CHAPTER II

RESEARCH DESIGN
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Researches are designed to proceed in a planned manner to control variance and to answer pertinent research questions (Lindquist, 1956). Such questions should be answered as far as possible, objectively and accurately. Research design has assumed significance in social and behavioural sciences and it is considered to be the most important component of research methodology.

The spirit of scientific enquiry is to objectively ascertain facts and analyse them in an unbiased manner to draw fruitful conclusions. Scientific methodology was evolved to achieve these objectives. The choice of a method is governed by the aims of the study, the variables under investigation and the nature of the data. It is, thus, imperative that the objectives of the study should be spelt out to facilitate the choice of the design.

The review of research literature reported in preceding chapter impresses us with the fact that an individual's performance is influenced by stressors lying outside as well as within the organisation. But it has come to light that stressors pertaining to organization/occupation have been extensively researched and strategies have been evolved to minimize the sources of stress so as to enhance performance.
Stressors external to the organization have not been emphasized to the desired extent especially in our country. It was probably due to the fact that the tool for its measurement was not developed. In this regard Vadra & Akhtar (1990) have filled the void by developing Social and Family Role stress scale. The way has been paved for the measurement of extra-organizational stressors and the present researcher has considered the stressors residing within the organization as well as outside it.

The focal aspect of the present investigation as stated earlier is to determine the extent to which job-involvement of an employee is influenced by occupational stress, social and family role stress and a set of demographic variables namely age, sex, income and job-tenure. In other words we are interested in ascertaining the predictors of job-involvement for various occupational groups.

The review of literature has also revealed that such variables as age, sex, income and job-tenure together with occupational and social and family stressors have not been investigated in the context of job involvement by the Indian researchers. The present study was conceived to answer such questions as to find out:

1. the prevalence of occupational stress and social and family role stress among teachers, telephone operators,
nurses and bank cashiers/clerks, and the extent to which they influence their job-involvement.

2. the influence of demographic variables on job-involvement of the above mentioned groups.

3. the extent to which men and women differ on job-involvement.

The findings may have wide ranging implications for organizational change and organizational development. The natural outcome would be to evolve intervention strategies to counteract the adverse effect of the above mentioned variables on job-involvement.

Tools Used:

To pursue the above objectives the following scales were used:

"Occupational Stress Index:

Occupational stress index developed by Srivastava and Singh (1981) has been used to measure occupational stress. It consists of twelve dimensions of job-life namely - Role overload, Role ambiguity, Role conflict, Unreasonable groups and political pressures, Responsibility for persons, Underparticipation, Powerlessness, Poor-peer relations, Intrinsic impoverishment, Low status, Strenuous working conditions, and Unprofitability. The occupational stress
index has a total of 46 items and apart from yielding scores on the twelve sub-scales a composite stress score could also be obtained.

The reliability indices ascertained by split-half method and by Cronbach's alpha coefficient for the scale as a whole are 0.94 and 0.90 respectively. The reliability indices of the 12 sub-scales are found to range from 0.45 to 0.84. The index of homogeneity and internal validity of the individual items has been determined by computing point-biserial coefficient of correlation ($rpbi$). The values of $rpbi$ range from 0.36 to 0.59. The external criteria method has also been used for its validation.

Job-Involvement:

The job-involvement of the subjects was assessed with the help of Indian adaptation of Lodahl and Kejner's (1965) job-involvement scale. This adaptation was undertaken by Akhtar and Bachcha (1984) and that scale was in Urdu script having the reliability value of 0.76, whereas in the present investigation it was in Devanagri script. For the purpose of determining the reliability of the Hindi version, the job-involvement scale was administered on a sample of 100 teachers (both men and women). The split-half reliability coefficient corrected by Spearman-Brown formula was 0.89. The obtained value of $r$ is sufficiently high to signify that the Hindi version of the above scale is highly reliable.
instrument for assessing the job-involvement in the Indian context.

**Social and Family Role Stress:**

Social and family role stress (SFRS) scale developed by Vadra & Akhtar (1990) was used to measure the stress emanating from social and family situations. The SFRS is a Likert-type 5 point self rating scale. It consists of 25 items pertaining to social and family areas.

Validity of the scale was gauged by computing item-total score correlation which ranged from 0.27 to 0.58 and inter-item correlation which ranged between 0.20 to 0.62 for N=100. The split half reliability corrected by Spearman-Brown formula is 0.81. Both the reliability and validity values determine the efficacy of the scale (Vadra, 1989).

