

CHAPTER 3

RESEARCH METHODOLOGY

This chapter defines the research methods adopted to conduct the study, and also explains how the necessary data and information to address the research objectives are collected, presented and analyzed. This study has been conducted in order to assess the work culture in the special libraries with reference to Delhi-NCR. Descriptive methodology, with both qualitative and quantitative approaches has been adopted to collect necessary data. Survey, by way of questionnaire and interview are the primary techniques of data collection.

This chapter presents details of the:

- Research Design
- Research Methods
- Research Tools
- Pre-test
- Limitations of the Study
- Population and Sample
- Data Sources
- Data Collection
- Scaling of items
- Data Analysis
- Data Presentation
- Citation Style

RESEARCH DESIGN

Heppner, et al. (1992) describe a research design as a plan or structure for an investigation or a list of specifications and procedure for conducting and controlling a research project. In other words, it can be described as a

master plan which indicates the strategies for conducting a research. A research design serves as a master plan of the methods and procedures that should be used to collect and analyze data needed by the decision maker. The research design is a deliberately planned arrangement of conditions for the analysis and collection of data in a manner that aims to combine relevance to research purpose with the economy procedure.

According to Covey (2002), survey is an effective way to gather information about an organisation, people's attitudes, beliefs and feelings. The present study has used questionnaire based survey method, as many similar studies conducted earlier, have also used this method for data collection. This method is also preferred as it is less time consuming and economical for a scattered population and support quantitative analysis.

The study essentially involved the following steps:

1. Analyzing selected literature to gain a better understanding of the subject and to learn about the gaps in knowledge in the subject
2. Identifying research objectives
3. Preparing a preliminary list of research questions
4. Selecting a suitable research method for the purpose of the study
5. Developing the questionnaire as research tools
6. Selecting the institutions involved in the study
7. Pre-testing the questionnaire, and revising it
8. Distributing the questionnaire to the respondents.
9. Collecting the questionnaire and checking the data for reliability and usability
10. Analyzing the data by coding the responses, tabulating data, performing appropriate statistical computations and interpreting the results.

RESEARCH METHODS

Saunders, et al. (2003) define the descriptive survey method as one which looks with intense accuracy at the phenomena of the moment and then describes precisely what the researcher sees. Descriptive research design is concerned with describing characteristics of a problem.

This study utilizes the descriptive method of research. As widely accepted, the descriptive method of research is a fact-finding study that involves adequate and accurate interpretation of findings. Descriptive research describes a certain present condition. Relatively the method is appropriate to this study since it aims to describe the present condition of an organisation and attitude of employees. The technique that has been used under descriptive method is the normative survey approach and evaluation, which is commonly used to explore opinions according to respondents that can represent a whole population. The survey is appropriate in this study because it enables the researcher in formulation of generalizations. The direct-data type of survey is a reliable source of first-hand information because the researcher directly interacts with the participants.

RESEARCH TOOLS

Several studies on the related topics have been consulted and their instruments have also been examined. Generally, survey research is conducted by interviews or questionnaires. A questionnaire is a formalized list of questions that is used to solicit information from respondents.

The questionnaire was prepared after comprehensive search of related literature and discussion with subject experts. The questions are obtained from similar questionnaires used in similar studies, and, in some cases adapted to the needs of this study. At the beginning of the questionnaire, brief instructions explaining the purpose of the study were provided. In order to secure honest responses from the respondents, anonymity and complete confidentiality was promised.

With a view to establish rapport with the respondents, the need, intention and pattern of data collection were described to them briefly. They were promised to be given a summary of the research findings. This apparently made them more enthusiastic and responsive to the research project.

A field diary was prepared on the basis of information obtained during data collection phase to be used to substantiate the information obtained from questionnaire to provide a balanced understanding of the situation.

The questionnaire comprised of eight sections. Section one was structured to elicit the personal information about the respondents such as gender, academic rank, qualification and experience, etc. Section B was designed to collect data on the time management. Section C focused on the job involvement. Section D was designed to collect data relating to the job clarity. Section E dealt with the job satisfaction. Section F proposed to collect data about the organizational climate and section G was related to the employee's values in life and work. The last section i.e. H contained satisfaction of each value, through their job. Following are the details of each section:

A. Personal Data Schedule:

These include variables like designation, education, age, sex, duration of service, number of dependents etc.

