CHAPTER III
RESEARCH DESIGN

The research design which is employed in the present study is described below:

1. SELECTION OF THE SAMPLE

The population in this study consists of library professional staff working in university, and special libraries of Andhra Pradesh. The libraries attached to the universities or the institutions deemed to be universities or the institutions which have been status of a university are considered as university libraries. There are fifteen university libraries in Andhra Pradesh which fall in any one of the above categories of the definition. There are 198 professional staff working in those university libraries.

The libraries attached to the research organizations, research laboratories, organizations which have been established for providing help to research activities, industrial organizations, government departments, and specialized training institutes are considered as special libraries for the purpose of this study. There are 54 special libraries which fall in any one of the above categories of special libraries. There are 168 professional staff working in those special libraries. In total,
there are 366 professional staff members working in university and special libraries of Andhra Pradesh. Since the population is too large to study completely in view of time and cost involved, a sample consisting of 256 persons (approximately 70%) has been drawn from the population by the method of simple random sampling. However, the investigator received responses only from 195 persons (53% of the total population). The professional staff working in college and public libraries were not covered in this study.

Table 3.1 shows the distribution of professional staff both in the sample and in the population according to the type of the library.

<table>
<thead>
<tr>
<th>Library</th>
<th>Professional staff in the sample</th>
<th>Professional staff in the population</th>
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</thead>
<tbody>
<tr>
<td>1. University</td>
<td>59.0</td>
<td>54.1</td>
</tr>
<tr>
<td>2. Special</td>
<td>41.0</td>
<td>45.9</td>
</tr>
<tr>
<td>Total</td>
<td>100 (n=195)</td>
<td>100 (n=366)</td>
</tr>
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</table>

It is evident from Table 3.1 that out of the total
professional staff in the population, 54.1 per cent of them belong to university libraries and the rest 45.9 per cent belong to special libraries. It is also evident from it that 59 per cent of staff in the sample belong to university libraries and the rest 41 per cent belong to special libraries. Hence, both university and special library staff are represented in the sample more or less in the same proportion as they are in the population.

2. INSTRUMENTS USED

To measure job satisfaction and to find out its relation to age, sex, marital status, level of education, type of the library, level of joining, managerial level, salary, expectation of pay, experience, distance between residence and working place, professional involvement, utilization of professional knowledge, recognition for the work done, promotions and chances of rise, job challenge, job autonomy, intrinsic motivation, job involvement, supervisory support, job participation, work involvement, organizational involvement, attitude towards profession, job performance, willingness to leave the organization and ranking of incentives, different measures have been constructed or adopted. They have been described in the following paragraphs.
2.1 *Job Satisfaction*

Different techniques have been used for measuring job satisfaction by different investigators depending upon the nature of the problem and the sample. The first attempt to measure the job satisfaction was probably made by Hoppock (1) using a detailed questionnaire. In 1948, Kerr (2) developed another device known as 'Kerr Tear Ballot'. It has 5 point items that are answered by making a tear at one of the five points. Woods (3) has developed a 97 statement of job satisfaction scale which includes seventeen factors. Johnson (4) developed a satisfaction questionnaire and referred to it as an adjustment questionnaire. This was primarily meant to be administered on teachers. Vaughan and Dunn (5) used Job Description Index devised by Smith et al. (6) to measure job satisfaction of professional librarians working in university libraries. Wahba (7) also used the same measure in studying the job satisfaction of librarians working in 23 academic libraries of USA. However, Azad (8) made job satisfaction study of para professional librarians working in eight universities in Pennsylvania, Ohio, West Virginia using Minnesota Satisfaction Questionnaire. D'Elia (9) also employed the same questionnaire.

Kornhauser (10) has suggested three types of employee attitude measures: (i) free answer interviews including
guided and unguided interviews, (ii) oral attitude questionnaire (simple interview schedule with fixed responses, and (iii) printed questionnaires based on check lists, dichotomous choice or scaled choice. Edwards(11) suggested six types of attitude measures namely (i) guided interview (ii) unguided interview, (iii) questionnaire, (iv) attitude scale, (v) impressionistic method, and (vi) indirect method. The most often used measure among the various attitude measures is that of attitude scales. There are three major kinds of attitude scales which are in use today. They are: (a) Thurstone(12) method of equal appearing intervals, (b) Likert's(13) summated rating scale, and (c) Guttman's(14) scale analysis. Bartlett(15), Riker (16), Edwards(17), Edwards and Kenny(18), Edwards and Kilpatrik(19), Garrett(20), Bray(21) and Vernon(22) have extensively discussed these scales, described their merits and demerits and suggested modifications.

