CHAPTER - 2

MATERIALS & METHODS
2.1. Introduction

The success of any research design always depends upon a well controlled sample and a defined methodology for collecting the relevant data. The first step is to plan the whole investigation and then to decide on its scale, the method to be used, the timing of the study and type of the questions to be asked or the type of information to be recorded. Wood (1969) has suggested mainly five methods such as (i) investigating user needs, (ii) questionnaire, (iii) interviews, (iv) diaries and (v) observation and analysis of existing data. However, individual methods do not give any objective assessment of the situation and there is, therefore, a tendency for use of several methods jointly. The interview/discussion method has the advantage of allowing precise formulation. Thus most desirable approach with regard to the choice of the method depends upon the particular problem and on the time and resources available along with the desired degree of accuracy.

While planning the study, the most important thing is to determine the size of the sample to be investigated. The published literature does not provide any clear guidelines for that. The sample in the studies on the status and job satisfaction of academic librarians varies significantly. For example, (Kim 1980) has considered 380 academic librarians employed at 20 universities in the 5 selected midwestern states of U.S.A. in a study to identify the factors affecting salaries whereas Harris & Tague (1989) have taken only 26 libraries of which 12 were females and 14 were males.
in a survey with a purpose to determine the patterns which would characterise two careers of male and female leaders in Canadian Librarianship. In another study Vaughn & Dunn (1974) have considered 265 full time employees from 6 University libraries of USA for measuring their job satisfaction in the areas of work, pay, promotion and supervision where as Braunagel (1975) has made the survey on job mobility as related to career progression of 530 female academic librarians. Few workers have reported the results of studies by considering their samples from different levels of workers in the same environment. For example, Smith & Schafield (1973) considered a sample of 34 University librarians, 182 professionally qualified librarians and 129 library staff who were graduates without having the formal library science qualifications in a survey relating to pay and salary scales, service conditions and job expectations where as in India, Khanna (1981) has considered in his study a sample of 22 University librarians, 16 deputy librarians, 60 assistant librarians and 142 non-supervisory professionally qualified staff (total sample 240). Few others have worked with a combination of University and College libraries in their samples. For example, Yoo (1988) has considered a total of 244 librarians working in Universities and Colleges of USA whereas Dow (1977) considered 166 libraries working in 41 colleges and universities of New York state in a study on faculty status of librarians. Status and job satisfaction of librarians of academic institutions have also been reported in the literature. Hayden (1979) has collected data from 121 librarians employed at four year public and private institutions in Texas to make a
comparative study of the faculty status of college and university librarians whereas Harwood (1981) has considered 142 undergraduate librarians in a survey to determine their perceptions regarding their functions, roles and characteristics.

DeWeese (1972) in an exploratory study has considered 39 professional librarians to test the relationship between status concerns and professionalisation of individual university librarians. Hayman & Schlachter (1973) considered a sample of 216 professional librarians to determine their reactions to the concept of faculty status. The sample considered by Plate & Stone (1974) consisted of two groups of librarians, one American (162 persons) and the other Canadian (75 persons) in two studies to determine the factors affecting librarians' job satisfaction. Simon & Amaral (1989) considered a very small sample of 26 library staff members to evaluate the personnel status and to develop a survey instrument that would enable the staff to rate and give their comments/opinions of the directors' leadership, communication and professional growth. Professional status of library professionals have also been studied by other researchers from a different angle i.e. by analysing the attitudes/opinions of the persons other than library professionals but closely associated with them. For example, Byerly (1979) has taken a sample of 45 Ohio academic library directors in a study to determine the extent to which academic librarians in institutions of higher education in Ohio have achieved faculty status as defined by the ACRL standards for Faculty status for college and University librarians, whereas
Bhuiya (1981) considered the opinion of 351 faculty members from 30 institutions to ascertain the image of academic librarians among the faculty members. A survey of administrators' opinion and attitudes towards the desirability of faculty status for academic librarians was conducted by English (1983) by considering a sample of 89 US academic institutions of the Association of Research Libraries, whereas Divay, Ducas & Michaud-Oystryk (1985) have considered the opinion of 1095 faculty members of the University of Manitoba in a study to determine their perceptions towards the faculty status for librarians and the extent and nature of the faculty librarian interactions. Thus the sample size in these investigations vary greatly.

