figures in a row, four are the same and one is different. In this row which one is different in some way from all the others? The fourth one is different, so the box under four has been filled in on the answer sheet. Let us do the second example now, which one is the different one here, yes it is the first one. It is black and all the others are white, of course the others are different sizes but they are all white, so you can’t pick out one of them on your answer sheet. Fill in the box under one in the second example. Now you can start writing answers to the second test. Exactly after four minutes, stop signals were given.

Immediately, the Ss were told to turn to test 3, they were instructed as follows. "Look at the first example, there are four small boxes in the large square at the left. One of them is dotted and empty. Which one of these five boxes is the correct one to fill in the dotted empty box; ‘yes’ it is the third, if we put that one in empty box it would look right in your answer sheet, there three has been already written. Now look at the second example which one shall we put into the empty box to make it look right. Yes, it is number one. Let us take the third example, you have to choose the right answer. In this case it is four. So mark it on your answer sheet. Now you can start answering the problems given in test three. Work carefully and as fast as you can. Exactly, after three minutes they were asked to stop and put the pencil down.

Now turn to test 4. Look at the first example, in the box at the top that is by itself you see that there is a circle and in the circle, there are a dot and a square. The dot is inside the circle, but outside the square. Now look over here, at the five boxes on the right, we must find one where we can do just the same thing, put a dot inside the circle but outside the square. You can find this in figure number three. You see the dot is inside the circle but outside the square. The dot was put in for you to show you that
answer three would be right. It is the only one where we can do the same as in the separate box on the left.

Look at the second example, in the separate box at the left, the dot is inside the egg shaped figure, but under the line. Now we have to find another box where we can do just the same, yes the second, that is the only the right one.

Now look at the third example, this time one dot must be in both squares at once but outside the circle. If you see the alternatives given, then you find the third is the only one where you can put the dot, in both squares but outside the circle. Mark the answer in your answersheet.

Now you can start replying or giving answer to the problems of the fourth test. Exactly after two & half minutes, stop signal was given, and the booklets alongwith the answersheet were collected.

In the second session, again the Ss were called in small groups, the same procedure of making seating arrangement & forming rapport were repeated and then copies of Bem’s Inventory were distributed among them. They were instructed as follows, “On the opposite side of the sheet you will find listed a number of personality characteristics, we would like you to use those characteristics to describe yourself that is we would like you to indicate on a scale from 1 to 7 how true of you each of these characteristics is. Please do not leave any characteristic unmarked, for example, write a 1 if it is never or almost never true that you are sly. Write a 2 if it is usually not true that you are sly. Write a 3 if it is sometimes but infrequently true, that you are sly. Write a 4 if it is occasional true that you are sly. Write a 5 if it is often true that you are sly. Write a 6 if it is usually true that you are sly. Write a 7 if it is always or almost always true that you are sly.
Thus, if you feel it is sometimes but infrequently true that you are sly, then you have to select the appropriate number.

The procedure was explained to the Ss on blackboard, questions & queries were invited, and they were answered to their satisfaction. There was no time limit to this inventory, however the subjects were told to write down their responses as fast as they can. Filled copies of inventory were collected at the end. It took just 15 to 20 min. to complete the inventory.

After collecting the filled copies of Bem's Inventory copies of Self-Concept Scale were distributed among the subjects. For this scale, following instructions were given “Like the earlier scale, in this scale also, there are a number of personality characteristics, however these characteristics are presented in the form of bipolar adjectives. You have to read the bipolar adjectives and then decide the extent to which you possess that characteristic. For example, if you feel that you are neither strong nor weak, but normal, then put a tickmark on number 3 on a five point rating scale. If you feel that you are little more strong than the normal, then put a tickmark on number 2. If you feel you are more strong, then you have to put a tickmark on number 1. In case you think that you are little weak than normal then put a tickmark on number 4, and if you feel that you are very weak then you have to put a tickmark on number 5. For this Scale also, the procedure was explained on the blackboard. When it was confirmed that the Ss had followed the instructions correctly, they were asked to rate themselves on five point scale associated with each bipolar adjective. For this scale also there was no time limit. Filled copies were collected after fifteen minutes and thanks were given to the subjects for extending their cooperation.

Similar procedure were adopted for collecting data from different groups of subjects.
Variables under study :-

There are four major variables which were treated as independent variables, they are sex, intelligence, sex role, & ego strength. There were six dependent variables they were, namely, physical self concept, social self concept, intellectual self concept, moral self concept, emotional self concept & aesthetic self concept.

Design of Study:

In present study a factorial design was used. It was a $2 \times 2 \times 2 \times 2$ balanced factorial design. Cell frequencies were equal. Each of the four independent variable was varied at two levels.

Statistical Treatment of Data:

At the first stage the data were treated by mean and standard deviation. Secondly it was treated by four way ANOVA. Finally, Duncan’s New Multiple Range Test was applied to find out whether the intergroup mean differences are significant or not.

Discussion:

Results were discussed considering the statistical values and the findings of relevant studies carried out earlier.