

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

Research methodology is the most significant aspect in designing and executing the research in systematic and scientific manner. If the procedure is stated clearly and systematically, there will be no difficulty in achieving the aims and objectives. In the planning of a study, the investigator attempts to select the design which is most appropriate to the particular problem. In the same way, the clear and systematic procedure avoids all the difficulties in the way of research and helps the investigator to achieve the aims and objectives in the study because planning includes the possibilities of better performance on all jobs.

In the present study the prime objective of the researcher was to see the effect of Post Matric Scholarship scheme on educational status of tribal students. This chapter deals with the methodological details adopted in this study under following headings:

- Hypotheses
- Research questions
- Sample technique
- Tools of the study
- Administration of scoring
- Statistical techniques

#### **Hypotheses**

To see the effect of Post Matric Scholarship on educational status of tribal students following hypotheses were framed by the researcher.

- There is no difference among components of educational status affected by Post Matric Scholarship among Schedule Tribes students in higher education.

- There is no significant difference in educational status between male and female Schedule Tribes Post Matric Scholarship beneficiaries in higher education
- There is no significant difference in educational status between rural and urban Schedule Tribes Post Matric Scholarship beneficiaries in higher education
- There is no significant difference in educational status of government and government aided college students of Post Matric Scholarship beneficiaries
- There is no significant impact of Post Matric Scholarship scheme on educational status of Schedule Tribes students in higher education

### **Research questions**

For qualitative research following research questions were frame by researcher.

- To explore the awareness and utility level of Post Matric Scholarship scheme among Schedule Tribes students in higher education
- To explore the motivation and challenges among Post Matric Scholarship scheme beneficiaries Schedule Tribes students in higher education.

### **Methodology**

In research work this part is the most crucial deciding the direction and motive of research. This part describes methods used in study for data analysis and interpretation. This stage also includes sampling technique, tool used for data collection, description of items, procedure of data collection, administration of scoring and statistical technique used on the basis of nature and objective of the study.

### **Method used**

There are various methods to conduct a research work like scientific method, experimental method, descriptive method, survey method etc. On the other hand interview, observation scheduled and focus group interview are the most commonly used tools for qualitative research. Selection of an appropriate method strictly depends upon the nature and objectives of the problem.

In the present study the investigator used mixed method approach for the research work. Further descriptive survey method was used for quantitative research and focus group interview observation was used for qualitative research by the investigator.

### **Population of the study**

A population is a large group of individuals having common characteristics selected for research work. The target population of the present study consisted of all the Schedule Tribes students who received Post Matric Scholarship and studying at degree colleges of Sambalpur sub-district.

### **Sample of the study**

A sample is the true representative unit of the whole population. The present study is conducted at degree colleges of Sambalpur sub-district.

### **Sample for quantitative research**

In the present study the researcher chosen 6 degree colleges out of 8 degree colleges of Sambalpur sub-district. Further, out of 6 colleges 3 colleges were from rural area and 3 colleges were from urban area. The sample was further stratified in two groups as Government Colleges and (2) Government Aided Colleges (4). Random sampling was adopted for data collection for quantitative research. Sample of 120 Schedule Tribes students who were beneficiary of Post Matric Scholarship

from 6 degree colleges of Sambalpur sub-district were selected through lottery method. Out of 120 students 60 male students and 60 female students were chosen by for quantitative research. For the data collection following colleges were selected:

**Table 9**

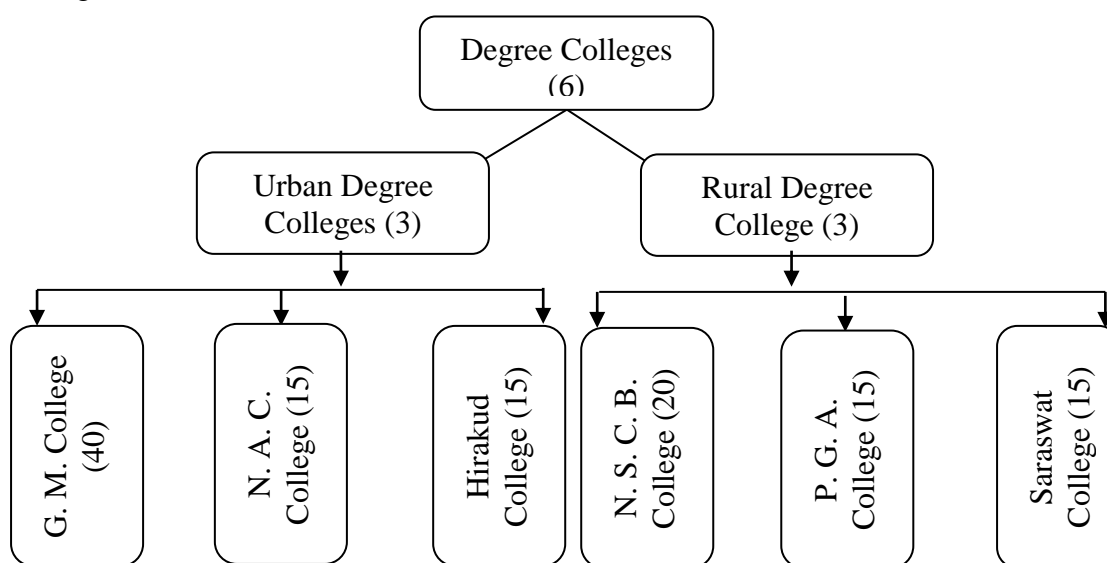
*The Degree colleges selected for data collection*