In the present study, a scale has been constructed by the investigator to measure the job satisfaction of professional staff. It is based on Likert's method of summated ratings with the practical advantages of simplicity and ease of construction at the same time. Help also has been taken from already existing job satisfaction scales like 'Job Description Index' devised by Smith et al.(23) in the construction of the scale. The scale
incorporates the following dimensions of job satisfaction:

a. Satisfaction with nature of work;
b. Satisfaction due to pay;
c. Satisfaction regarding the scope for promotions and promotional policies;
d. Satisfaction with technical and human relations aspect of supervision;
e. Satisfaction with co-workers;
f. Satisfaction with regard to opportunities for professional development;
g. Satisfaction due to security of the job;
h. Satisfaction with the reading community;
i. Satisfaction in relation to library's/institute's policies and administration (which include functioning of the library committee, opportunities to submit complaints or to make suggestions, and general policies and administration); and
j. Satisfaction with working conditions (which include working hours, physical working conditions, materials and equipment necessary to perform job successfully, housing facilities, medical facilities, rules regarding leaves and employee benefit schemes).
The scale consists of forty two statements and each statement has five alternative answers. Each alternative has a score assigned to it. For example, for the question 'How Satisfied are you with the housing facilities that your institute is providing?', there are five alternative answers. They are Highly satisfied, Satisfied, Neither satisfied nor dissatisfied, Dissatisfied and Highly dissatisfied. Score values of 5, 4, 3, 2, and 1 have been assigned to these alternative answers respectively. The total score of the employee which is the sum of the scores assigned to alternatives which the respondent checks, indicates one's attitude towards significant aspects of job. This score is considered as overall job satisfaction score. The maximum and minimum possible score for this scale are 210 and 42 respectively. A high score indicates more job satisfaction.

The total score of a person on a significant aspect of job such as pay can easily be got by adding the scores of those questions which are concerned with pay.

2.1.1 Reliability and Validity

The fundamental purpose of standardizing a psychological test is to establish its reliability and validity at a high level as possible. In the present study, the reliability of the scale was tested by split-half method
on thirty library professional staff working in university and special libraries of Andhra Pradesh selected by simple random method. The reliability was determined by using the Spearman-Brown formula (24). It was found to be 0.924. Its validity was also tested by the investigator.

2.2 Job Challenge Scale

A nine item scale based on Schneider et al. (25) was used to measure the challenging nature of the job. Each item is to be responded on a 5 point scale.

2.3 Job Autonomy

It is a four item scale. Each item is to be responded on a 5 point scale.

2.4 Intrinsic Motivation

A four item scale, based on Lodhal and Kejner (26) and modified by Lawler and Hall (27), was used to measure the intrinsic motivation of the job. Each item is to be responded on a 5 point scale.

2. Job Involvement Scale

It is based on the scale developed by Lodhal and Kejner (28). This scale has 20 items each to be responded on a 5 point scale.
2.6 **Supervisory Support**

A three item scale based on Narayana Rao (29,30) was used to measure the supervisory support. Each item has been rated on a 5 point scale.

2.7 **Job Participation Scale**

It is based on the scale developed by Vroom (31). It has 4 items each to be responded on a 7 point scale.

2.8 **Work Involvement**

A five item scale developed by Narayana Rao (32,33) was used to measure the work involvement of the professional staff. Each item is to be responded on a 7 point scale.

2.9 **Organizational Involvement Scale**

A five item scale developed by Narayana Rao (34,35) was used to measure the organizational involvement. Each item is to be responded on a 7 point scale.

2.10 **Promotions and Chances of Rise**

It is a two item scale based on Lawler and Hall (36). Each item is to be responded on a 7 point scale.
2.11 Professional Involvement

Professional involvement of a person is measured on the basis of following four activities:

a. Extent of involvement in reading the professional journals;

b. Membership in professional organizations;

c. Participation in conferences, seminars, workshops, and refresher courses;

d. Contribution to professional knowledge.

Weightage is given to each one of the above activities as explained in Appendix-B. The total score of a person has been calculated by adding the scores obtained for the above mentioned activities. The obtained total score is termed as professional involvement score.

2.12 Attitude Towards Profession

It consists of 13 items. All the items are to be responded on a 5 point scale. The reliability of this scale was determined by the test-retest method. The reliability coefficient was found to be 0.85.

2.13 Utilization of Professional Knowledge

In order to know the level of satisfaction of an individual with regard to utilization of his professional
knowledge in the library in which he is working at present, a question has been developed by providing five alternative answers. The answers are Highly satisfied, Satisfied, Neither satisfied nor dissatisfied, Dissatisfied and Highly dissatisfied. Score values of 5, 4, 3, 2, and 1 have been assigned to the above answers respectively. Each respondent has to check any one of the five answers. For example, if he checks the answer, 'Highly satisfied', he will get a score of 5. This score is termed as 'Utilization of professional knowledge' score. High score indicates more satisfaction with regard to utilization of professional knowledge.

2.14 Recognition for the Work done

To know the extent of recognition that the professional staff are getting for their work done, a question has been developed. It consists of five answers. They are Very high, High, Neither high nor low, Low and Very low. Scores of 5, 4, 3, 2, and 1 have been assigned to the answers respectively. Each respondent has to check any one of the five answers. For example, if he checks the answer 'Low', he will get a score of 2. This score is termed as 'Recognition for the work done' score. A high score indicates more recognition.
2.15 Job Performance

In order to measure the job performance of professional staff, a question has been developed. It consists of five alternative answers namely Very good, Good, Average, Below average and Bad. Scores of 5, 4, 3, 2 and 1 have been assigned to them respectively. Each respondent has to rate his performance by checking any one of the five answers. For example, if he checks the answer 'Good', he will get a score of 4. A high score indicates better performance.