In the present investigation the sample consisted of a combination of 42 University library personnel and 164 college library personnel i.e. 206 academic library professionals of Orissa.

Regarding the methods of data collection, they can be direct or indirect (Bhatt, 1976). The most popular method of collecting data in a survey is the questionnaire (Grubb, 1982; Amy, 1983; Allen, 1987). English (1983), Kilpatrick (1982), Khanna (1981), Kim (1980), Hayden (1979), Hayman & Schlachter (1973) and many others have used mailed questionnaires for collecting data in their studies. However, there are difficulties in using mailed questionnaire as the principal source of data collection. One such difficulty is question wording bias which
is to be avoided, otherwise it may mislead the survey to wrong results (Bennion, 1982). Next to the questionnaire most of the surveys are made on personal interviews either directly meeting the respondents or contacting them over telephones. Personal interviews, allowing a high response rate, direct interaction between the surveyor and the surveyed, question clarification and the elaboration of data through the minimization of unclear answers, is conceptually the superior form of study technique (Chen & Herron, 1982). A combination of questionnaire and personal interviews was adopted by Simon & Amaral (1989), Harris & Tague (1989) and Plate and Stone (1974) in their works for the purpose of data collection. The primary drawback of personal interviews is the highest and longer time involvement even in a sample population of moderate size. Telephone interviewing retains many of the advantages of personal interviews, while minimising costs significantly. This technique is considered to be more cost-beneficial when compared with the personal interviews (Grover & Kahn, 1979). But telephone interviewing is not possible in India. Most of the towns and Semi-urban areas of India are deprived of this telephone facility. This leaves no alternative in the present investigation than to meeting each of the respondents of the sample personally at his/her institution and conduct the interview for data collection. In the light of the size of the sample considered by earlier workers as evidenced from the published literature wherever personal interviews were made as methods of data collection, the sample considered for this investigation seems to be adequate for a project of this type. Thus the most recommended method for collection of data in the Indian context could only be the
2.2. THE SETTING

2.2.1. ORISSA: AS AN INDEPENDENT STATE

Orissa is a land of hoary antiquities and magnificent artistic achievements with a rich cultural heritage. Orissa has become the workshop of Indian art and architecture through the ages. The famous ancient Indian University at Puspagiri in Orissa was a centre of learning and research like Nalanda which attracted innumerable scholars from abroad. Now Puspagiri lying buried under the Buddhist complex at Ratnagiri-Lalitgiri-Udaigiri of Orissa. Thus Orissa has contributed her immense share in making Indian history and culture as well as civilisation.

Orissa was constituted as a separate province from the 1st April, 1936 and after independence those small princely states who flourished in Orissa under separate administration by the British regime were merged in the greater Orissa. Now Orissa has an area of 155,842 sq. kilometres, divided in to 13 revenue districts, 57 sub-divisions and 314 blocks consisting of 50,887 villages, 27 municipalities and 72 Notified Area Councils and a population of about 4 crores with a density of about 250 persons per square kilometres, and 28% of its population are literates.
2.2.2. **Universities and their libraries**

In Orissa there are 5 Universities and about 475 Colleges of different categories (Fig. 2A). The Utkal University is the oldest and occupies the seventeenth position among Indian Universities, established in 1943 at Cuttack as an examining-cum-affiliating University which started functioning with 5 Colleges to cater to the educational need of the entire state. Gradually it changed its character from affiliating one to both affiliating and teaching and it is shifted to its present site at Vani Vihar, Bhubaneswar since 1962. The jurisdiction of Utkal University which used to extend to whole of the state of Orissa was again defined under the new legislation, the Orissa Universities Act, 1966 when two new Universities namely Berhampur University and Sambalpur University were created. However, now the Utkal University has jurisdiction over the districts of Cuttack, Puri, Balasore and Dhenkanal (except the sub-division of Athamallik), over an area of 21,513 sq. miles. At present this University has 256 affiliated Colleges, two constituent Colleges, 24 Post-Graduate teaching departments leading to the field of Arts, Science, Commerce and Humanities. The Utkal University library was founded in 1946 at Cuttack and in 1962 it was shifted to its newly built building at Vani Vihar, Bhubaneswar. Without the total staff strength, staffing pattern and the nature of collection of Parija Library (Central Library named after Late Dr. P. K. Parija, founder Vice-Chancellor of Utkal University), this University has two constituent college libraries. The old one is Madhusudan Law College Library at Cuttack established
in 1949 and the second one is at the present University campus namely University Law College Library at Vani Vihar. These two libraries cater to the needs of about six thousand students, two hundred teachers and about one hundred researchers.

