CHAPTER THREE

METHODOLOGY
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Research is a systematic attempt to push back the bounds of comprehension and to seek beyond the horizons of our knowledge some truth. As a matter of fact, from the beginning man has been curious about his environment. In his analysing the problem, he first of all, comes across with his experience (good/bad) followed by reasoning (thinking) and then undertaking experimentation (testing for). Thus, reasoning is an indispensable tool in the derivation of scientific truth. To attain this truth, experimentation is the most rigorous approach. In short, research is an endeavour to discover answers to problems through the application of scientific method to the knowable universe.

The present study dealt with three different aspects of assessment in psychology 1. the personality traits i.e., achievement motivation, 2. family status and 3. the jealous behaviour itself. The intent of the author is to reveal the causal relationship between certain independent variables i.e., ordinal position, sex, and achievement motivation and the dependent variable i.e., jealous behaviour. Besides these, a study of the effect of reward on jealous behaviour is also envisaged. However, before starting the assessment of the variables, the first step is to decide about the sample from which information regarding achievement motivation and jealous behaviour will be gathered. Thus, in the present chapter, elaboration will be made on the part of the Sample, Instruments of the Study and the Experimental Design with special reference to the procedure of bringing in the effect of non-reward and reward.

1. THE SAMPLE

A researcher has always a special concern regarding the sample for the study which is the vital aspect of any research. The essence of sampling is appropriate representation of population to which one desires to make generalization.
Research on complete census method is both costly and difficult and in many cases it is completely impossible. On the other hand, research on representative sampling can produce more accurate results with statistical competency. Our limited resources "Time, Money and Energy" can be wisely utilized only by sampling procedure. A good sample is representative of the universe from which it is drawn so that generalization of inferences can be made. The whole group from which the sample has been drawn is technically known as universe or population and the group actually, selected for study is known as sample. Festinger and Katz (1970) have defined sample as a group of elements selected from the population with the intention of finding out some informations about the population.

To have a homogenous and unbiased sample, the adolescents ageing 14 to 16 years and studying in the X or XI standard, were selected for this study. Hence, the exhaustive list of all the English and Hindi medium schools of Durg and Bilal cities of Chhattisgarh was obtained. Out of a total of 76 schools 15 schools were selected randomly on the basis of information on Family Biodata Form. Stratified random sampling device was used, so as to get proper representation of the population involved in the present investigation with due consideration to the requirements for control over some of the extraneous variables namely age and socio-economic status.

A large group of 2100 male and female adolescent students studying in X or XI standard was administered Family Bio Data Form. A total of 900 first born and 900 later born adolescents were randomly selected. Out of these 900 adolescents in each group half (N=450) were males and another half (N=450) were females. These 1800 adolescents were studied for their socio-economic status. On the basis of scores on Socio-Economic Status Scale 1200 adolescents were selected with average socio-economic status (scoring between 108-223) excluding the adolescents of high and
low socio-economic status. In this way, 300 adolescents of average socio-economic status were selected in each of the four subgroups i.e., first born males, later born males, first born females and later born females. Lastly, these 1200 adolescents were administered achievement motivation scale. On the basis of scores on achievement motivation scale, 40 subjects were selected randomly in each of 8 sub-groups i.e., first born males with high achievement motivation, first born males with low achievement motivation, first born females with high achievement motivation, first born females with low achievement motivation, later born males with high achievement motivation, later born males with low achievement motivation, later born females with high achievement motivation and later born females with low achievement motivation. A brief account of sub-samples is given in Table 13.

Table # 13 : Sub Grouping Of The Final Sample.

<table>
<thead>
<tr>
<th>Group</th>
<th>First Born</th>
<th>Later Born</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>High Achievement</td>
<td>N=40</td>
<td>N=40</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Achievement</td>
<td>N=40</td>
<td>N=40</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. INSTRUMENTS OF THE STUDY

It has already been stated earlier that the present study deals with three different aspects of assessment in psychology 1. Family status (2) Personality and (3) Jealous behaviour. The instruments used for the purpose are described below in some detail.

(A) DETERMINATION OF FAMILY STATUS

Two aspects of family status i.e., ordinal position and socio economic status in the family have been considered in the present research.
(i) FAMILY BIO-DATA FORM: Family Bio Data form has been prepared to know about personal biodata of the subject specifically in regard to his sex and ordinal position. This form consists of 12 points on which information about the family was sought from the subject.

For the present research first born and later born male and female adolescents who came under the age group of 14 to 16 years were selected.

(ii) SOCIO ECONOMIC STATUS SCALE (SESS): This test has been prepared by Dr. S. P. Kulshrestha (1987). From this test we can find out the socio-economic status of the subject. The test consists of 20 items and can be conducted among a group of 20 adolescents. The test is in the shape of a form and subject has to put a tick mark (✓) against the appropriate information.

The score is then calculated using a transparent scoring key and the marks for each page are written at the end of each page and the total score is obtained by adding up the scores of all the pages.

Adolescent scoring 223 marks or above are considered of high socio-economic status, those scoring 108 to 223 marks are considered of average and those scoring below 108 are taken as of low socio-economic status. In this way, this test was used to determine the socio-economic status of the subjects.

As we have to take adolescents of average socio-economic status, adolescents with a score of 108 to 223 marks have been selected for the present research.