Sr.No.	Name of college	No. of students
1	Burla N.A.C. degree college	15
2	G.M autonomous degree college	40
3	Hirakud degree college	15
4	N.S.C.B. degree college	20
5	ParbatiGiri arts degree college	15
6	Saraswat degree college	15

**Sample for qualitative research**

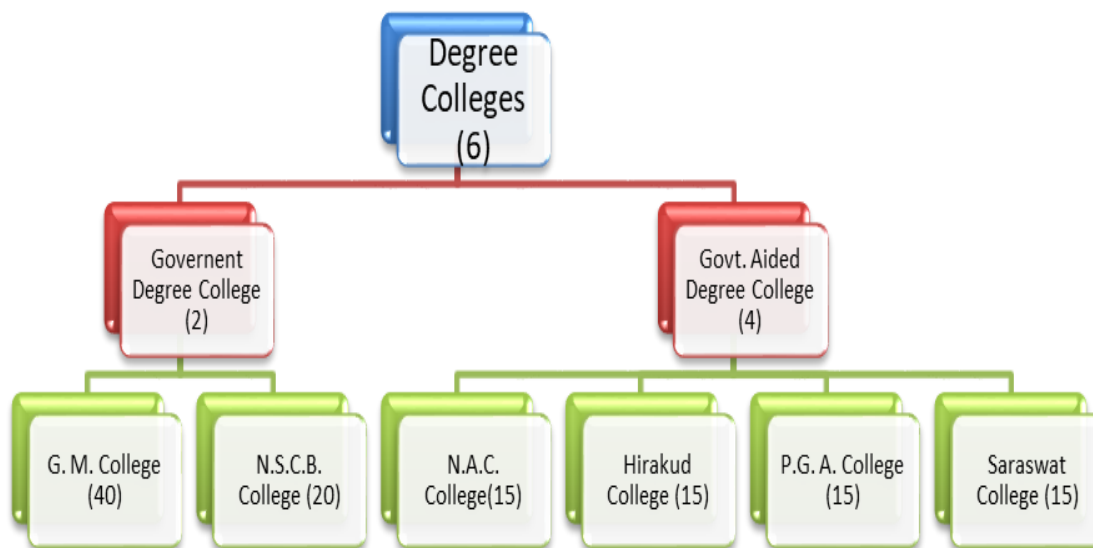
In the present study for qualitative research sample of 30 students by using simple random sampling was used. For the present study 5 students were randomly selected from each college.

figure 1



*Sample design on the basis of urban and rural degree colleges*

Figure 2



*Sample design on the basis of govt. Degree College and govt. aided Degree College*

### **Tools used**

The objective of the present study was to see the effect of Post Matric Scholarship scheme on educational status of tribal students. For this purpose the researcher used self-made questionnaire for quantitative research and focused group interview for qualitative data collection. The self-made questionnaire was first implemented for pilot survey on a group of 50 Schedule Tribes students of higher education institutions. After trial questionnaire was modified and reliability and validity was assessed with the help of SPSS.

### **Reliability of the questionnaire**

The test retest method was used for calculating reliability of the questionnaire. Researcher used test retest method for reliability of the tools. The researcher conducted a pilot study on 40 students to check the reliability of the tools. The reliability of the tool is 0.746.

### **Content validity**

Content validity is ascertained in the scale on the basis of expert judgment after preparing final questionnaire. For validity of the test the researcher sent the questionnaire to ten experts of department of education in different universities to judge the appropriation of each item.

### **Description of questions for quantitative data**

For the present study the researcher was developed self-made questionnaire for collection of data from students. The questionnaire had two groups where;

- **Group-A** consisted questions regarding awareness and utility level Post Matric Scholarship among Schedule Tribes students. The responses of these questions were recorded on the basis of 'YES' or 'NO' and 1 was given to correct response and 0 was given to wrong response.
- **Group-B** consisted questions regarding educational status of students. Further educational status of students divided into three dimensions such as academic progress (scholastic and co-scholastic), peer adjustment, motivation for higher education. Five point Likert scale was used to record the responses.