This University has two study centre libraries i.e. one at Ravenshaw College, Cuttack and the other at B.J.B. College, Bhubaneswar managed by one Assistant Librarian, each. Also this University has a good library attached to the Directorate of Correspondence Courses managed by a professionally qualified librarian and this library caters to the needs of about five thousand students and fifty teachers.

In 1962, the Orissa University of Agriculture and Technology was established at Bhubaneswar. The total jurisdiction of this University extends to the whole of the state. This University has its centralised library system for all its five constituent colleges with 18 Post Graduate teaching departments. Its central library was established in 1964 which now caters to the needs of about two thousand students, five hundred teachers, one thousand employees and one thousand research scholars of 18 Post-Graduate departments. This central library has about 2 lakhs of books and back volumes of periodicals and it subscribes 500 current periodicals on different subjects. It has a staff structure of one Chief Librarian, two Assistant Librarians, one Documentalist, Junior Librarians and technical assistants. Further it has organised a good documentation section managed by a documentalist for extending information services to the users. This University has two constituent colleges i.e. one at Gopalpur
and another at Chipillima, Sambalpur and both the Colleges have their libraries managed by professionally qualified and experienced librarians.

In 1967, the Berhampur University was established having its jurisdiction over the districts of Ganjam, Koraput and Phulbani and its library was set up in 1968 with a small collection of books and periodicals and it was housed in a rented building at Berhampur town. Later it was shifted to the Student's Day Home building in the University Campus, Bhanja Bihar in the year 1973. Now it is functioning in its own newly constructed building in the University premises with a stock of about 1,75,000 books and 400 current periodicals of different disciplines such as Arts, Sciences, Commerce and Humanities. It has a staff structure of One University Librarian, 4 Assistant Librarians, 8 Library Assistants. The use of the library is available to all the employees of the University, local members, registered students and research scholars of the University. Also this library extends its services to the students and teachers of the affiliated colleges of this University for their reference and research guidance. This university has 87 affiliated Colleges having their own libraries for catering to the needs of their students, teachers, researchers and allied staff. But unfortunately, most of these college libraries are managed without properly qualified professional staff. This University has one constituent College Library namely Lingaraj Law College Library in the Berhampur town which caters to the needs of 1500 students, teachers as well as 200 general members.
Also this University has set up a study centre library in the Berhampur town which renders free service to the students of five local colleges.

The Sambalpur University was established in 1967 to meet the educational needs of the Western Orissa. This has the jurisdiction over the districts of Sambalpur, Sundargarh, Bolangir, Kalahandi and Athamallik sub-division of the district, Dhenkanal. This University was housed in Sambalpur town and later on it was shifted to its new campus, Jyoti Bihar at Burla, near the Hirakud Dam, on the embankment of river Mahanadi. Now this University library is functioning in its new building. It has a collection of books and back volumes of periodicals of about 1,60,000 and it subscribes 500 current periodicals on different subjects covering Arts, Sciences, Commerce, Humanities and Engineering and Technologies. This library caters to the needs of about 2000 students, 300 teachers, 500 employees of different categories, and 200 research scholars. This library has a staffing pattern of one University Librarian, three Assistant Librarians and 10 Library Assistants, as professional staff and 15 other supporting staff.

There are 65 affiliated Colleges under the jurisdiction of Sambalpur University and each college has its own library for providing library services to its community. This University has two constituent college libraries. One is the University College of Engineering, Burla, established in 1956 has a good library which caters to the needs of 1500 Graduate and Post-Graduate Students, 200 teachers and about 200 other employees as well as research
scholars of the college. Another constituent College which is situated at Sambalpur town namely Lala Lajpatrai Law College has its library with a good collection of books for catering the needs of about 2000 students and teachers and 200 general members.