(B) MEASUREMENT OF PERSONALITY (Achievement Motivation)

The present study deals with motivational aspect of the personality. The achievement motivation test was used to assess the level of achievement motivation. This test has been prepared by Dr. V. P. Bhargava (1994) and consists of 50 items.
which are mainly incomplete sentences and which are to be completed by selecting the appropriate answer from the three options putting a tick mark by (✓) against the correct one, thus, completing the sentence. Thereafter, with the help of scoring key one mark is given to each correct answer.

Those boys who score 23 marks and above are regarded as of high achievement motivation and those scoring 11 to 14 marks are classified as with low achievement motivation. Similarly, those girls who score 23 and above are considered of high and the girls who score 11 to 13 marks are considered as of low achievement motivation.

(C) MEASUREMENT OF JEALOUS BEHAVIOUR

Jealous behaviour of the subjects was measured with the help of a test. This test has been prepared by Ajawani and Sehgal (1997) and contains 35 items in all. The subject has to answer each item in terms of "Yes", "No" or "Indefinite" by putting a tick mark (✓) against "Yes" if he agrees with the question, "No" if he does not, and if he is doubtful then he should put tick mark (✓) against "Indefinite".

For items no. 1, 17, 18 and 34, score of 1 is assigned to "Yes" answer, score of 2 to "Indefinite" answer and score of 3 to "No" answer. While reverse scoring pattern is adopted for rest of the items.

3. EXPERIMENTAL DESIGN OF THE STUDY

With specification of the research problems and formulation of the hypotheses, the next consideration was that of selecting a suitable design so as to meet the requirements necessary to obtain empirical solution of the problems and verification of the hypotheses.

In order to meet the objectives, a 2X2X2X2 factorial design will be used in
the present study for four independent variables i.e., ordinal position, sex, achievement motivation and reward to study their independent and interaction effects on the dependent variable i.e., jealous behaviour of adolescents.

In control (non-reward) condition the subjects will be tested for their jealous behaviour after working solely in a non-competitive situation while the subjects of experimental (reward) group would be tested for their jealous behaviour after working in a competitive situation along with another student wherein the other student only will be declared successful and will be rewarded in front of the subject. An outline of the experimental design of the present study is given in Table 14.

Table # 14 : An Out-Line Of The Design Of The Present Study

<table>
<thead>
<tr>
<th>Group</th>
<th>First Born</th>
<th>Later Born</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Control (Non-Reward)</td>
<td>N=20 *</td>
<td></td>
</tr>
<tr>
<td>Experimental (Reward)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* There would be 20 subjects in each cell.

An outline of the plan for the present investigation is given in Table 14. The main features of the experimental design are summarized as below:

A total of 320 subjects would be drawn for 8 sub-groups i.e., first born males with high achievement motivation, first born males with low achievement moti-
vation, first born females with high achievement motivation, first born females with low achievement motivation, later born males with high achievement motivation, later born males with low achievement motivation, later born females with high achievement motivation and later born females with low achievement motivation. Each group comprises of 40 subjects which further be divided into two sub-groups i.e., control (non-reward) and experimental (reward) groups.

As per Kerlinger's (1986) principle of "Max Min Con" (Maximization of systematic variance, minimization of error variance and control over extraneous variance) steps were taken to control extraneous variables that would presumably influence the dependent variable. Two such extraneous factors age and socio-economic status will be considered for the control. Therefore, the variance attributed to factor (age of target person) will be eliminated by holding the age of the target person constant (14 to 16 years) and another extraneous variable-socio-economic status will be controlled in the present investigation by selecting adolescents of average socio-economic status only.

4. PROCEDURE

Data were collected in four steps. In the first step, after selecting the schools randomly from the list of schools of Durg and Bhilai cities, Family Bio-Data Form was administered on all the students of these schools studying in class X or Class XI ageing 14 to 16 years. On the basis of information obtained, 900 first born and 900 later born adolescents with male-females ratio of 1:1 were selected. Socio-Economic Status Scale was administered on this primary sample of 1800 adolescents. On the basis of scores on socio-economic status scale, only those (N=1200) scoring between 108 to 223 were selected for further study, considering them as of average socio-economic status. Thus, 1200 adolescents were selected randomly giving due consideration to first born and later born and male - females ratio as 1:1. That is, 600
subjects were first borns and 600 were later borns. Half of the subjects (N=300) were males and another half (N=300) were females in each group of first borns and later borns.

These adolescents were administered achievement motivation scale in a group of 20 to 30 students. On the basis of scores on achievement motivation scale subjects scoring above 23 were considered with high achievement motivation and males scoring 11 to 14 and females scoring 11 to 13 were considered with low achievement motivation. Finally 40 subjects were selected in each of 8 sub-groups randomly, formed on the basis of ordinal position (first born and later born), sex (male and female) and non-reward and reward conditions. In this way, 320 subjects were finally tested for their jealous behaviour. Half of these 40 subjects in each sub-groups were tested under control condition (non-reward) and another half (N=20) were tested under experimental condition (reward). The subjects in control (non-reward) and experimental (reward) groups were selected randomly.

Subjects of control (non-reward) group were studied for their jealous behaviour after performing on a non-competitive task in a solo situation while subjects of experimental (reward) group were tested for their jealous behaviour after performing in a competitive situation along with another student wherein the other student was declared successful and was rewarded by the experimenter in front of the subject himself.

The response measure was scores on jealous behaviour test. Only one subject was tested at a time for his jealous behaviour.