B. Time Management:

The activity component or the extent of participation in work role can be measured by asking how much time one devotes to working compared to other life roles. Super and Nevill (1986) asked the respondents to judge whether they participate in major life roles or not. The Spanish team of the WIS group also employed a time distribution scale which was adopted with some modifications for the present study. The library professionals were asked to indicate how they spent 24 hours among the roles of (a) job (b) commuting (c) professional development (d) family (e) social activities and

(f) leisure and other activities. They also indicated how they would like to reallocate their 24 hours. The time distribution thus generated two variables: (a) the hours actually spent in work and non-work roles and (b) the amount of time preferred to be spent in work and non-work roles.

C. Job Involvement:

This scale used for measuring involvement of a person in their job and it was developed by Agrawal (1978). The J.I.S. comprise 24 items rated on 5 point scale. The items are related to twelve dimensions and discriminatory power of the items are considerably high and validity and reliability of the scale were well established.

D. Job Clarity:

This scale measure rights and duties of an employee invested in the present job scenario. Ten most relevant items related to job clarity have been taken in the study and rated on 5 point scale.

E. Job Satisfaction:

Job and life satisfaction is also an affective variable. It is a feeling which is a function of the perceived relationship between all that one wants from the job/life and all that one perceives it as offering or entailing. If the job does not helps satisfy one's needs, one may feel dissatisfied but still conceivably be positive about one's job at least for a while. He/she can blame extraneous factors for his/her dissatisfaction and keep his/her involvement intact.

Job satisfaction was measured with the help of a scale. 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 in the construction of the scale. The scale incorporates total 10 dimensions of job satisfaction, consisting of 4 questions each. Thus a total 40 questions were asked under this section, containing 5 negatively worded questions. The marking of these 5 questions have been reversed

before analysis. Following 10 dimensions were used to gauge the job satisfaction levels:

TABLE 3.1
DIMENSIONS OF JOB SATISFACTION

Sr. No.	Dimensions of Job Satisfaction	Related Statements	Sample Statement
1	Satisfaction with nature of work	2, 10, 12, 33	There is a lot of variety in my work
2	Satisfaction due to autonomy at job	1, 11, 16, 19	I have full freedom to try out some of my own ideas
3	Satisfaction due to pay	6, 14, 22, 30	I get enough salary for the amount of work I do
4	Satisfaction with human relations aspect of supervision	3, 27, 32, 38	This library has very good policies and practices for its employees
5	Satisfaction with co-workers	4, 9, 13, 35	The spirit of cooperation among my co-staff is very high
6	Satisfaction due to sense of security at job	5, 21, 31, 40	My job is totally secure
7	Satisfaction with working conditions	7, 15, 25, 29	The working conditions of my office are very good
8	Satisfaction because of personal/professional development	8, 23, 28, 36	Everyone has ample opportunities for promotion in my organization
9	Satisfaction with regard to recognition	17, 18, 24,26,	I get full credit for the work I do
10	Satisfaction with level of communication in organization	20, 34, 37, 39	My library communicates effectively and in a timely manner to all the staff members

F. Organisational Climate:

The measure used for measuring organizational climate was an abridged version BOCI (Business Organisational Climate Index) by Payne and Phesey (1971). Twenty four items of BOCI which appeared most relevant were taken and responses were again obtain on a five points rating scale ranging from Strongly Agree (1) to Strongly disagree (5). Thus, in the present study, the scale used to measure the organizational climate of the special libraries of Delhi NCR incorporates total 24 questions of organizational climate. Out of those 24 questions, 9 were negatively worded. Their scores have been reversed for the purpose of taking average mean score.

G. Valuable in life and Work:

This scale measure some life values because everyone has certain expectations from his/her life and work. This 21 items scale describing importance of the values from Strongly Agree (1) to Strongly Disagree (5). Following value dimensions were used in the study:

1. Ability utilization
2. Achievement
3. Advancement
4. Aesthetics
5. Altruism
6. Authority
7. Autonomy
8. Creativity
9. Economic rewards
10. Life style
11. Personal development
12. Physical activity
13. Prestige
14. Risk

15. Social interaction
16. Social relation
17. Variety
18. Working conditions
19. Cultural identity
20. Physical prowess
21. Economic security

Each of those 21 values were measured by one statement each.

H. Values Satisfaction:

This 5 point scale also has 21 items corresponding to the 21 life values listed above. The library professionals were asked to rate each statement from Strongly Agree (1) to Strongly Disagree (5). It describes the extent to which their work experience helped or anticipated to help them realize the particular value.