In 1981 another new University namely "Sri Jagannath Sanskrit Viswavidyalaya", at Puri was created by an act passed in the State Legislature for the development of higher learning and research in Sanskrit. This University extends to the whole of the state. It has established its library in a rented building since 1982 to cater to the needs of teachers, students and research scholars. This University library is being managed by one Assistant Librarian and two library assistants.

2.2.3. Colleges and their libraries

Orissa has altogether 475 colleges (Fig. 2A) which are categorised as follows:

A. General
- Government Colleges - 55
- Private Colleges (aided by the Government) - 178
- Private Colleges (run by private management) - 155

B. Medical
- Government Medical Colleges - 3
- Ayurvedic Medical Colleges (Government) - 2
- Ayurvedic Medical Colleges (Private) - 4
- Homeopathic Medical Colleges (Government) - 1
- Homeopathic Medical Colleges (Private) - 4
<table>
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<tr>
<th>C. Engineering</th>
<th>Regional Engineering College (REC) - 1</th>
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<tr>
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<td>State Government Engineering Colleges - 2</td>
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<tr>
<td></td>
<td>University Engineering College - 1</td>
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<tr>
<td></td>
<td>Private Engineering Colleges - 2</td>
</tr>
<tr>
<td>D. Music and Arts</td>
<td>Government Colleges - 3</td>
</tr>
<tr>
<td>E. Teacher's Training/</td>
<td>(NCERT) Regional College of Education - 1</td>
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<td>Education</td>
<td>Government Colleges - 8</td>
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<td></td>
<td>Private Colleges - 12</td>
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<tr>
<td>F. Physical Education and Training</td>
<td>Government College - 1</td>
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<td></td>
<td>Private College - 1</td>
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<tr>
<td>G. Law</td>
<td>Government Colleges - 1</td>
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<tr>
<td></td>
<td>University Managed Colleges - 4</td>
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<tr>
<td></td>
<td>Private Colleges - 12</td>
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<tr>
<td>H. Library and Information Science</td>
<td>Private Colleges - 3</td>
</tr>
<tr>
<td>I. Business Administration and Management</td>
<td>Private Colleges - 3</td>
</tr>
<tr>
<td>J. Management and Accountancy</td>
<td>Government College - 1</td>
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<tr>
<td></td>
<td>Private College - 1</td>
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<tr>
<td>K. Social work and Social Science</td>
<td>Private College - 1</td>
</tr>
<tr>
<td>L. Fisheries, Agriculture and Technology, Veterinary Sciences.</td>
<td>University managed Colleges - 5</td>
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In Orissa the number of colleges have been increased since independence. In 1950, the total number of colleges was only 15 which increased to 475 in 1991. Similarly the number of students and teachers in these colleges has also increased enormously. All the colleges have their libraries for catering to the needs of the students, teachers and researchers. The book stock of the college libraries varies from 2000 volumes to more than one lakh. Those College libraries which have received financial assistance either from the University Grants Commission, India or from the State Government for the construction of library building, purchase of equipment and furniture, purchase of books and periodicals, are in a better condition to provide required services to their users. On an average, the staff strength of the College libraries vary from 2 full time staff to 20 staff members depending upon the nature and size of the library.
2.3. MATERIALS

2.3.1. Sample of the present study

The sample in this study consists of the library personnel from all the Universities, degree and post-graduate colleges and junior Colleges of the State. Persons possessing a basic graduate degree as well as a degree or diploma or certificate in Library and Information Science are only considered for this investigation. Out of a total of 475 college libraries of the state considered, only 250 college libraries had at least one trained graduate in the staff and the rest of the college libraries were managed by persons without any professional qualifications. Out of the 250 colleges, 206 persons were chosen as the sample. 44 professionally qualified persons could not be considered in the sample due to various reasons such as (i) long leave during the period of investigation, (ii) non-availability even after repeated approaches, (iii) non-co-operation at the time of interview, etc. The distribution of the sample is as follows:

1. University Library personnel - 42
   i) Chief Librarians - 5
   ii) Assistant Librarians/
       Junior Librarians - 23
   iii) Technical/Professional
        Assistants - 14