The format of all the three scales was Likert-type with 5 alternative response categories. Appendix A consists of job-involvement and occupational stress items which were randomly intermingled because both the scales were in Hindi language. Social and family role stress scale which is in English language has been put into Appendix B.

**Sample:** The sample of the present study comprises of 340 employees drawn from Educational institution (men and women teachers), Nationalized Banks (Cashiers/Clerks), Medical
College Hospital (nurses), and Telephone Exchange (Operators both men and women). Thus the sample represents various organizations and professional groups. This was done to find out the stressors whether they were specific to the nature of the job or they had a common link across the professions. Incidentally, all the four professional groups chosen for investigation are related to the rendering of services.

For collecting the data a complete list of employees working in the organization was compiled and every second individual was randomly selected. Broadly, it works out to be 50% of the total number of employees. Each and every subject was personally approached and they were assured that their responses would be treated in strict confidence. Amongst the four groups, teachers and nurses were more cooperative. The completed returns were 25% of the teachers and 50% of the nurses.

The sample of the teachers was drawn from the Faculties of Art, Science and Social Sciences of Aligarh Muslim University, Aligarh and the nurses were employed in the Jawahar Lal Nehru Medical College, A.M.U. Aligarh. The sample of Bank cashiers/clerks was drawn from the Nationalized Banks located in Aligarh. Incidentally, no women was employed as bank cashier/clerk and so the data was of men only. The data of men operators was taken from Aligarh Telephone Exchange whereas the data for women
operators was drawn from Kidwai Bhavan Telephone Exchange, New Delhi, because the women operators in Aligarh were part-time or casual employees.

Having obtained the returns, each and every respondent's form was thoroughly scrutinized. The incomplete returns were deleted and thus the sample is equal to 340 which covers about 25% of the total population.

The table given below presents the list of four occupational groups studied and their sample sizes, along with information on biographical variables.

<table>
<thead>
<tr>
<th>Occupational group studied</th>
<th>N</th>
<th>Age (Years)</th>
<th>Income (Rs.)</th>
<th>Job tenure (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men Teachers</td>
<td>60</td>
<td>38.46</td>
<td>3620</td>
<td>10.26</td>
</tr>
<tr>
<td>Women Teachers</td>
<td>60</td>
<td>40.20</td>
<td>3130</td>
<td>15.23</td>
</tr>
<tr>
<td>Men Telephone Operators</td>
<td>60</td>
<td>39.03</td>
<td>2101</td>
<td>14.66</td>
</tr>
<tr>
<td>Women Telephone Operators</td>
<td>60</td>
<td>37.00</td>
<td>2183</td>
<td>15.50</td>
</tr>
<tr>
<td>Nurses</td>
<td>50</td>
<td>36.30</td>
<td>2204</td>
<td>11.24</td>
</tr>
<tr>
<td>Bank Cashiers/Clerks</td>
<td>50</td>
<td>31.85</td>
<td>2628</td>
<td>8.86</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>340</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Statistical Analysis:

The choice of a statistical method is linked to the type of data and the design of the study. In the present study there are sixteen independent variables namely social and family role stress, twelve dimensions of occupational stress, age, income and job-tenure and one dependent variable i.e. job-involvement. Only a statistical test that could handle such a large information and so many variables successfully could be useful. For such purposes Multiple Regression is considered to be the most suitable and useful technique because it ascertains the influence of several independent variables on the dependent one (Tabachnick and Fidell, 1983). Through this technique we are able to find out which IVs are the significant predictors of the criterion or D.V. Another advantage is that there exists no necessity of selecting uncorrelated IVs. Moreover, multiple regression technique relates independent to dependent variables in a manner which take interactive effects into account.

There are three major analytic strategies in multiple regression namely: Standard, Hierarchical and Stepwise Regression. To simply assess relationships among variables and answer the basic question of multiple correlation, the method of choice would be standard multiple regression. In hierarchical regression the researcher controls entry of
variables into the regression equation on the basis of logical or theoretical considerations. While in stepwise regression the order of entry of variables is based on statistical rather than theoretical criteria. Reasons for using these methods might be theoretical or for development of hypotheses.

In the present piece of research, we have made use of Standard Multiple Regression. This simultaneous or standard strategy calls for entry of all the IVs into the regression equation at once. Each IV is assessed as if it had entered the regression after all other IVs had been entered. Each IV, then can be evaluated in terms of what it adds to prediction of the DV, over and above the predictability afforded by all the other IVs.