SCOPE

The present study covers only the library professionals in the special libraries of Delhi and NCR. There were approximately 400 professionals in the discipline in close to 70 institutions approximately. The list of special libraries of Delhi NCR included in the survey is given in the Table 3.2.

TABLE 3.2

LIST OF SPECIAL LIBRARIES

Sr.No.	NAME OF THE SPECIAL LIBRARY
1.	Agricultural Economics Research Centre Library, New Delhi
2.	Archaeological Survey of India Library, New Delhi
3.	Association of Indian Universities Library, New Delhi
4.	Bureau of Indian Standards Library, New Delhi

5.	Bureau of Police Research and Development Library, New Delhi
6.	Central Administrative Tribunal Library, New Delhi
7.	Centre for Policy Research Library, New Delhi
8.	Centre for the Study of Developing Societies Library, New Delhi
9.	Centre for Women's Development Studies Library, New Delhi
10.	Centre Secretariat Library, New Delhi
11.	Competition Commission of India Library, New Delhi
12.	Defence Scientific Information and Documentation Centre, New Delhi
13.	Election Commission of India Library, New Delhi
14.	Federation of Indian Chambers of Commerce & Industry Library, New Delhi
15.	Gandhi Peace Foundation Library, New Delhi
16.	Haryana Academy of History and Culture Library, Gurgaon
17.	Haryana Institute of Public Administration Library, Gurgaon
18.	High Court of Delhi Library, New Delhi
19.	India International Centre Library, New Delhi
20.	Indian Council for Cultural Relations Library, New Delhi
21.	Indian Council of Historical Research Library, New Delhi
22.	Indian Council of Philosophical Research Library, New Delhi
23.	Indian Council of World Affairs Library, New Delhi
24.	Indian Institute of Foreign Trade Library, New Delhi
25.	Indian Institute of Mass Communication Library, New Delhi
26.	Indian Institute of Public Administration Library, New Delhi
27.	Indian Law Institute Library, New Delhi
28.	Indian Society of International Law Library, New Delhi
29.	Indian Statistical Institute Library, New Delhi
30.	Indira Gandhi National Centre for the Arts Library, New Delhi

31.	Institute for Defence Studies and Analysis Library, New Delhi
32.	Institute for Studies in Industrial Development Library, New Delhi
33.	Institute of Applied Manpower Research Library, New Delhi
34.	Institute of Economic Growth Library, New Delhi
35.	Kala Nidhi Reference Library, New Delhi
36.	Lalit Kala Academy Library, New Delhi
37.	National Cooperative Development Corporation Library, New Delhi
38.	National Council of Education Research and Training Library, New Delhi
39.	National Institute of Fashion Technology, Sonapat
40.	National Institute of Health and Family Welfare Library, New Delhi
41.	National Institute of Immunology Library, New Delhi
42.	National Institute of Public Finance and Policy Library, New Delhi
43.	National Institute of Science Communication and Information Resources Library, New Delhi
44.	National Institute of Urban Affairs Library, New Delhi
45.	National Social Science Documentation Centre, ICSSR, New Delhi
46.	Nehru Memorial and Museum Library, New Delhi
47.	Niti Aayog Library, New Delhi
48.	Sahitya Academy Library, New Delhi
49.	Sangeet Natak Academy Library, New Delhi
50.	School of Planning and Architecture Library, New Delhi
51.	Supreme Court Library, New Delhi
52.	Tata Energy and Research Institute Library, New Delhi
53.	Water and Power Consultancy Services Library, Gurgaon

PRE-TEST

A pre-test was conducted prior to the actual data collection to make sure that the questions fit the purpose of the study and are easy to follow by the respondents, in order to pre-empt the difficulties that may be confronted during the course of the study. The pilot study respondents consisted of 10 senior library professionals in Delhi and NCR. They were requested to seek clarifications, if required, for any of the items in the questionnaire, provided they encountered any difficulty in answering the questions. The questionnaire was shaped in accordance with the user's reactions and also with the objectives set apart for the study.

LIMITATIONS OF THE STUDY

The present study is solely confined to the statement of the problem, objectives of the study and the sample derived for the study. The other limitation of the study is:

It is estimated that close to 400 library professionals are working in the special libraries scattered in approximately 70 major special libraries of Delhi NCR. A total 53 special libraries were selected for this survey. Rest of the special libraries were not included in the survey as the staff employed there was either very minimal or in contractual job. To measure the work culture and various parameters associated with it, requires that at-least 3 or 4 professionals are working in the target institutions and are in regular job.