2. College Library personnel - 164
   i) Librarians/Senior Librarians - 105
   ii) Assistant librarians/Junior
       Librarians - 59
Thus a sample of 206 academic library professionals from different College and University libraries, identified for this investigation, was divided in the following manner for easy and systematic analysis:

(i) University Library Supervisory — 28
(Librarians, Assistant Librarians/Junior Librarians)

(ii) University Library Non-supervisory — 14
(Technical/Professional Assistants)

(iii) College Library Supervisory — 105
(Librarians/Senior Librarians, Assistant Librarians/Junior Librarians, where they hold the top position)

(iv) College Library Non-Supervisory — 59
(Assistant Librarians/Junior Librarians, where they are subordinate to librarians/senior librarians)

2.4. METHODS

The most common method of measuring the status and job satisfaction of personnel is to design a suitable questionnaire for the analysis of the jobs and for measuring their satisfaction in the areas of work, pay, promotion and supervision. Vaughn & Dunn (1974) used such a job description Index in their study of full time employees of the Universities. Nzotta (1985) also made a study on the factors associated with job satisfaction of male and female librarians of Nigeria by adopting Minnesota Satisfaction
Questionnaire consisting of 20 item questions which measured 21 dimensions of job satisfaction and the responses to these items were made on a Likert type scale of a maximum 5-point scale. D'Elia (1979) collected data from the librarians as to their sex, type of library in which they worked, their vocational needs (using Minnesota Importance Questionnaire), the characteristics of their job environments (using the Minnesota Job Description Questionnaire) and their job satisfaction (using Minnesota Satisfaction Questionnaire) in order to determine job satisfaction among beginning librarians. Several others (Swe, 1981; Glasgow, 1982; Jegg, 1982; Swasdison, 1989) have also used such questionnaires in their studies of status and job satisfaction of librarians. One of the best examples of using a job analysis questionnaire is the Sheffield Manpower Project in which an extensive questionnaire was developed to enable them to compare different types of jobs in different types of libraries and information units. The questionnaire dealt with (i) identification of work done, (ii) change (past and future) in work and in terms and conditions of employment, (iii) the pattern of the work, (iv) responsibility in work, (v) contact with people, (vi) informational aspects of the job, (vii) physical nature of the work and the working environment, and (viii) demographic particulars about the respondent. In the present study also an extensive questionnaire was developed based on the salient features of the above mentioned questionnaires but only after modifying them suitably to the needs of the Indian situation.
2.4.1. The Questionnaire

Keeping the purpose of the investigation in view a detailed questionnaire (Appendix 2B) was designed and with the help of the questionnaire each of the respondents was interviewed. The questionnaire was filled up by the investigator while interviewing the respondents. Brief notes regarding the socio-economic background, working environment, his/her approach and attitudes in answering as well as his/her co-operation in the interviewing process were noted after the interview. Brief descriptions regarding different aspects of the questionnaire are given in the following paragraphs.

Main Sections

The main sections of the questionnaire are as follows:

A. Identification of work actually done.
B. Pattern of and responsibility in the work.
C. Physical nature of work and working environment.
D. Satisfaction towards basic needs of human life.
E. Job attitude measurement.
F. Status evaluation.
G. Overall job satisfaction.
H. Demographic characteristics about the respondent.

Brief discussions regarding each of the above mentioned sections are given below.
A. **Identification of work actually done**

The purpose of this section is to get a clear account of the work actually done by the respondents. The questions of this section have dealt with the following aspects:

1) **Aim and objective of the job**

2) **Main activities actually performed.**

3) **Critical activities i.e. jobs which the respondents enjoy most, dislike most and the jobs which take respondents most of the time.**

4) **Other activities which the respondent is capable of doing.**

5) **Nature of personnel required to perform the activities actually done by the respondent, such as sex, educational background, past experience, special skills, etc.**

B. **Pattern of and the responsibility in the work**

The purpose of this section is to obtain the general pattern of and the responsibility of the work done. The questions of this section have dealt with the following aspects:

1) **Nature and characteristics of job such as variety, regularity, tempo or pace, interruptions during the work, involvement with non-professional activities, freedom of choice and type of supervision.**

2) **Involvement of the responsibility for other people.**
C. Physical nature of work and working environment