A detailed description of the questions was given in the following table:

**Table 10**

*Dimensions wise description of questions*

<b>Groups</b>	<b>Dimensions</b>	<b>No. of items</b>	<b>Maximum score</b>
<b>Group-A</b>	Awareness and utility of Post Matric Scholarship	6	6
<b>Group-B</b>	Academic progress	10	50
	Peer adjustment	09	45
	Motivation for higher education	10	50

## **Scoring of questionnaire**

In the study five point Likert scale is used to measure the responses of the respondent where the researcher category the scale as strongly agree (SA), agree (A), neutral (N), disagree (DA), strongly disagree (SDA) which contains 5 to 1 number. 5 is the highest score and 1 is the lowest score.

## **Tools for qualitative research**

### **Focus group interview**

Focus Group interview is a type of in-depth interview accomplished in a group for qualitative data collection. A focus group is group interview where a small group of individual having same characteristics who focus discussions on a given issue or topic” (Anderson, 1990, p.241). According to Denscombe (2007, p.115), “focus group consists of a small group of people, usually between six and nine in number, who are brought together by a trained moderator (the researcher) to explore attitudes and perceptions, feelings and ideas about a topic”. The participants influence each other through their answers to the ideas and contributions during the discussion. The moderator stimulates discussion with comments or subjects. The general characteristics of the Focus Group are people's involvement, a series of meetings, the homogeneity of participants with respect to research interests, the generation of qualitative data, and discussion focused on a topic, which is determined by the purpose of the research (ISRC working paper, 1998).

For exploring various challenges faced by Schedule Tribes students in getting scholarship, effect of the scheme on their motivation for higher education and utilisation of scheme to enhance their educational status and adjustment in society researcher conducted focused group interviews with 30 Schedule Tribes students studying in various government and government aided colleges. For focused group

interview a group of 5 students from a college was selected. To further explore the various nuances of scheme an in depth interview was also conducted with college principals. Field notes and observations were taken at the time of interview. These field notes were analysed and common themes were selected for data analysis.

### **Procedure of data collection**

The investigator went personally from college to college to collect appropriate data from the respondents. First, the investigator met the principals of the college and gave him /her introduction and the purpose of visit. With the permission of college Principal researcher collected information about the STs students who received Post Matric Scholarship. Then researcher personally visited to the students and briefed them about purpose of research. The investigator told them that responses would be kept confidential and will be used only for research purpose. Each student was handed over with a questionnaire to record his or her answer. For qualitative focus group interview the researcher visited again college to college. The researcher first convinced to students and created amicable environment for focus group interview.

### **Statistical techniques**

In the present study the researcher used percentage, t-test, principle component analysis and regression test for data interpretation and analysis with the help of SPSS statistical software. For qualitative analysis field notes were used for data interpretation.

### **Techniques for quantitative study**

**Percentage:** Percentage is the simple statistical technique used in research for interpretation and analysis of numerical number into percentage. In the present study the researcher used percentage for analysis and interpretation of awareness and utilization of Post Matric Scholarship among Schedule Tribes students.



**t- test:** The t-test is used to compare the mean of two groups. In the present study the researcher used t-test to see the difference between male and female, rural and urban college students and Government College and Government aided college students of Post Matric beneficiaries.

**principal component analysis:** Principal component analysis technique is used when the researcher is interested to identifying a smaller number of factors underlying a large number of observed variables. In the present study the researcher used principal component analysis (PCA) with the help of SPSS-22 to see the principal component educational status of student which was mostly affected by Post Matric Scholarship Scheme.

**regression:** Regression analysis is a statistical technique used to assess the relationship between one dependent variable and several independent variables. In the present study the researcher used linear regression technique with the help of SPSS-22 statistical software. This technique is used to see the effect of Post Matric Scholarship (independent variable) on educational status (dependent variable) of Schedule Tribes students.

#### **Technique for qualitative study**

**content analysis:** In the present study content analysis is used for qualitative analysis of data. It is a set of procedures widely used as qualitative technique of collecting and organizing information in a standardized format for making replicable and valid inferences of data from the written texts and other recorded materials. It provides insights, develop researcher's understanding of particular phenomena of research (Krippendorff, 1980). It is the best method to develop an understanding of the meaning of communication of any issue (Cavanagh, 1997) and to identify critical processes of the particular issues (Leaderman, 1991). In the present study the purpose

of using content analysis is to explore the effect of Post Matric Scholarship Scheme on educational status and challenges faced by the Schedule Tribes students for higher education.