POPULATION AND SAMPLE

Sampling involves the study of a few representative units of the universe. Here in this study, to have maximum representation and reliability, investigator has adopted census method. The chance of sampling error was very much minimized by considering an almost full population.

Total 328 questionnaires were distributed. Out of them 298 got returned. However, not all the returned questionnaires could be used for data

analysis. 18 questionnaires were discarded because some key questions were either not answered or answered partly. Therefore, the population of this research consists 280 library professionals working in 54 special libraries in Delhi and NCR. Whenever necessary the questionnaire method was supplemented by interview method. Librarians and other library staff were also informally interviewed in order to ascertain how to cultivate better work environment or culture in the libraries. Finally, in total 280 questionnaires were used for data analysis, representing an 85.36 % population.

DATA SOURCES

The research relies on both primary and secondary data in order to come up with accurate and objective findings.

Primary data refers to the data collected for the first time in the field. It is the data that has been collected for the purpose for which it is originally used. Primary data for this particular research has been collected through interview and questionnaire.

Primary data collection has been given the highest priority in this research as there is limited published material on the subject under study. For a subjective study like this one, primary data is of prime importance because primary data draws information directly from the field. Facts and figures are drawn directly from people because culture exists within a society of people.

Secondary data is the data that is collected for purposes other than the original use. It is an analysis of data that has already been collected for some other purpose. These may be contemporary or historical and the data may be qualitative or quantitative and usually needs adjustments and validation before being put to use. This data can include survey data and documentary data.

Sources used to gather secondary data were document analysis collected from published and unpublished documents and subject-relevant

literature, and frequent visits to related websites became crucial in collecting up to date secondary data as well as publications by renowned authors on various aspects of work culture.

DATA COLLECTION

To conduct a research study in a developing country like India is rather difficult where research culture is not conducive. Generally people are unaware of the importance of research. To get responses to a questionnaire from respondents is difficult because most of them feel reluctant and hesitant to give their opinion freely.

The respondents were time and again contacted personally in various institutions to distribute, administer and collect the questionnaire. This required a lot of persuasion and patience.

A number of problems and a variety of situations were confronted during these visits. Some of the most important and significant field experiences faced are describes below.

Some library professionals told that they would be sending their response through post and that there was no need to contact them time and again, while others refused to cooperate and they had to be contacted again and again to elicit their response. Of course, some of the respondents were very cordial and hospitable. The field experiences were of mixed nature.

SCALING OF ITEMS

Nominal Scale -- It has been used to select responses in respect of designation, age, gender, qualification, experience, etc.

Likert Scale -- Respondents were presented with five response categories ranging from strongly agree to strongly disagree and asked to respond according to their need.

Some variables have been studied as frequencies also wherever deemed suitable.

ANALYSIS OF THE DATA

The collected data has been coded and uploaded into the Statistical Package for Social Sciences (SPSS) version 17.0. and MS Excel for thorough descriptive statistics and testing of hypotheses using statistical techniques like ANOVA (Analysis of Variance) F-test, Standard Deviation, Mean, Percentage etc. Significance level has been confirmed with p value (Probability Value) of 95% significance (by convention), if the p value is less than 0.05, then the results from the study are statistically significant (unlikely to have arisen by chance) and the null hypothesis is rejected and it is considered that there is significant difference among the variables, whereas if, $p > 0.05$, then the hypothesis is accepted and it is considered that there is no significant difference among the variables in question.

Collected data has been tabulated and summarized as percentage and frequencies. Cross tabulation has been mainly used to find out relationship between different variables to fulfil the major research objectives of the present study.

One of the most popular ways to test for statistical significance in the social sciences is the use of the Chi-square test of independence, which measures variables at the nominal and ordinal level, or categorical data, Walsh (1990). Chi-square (χ^2) test was used wherever found suitable and necessary.

The degree of freedom (df) refers to the number of independent pieces of data used to calculate each statistic. In other words, it is the number of values that are free to vary after restriction has been placed on the data.

DATA PRESENTATION

The analyzed data has been tabulated in the tabular form together with graphics, wherever required. In each table, frequencies and percentage of response are given. The mean value has been used as a measure of central value, also ranking is depicted in some tables on the basis of Mean value.

CITATION STYLE

The study has given due credit to the authors and has properly acknowledged the references at appropriate places in the study. Therefore, for giving references in the present work the APA (American Psychological Association) style, 6th editions has been followed.

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