The purpose of this section is to get a description of the physical nature of the work and the working environment the respondent is involved. The questions of this section have dealt with the following aspects:

i) Physical nature of work involving eyesight; hearing; calmness, queiteness and seriousness; performance by standing; performance by carrying or lifting heavy things; performance by climbing up or down stairs; need of special physical demand to perform the work; and need for any other special characteristics to carry out the work satisfactorily.

ii) Various features of working environment such as noise, ventilation, work space, general environment from hygenic point of view, furnitures and any other features. In this case the respondents were asked to specify how much satisfactory these features were in their organization.

iii) Time, events or incidents on the job environment when the respondents have felt particularly good and bad.

D. Satisfaction towards basic needs of human life

The purpose of this section is to determine to what extent the respondents have felt that their job has provided for the basic needs of the human life. The respondents were asked to express their feelings towards:

i) provision towards basic needs i.e. food, cloth and shelter,
ii) security and safety,

iii) involvement,

iv) potentiality of sufficient success,

v) provision of social prestige as a respectable citizen in the society, and

vi) satisfaction of needs upto expectation.

E. Job attitude measurement

The purpose of this section is to measure the attitude of the respondents towards different aspects of their jobs. Few statements relating to their job are given with a 5 point rating scale and the respondents were asked to indicate the point which was closed to their feeling.

**Examples:**

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree to some extent</th>
<th>No particular opinion</th>
<th>Dis-agree to some extent</th>
<th>Strongly disagree</th>
</tr>
</thead>
</table>

1. I have ample opportunity to work independently in the organisation  
   2 1 0 1 2

2. The overall working conditions I have been provided so far are good  
   2 1 0 1 2

The statements are related to the following aspects of the job:

1) full engagement

2) independence in work
iii) attention of the people around
iv) relation with co-workers
v) Co-operation of staff
vi) freedom of work
vii) working condition
viii) salary
ix) ease of administrative practices or policies
x) behaviour of users
xi) role of the head of the institution
xii) interference of teachers.

F. Status evaluation

The purpose of this section is to finding out the respondent's sincere feelings towards the status of their job. The questions of this section have dealt with the following sections:

i) respondents' preference to type of status i.e. academic or faculty status.

ii) Criteria preferred for evaluating performance in case of promotion.

iii) Status equal to that of teachers.

G. Overall job satisfaction

The purpose of this section is to determine the overall job satisfaction of the respondent. The questions of this section have dealt with the following aspects:
i) interference of faculty members (teachers) in the ordering of books

ii) role of faculty members in working decisions regarding library procedures and policies

iii) conflict with faculty members

iv) dissatisfaction regarding the present job

v) Comparison with similar positions regarding status

vi) Satisfaction in progress towards future goals

vii) fulfillment of expectations

viii) desire to continue for a long time.

H. **Demographic characteristics about the respondent**

The last section of the questionnaire is meant for the demographic characteristics about the respondent. The questions of this section have dealt with the following aspects:

1. **Personal characteristics**

   i) Age, sex, marital status, place of birth

   ii) Salary range

   iii) Educational qualifications

   iv) schedule of jobs

   v) reasons in opting for librarianship

   vi) Family background i.e. number of family members, principal earning member, head of the family.

   vii) physically handicapped, if any

   viii) accommodation

   ix) travel pattern.
2. Library characteristics

i) duty hours
ii) total collection
iii) accommodation
iv) staff
v) headship
vi) membership in library associations
vii) membership in club, society, associations other than librarianship
viii) participation in library conferences, seminars, etc.

2.4.2. Personal interviews

With the help of a questionnaire each of the respondents was interviewed personally by the investigator and answers to few questions were filled up during the interview while few were filled up after it, but before the beginning of another interview. The serial number of the interview, the code and place, the date and time of duration and the remarks, if any, on the interview were also noted in the record sheets which were kept for future reference.

2.5. RECORDING AND TABULATION OF DATA

The data thus collected were recorded in specially designed slips and compiled them for tabulation. Wherever possible statistical techniques were applied to interpret the data. The percentages in the tables are provided with maximum up to two digits, but the percentages are not rounded in all cases to make them 100. The standard deviations, though in many cases, are very high, are provided to interpret their corresponding averages.