2.16 Willingness to Leave the organization

In order to measure the degree of willingness of an individual to leave the present organization in case he will get a job of the same designation with the same grade and with the same rules and amenities, a question has been developed. It consists of five alternative answers namely Always, Perhaps would leave, Undecided, Perhaps would not leave and Not at all. Score values of 5, 4, 3, 2, and 1 have been assigned to the above five answers respectively. The respondent is asked to check any one of the five answers mentioned above. For example, if he checks the answer 'Undecided', he will get a score of 3. This score is termed as 'Willingness to leave the organization' score. More score indicates more willingness to leave the organization.
The tools listed above (Nos. 2.2 - 2.10) were used by Narayana Rao(37) and Nagarathnamma(38) in their investigations. The test-retest reliability coefficients obtained by the above two investigators suggested that the tools were reliable. Hence the above tools were used in the present investigation. The remaining tools numbers from 2.11 to 2.16 were developed by the investigator for the purpose of this investigation.

2.17 Measurement of Incentives

There are four main techniques for assessing the relative importance of a set of issues for a group of persons. They are (a) simple voting techniques, (b) rating, (c) ranking and (d) method of paired comparison. In the present study, ranking method was adopted to assess the relative importance of incentive items for the library professional staff.

Fourteen incentive items which were considered meaningful for professional staff were selected. These items were gathered from professional staff in a pilot survey. In the pilot survey, it was found that the professional staff felt some uneasiness in ranking all the fourteen items. Therefore, in the final questionnaire from the list of 14 items, they were asked to rank any five items in the order of priority. A score of 5 is assigned to
the first preferred item and score values of 4, 3, 2 and 1 to the 2nd, 3rd, 4th and 5th preferred items respectively. The total score assigned by professional staff for each item has been calculated. The relative importance of each item among 14 items is determined by the total score or the mean score obtained by that item.

3. COLLECTION OF DATA

The data were collected with the help of a questionnaire as given in Appendix-A. It contains three parts.

Part I contains the questions relating to the background information of the respondents. It includes questions about the designation, age, sex, marital status, number of dependents, mother tongue, educational qualifications, salary, pay, expectation of pay and experience of the respondents. Questions also have been put to the respondents to know the name of the library and the section in which they are working at present, the distance between their residence and working place, mode of transport used by them, rank at which they joined in the present organization and the nature of duties performed by them.

In order to know the professional activities of the respondents, questions have been put to them about the extent of reading professional journals, holding
of membership in professional organizations, participation in seminars, conferences, workshops and refresher courses, and the contribution to professional knowledge. In order to know the preference of jobs, the respondents were asked to write down any three of the library jobs that they liked most in the order of preference.

All the questions are framed in such a way that they can easily be understood by the respondents. These are of the type of specific information questions which call for a specific item of information or questions with yes or No answers or multiple answers.

Part II of the questionnaire consists of job satisfaction and other scales which have been discussed under the heading 'Instruments used' in this chapter.

Part III of the questionnaire consists of ranking of incentives which has been discussed under the heading as mentioned above. At the end of the questionnaire, the respondents were asked to comment on their satisfaction or dissatisfaction with the job.

Since all the respondents were highly conversant with the English language, the questions were prepared in that language. A pilot study on a group of 20 persons was conducted before proceeding to the actual work.
The questionnaires were given to the respondents personally and were collected from them on the next day. If any of the respondent was willing to fill up the questionnaire immediately, the investigator waited until it was filled up and collected the same from him. At that time, no time limit was prescribed for the completion of the questionnaire. However, the respondents took from one to one and half an hour to fill it up. Some of the questionnaires were filled up by the investigator when the respondents were providing answers to the questions. The doubts raised by the respondents were clarified. Some of them were interviewed in depth. They were assured that the data provided by them would be kept strictly confidential and used for research purpose only. The respondents were not required to put their signatures or to give their names on the questionnaire which might reveal their identity. Hence it was assumed that they did not have any reason to distort their answers. Every effort was made to get as reliable data as practicable from them. The entire data needed for the study were collected during the months from January to September, 1989.

4. ANALYSIS OF DATA

After collecting information from the respondents, the data were analysed according to the objectives and
hypotheses stated. First the data were recorded on data sheets and then fed into the computer. The data were sorted out using the Lotus programme. Means, standard deviations, simple and multiple correlation coefficients were found out using the same programme. However, percentages and other necessary calculations were done with the help of a calculator.

In the analysis of data, both descriptive and inferential statistical techniques were employed. Mean, median, mode, standard deviation, and standard error of the mean were employed in case of descriptive statistics. Karl Pearson's coefficient of correlation, multiple correlation coefficient, 't' and 'F' tests of significance, Spearman rank correlation, and Chi-square test were employed in case of inferential statistics.

5. PRESENTATION OF DATA

The data were presented with the help of tables, graphs and figures wherever necessary. The bibliographic details of references cited in each chapter were given at the end of that chapter.

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