Chapter-Three

Methodology
Chapter - Three

METHODOLOGY

In any discipline whether it is a science, social science, commerce, humanities etc., for conducting research methodology plays a pivotal role. Research as defined by Redman and Mory (1923) is “a systematized effort to find out the solution of the problem”. Mounton and Marais (1993) defined methodology as “the logic of the applications of scientific methods to the investigation of the phenomena”. It is a kind of decision making process in which researcher has to select the appropriate model, sampling techniques, measuring instruments and data analysis methods suitable for selected problem. However, the objectivity of the scientific investigation is contingent upon the accuracy of research methodology adopted by the researcher.

Formulation of research problem is followed by research design – the scientific procedure within which research is conducted in a smooth and unbiased fashion. Selltizer, Jahoda, Deutsch, and Cook (1962) pointed out that “research design is the arrangement of conditions for collecting and analyzing the data in a manner that aims to combine relevance to the research purpose with economy in procedure”. It is a kind of blue-print prepared in advance by the researcher with minimum expenditure of time, money, effort and other requirements. In Mohsin’s (1984) view “research design contains a built-in system of checks against all factors that might affect the validity of the research outcome”. In other words the efficacy of research design prepared by the researcher in advance, standardized tools for measuring the responses, adequate sample, and appropriate statistical methods for analyzing the data are the basic requirements for developing and maintaining objectivity in research that may have greater generality.

In the light of the above facts and the nature of the present research problem, the following steps were taken for enhancing the efficacy and objectivity of the research endeavour.

Sample

This study was proposed to conduct study on the engineers working in government sector in Kashmir valley. The small portion of population possessing an average similar qualities and characteristics of the total population is referred as
sample of that population. Mohsin (1984) contends that sample is the portion of the entire population or universe of a certain kind of objects. Thus for making findings more generalized to over-all population, it is essential that sample must possess almost all the qualities and characteristics of the population or universe selected for the investigation. Moreover, the selection of the sample should be dependent upon the very objective of the research problem. For the present proposed study as have already been mentioned engineers of government sector in Kashmir valley were chosen for studying the “Influence Of Perceived Organizational Culture, Upward Mobility and Organisation’s HRD Practices on Employee’s Perceived QWL and Work Identification”.

Engineers play an important role for building infrastructure of the organisation or the nation. They are the persons who formulate and implement policies, plans etc. in the organization. They act as a bridge between various constructions in the state. Whatever the changes (technical, systematic etc.) engineers want to bring in the organization, engineers are the first to be contacted in addition to planners for suggestions owing the overall information about the organizational plans.

Taking into consideration the importance of engineers in an organization, the researcher found this work-force most suitable for the present investigation. The sample consisted of N=300 engineers who were randomly taken from departments of Kashmir division. The sample break-up is shown in Table 3.1.

Table 3.1

Break-up of the Sample

<table>
<thead>
<tr>
<th>Designation</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Engineer</td>
<td>117</td>
</tr>
<tr>
<td>Assistant Engineer</td>
<td>101</td>
</tr>
<tr>
<td>Assistant Executive Engineer</td>
<td>82</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
</tr>
</tbody>
</table>

Kashmir division’s engineering wing is very vide and huge where thousands of Engineers are working under these departments of Kashmir division. Relevant information of the sample characteristics have been given in Table 3.2.
Table 3.2
Sample Characteristics (N=300)

<table>
<thead>
<tr>
<th>Designation</th>
<th>Number</th>
<th>Age (years)</th>
<th>Experience (years)</th>
<th>Family status</th>
<th>Rural/urban</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Std. deviation</td>
<td>Mean</td>
<td>Std. deviation</td>
<td></td>
</tr>
<tr>
<td>Junior Engineer</td>
<td>117</td>
<td>36.01</td>
<td>7.136</td>
<td>7.98</td>
<td>6.443</td>
<td></td>
</tr>
<tr>
<td>Assistant Engineer</td>
<td>101</td>
<td>43.83</td>
<td>5.673</td>
<td>14.66</td>
<td>5.66</td>
<td></td>
</tr>
<tr>
<td>Assistant Executive Engineer</td>
<td>82</td>
<td>52.91</td>
<td>4.019</td>
<td>22.07</td>
<td>4.379</td>
<td></td>
</tr>
</tbody>
</table>
In behavioural sciences, measurements have always been considered a very complex task but an inevitable means to understand human experiences and behaviour. Among the various methods used in behavioural sciences, especially in psychology, questionnaire method is a convenient technique in understanding or gaining information about certain issues and problems. Pertaining to questionnaire, it is imperative to mention that without ascertaining the efficacy of the tools, reliable results cannot be obtained. Therefore, standardization of the psychological tool is necessarily and/or prerequisite. Standardization of psychological test involves - item analysis, ascertaining reliability and validity. In this regard, it is immensely important to mention that whatever the tools have been used in quest of studying the present problem, the standardized psychological tools were ascertained before administration.

The descriptions of the various tools used in this investigation are being given below:

**Organisational Culture Scale**

Organisational culture was measured with the help of organisational culture scale developed by Imtiaz and Ansari (2000). The twelve dimensions of scale are namely: fairness, mutual trust, openness, organizational climate, synergy, organizational environment, autonomy, work values, organizational belongingness, confrontation, pro-action and organizational loyalty as discussed above. The response-rating system as in organizational culture scale is 5-point response category. The congruent validity of scale and validity coefficient is $r = .76$ which indicate that the test is highly valid. Therefore, organizational culture scale was confirmed as standardized scale.

**Quality of Working Life Scale**

This scale was developed by Shah and Ansari (2000) was used to measure QWL. The scale is 5-point Likert type scales ranging strongly disagree to strongly agree. The numerous dimensions which were identified are: Work itself; Employees’ participation; Physical working conditions; Union-management relations; Organizational climate; Inter-group relations (employees relations); Autonomy at work; Organizational commitment; Supervisory relations (including trust); Clarity in organization; Recognition; Economic benefits; Self-respect; Employees health; and
Promotion. Items related to these dimensions were framed in the form of statements in simple, easy and highly indianized English language and in all there were 48 items.

The reliability of the QWL-scale, split-half reliability coefficient \( r' \) was calculated that yielded the value \( r = .702 \) which is also found highly significant. Congruent validity of the QWL-Scale is also checked by comparing the scale with Porter's (1972) job satisfaction scale. The obtained value \( (r = .89) \) confirms the validity of the scale.

**Work Identification Scale**

Work identification scale developed by Srivastava and Dolke (1978) was used to measure work identification. There are 12 items which are related to the two-facets of work identification, i.e., (i) importance attached to work facet, and (ii) satisfaction of needs through work. Each facet contains 6 items. The respondents are required to respond on a 5-point scale by giving a score of 1 to highly disagreed statement and 5 to highly agreed statement. The obtained reliability was found to be equal to 0.82 and validity equal to 0.75 that confirmed the scale was reliable as well as valid.

**HRD Scale**

HRD scale developed by Shah and Ansari (2000) was used to measure HRD practices. The 12 dimensions of the scale are: Forecasting human resource need in organization; Training; Organizational climate (team building, trust building); Organizational change (technological, system); Fairly liberal management functions; Employee-management relations; Total quality management; Flexibility Co-operation; and Competition. Responses were measured on Likert type 5-point scale by measuring the presence of HRD activity by assigning ‘1’ to the minimum degree; ‘2’ to above minimum but below moderate; ‘3’ to moderate; ‘4’ to above moderate but below maximum; and ‘5’ to the statement when it is present in maximum degree. In this way the total score ranged from 40-200. Higher the total score, maximum will be the HRD-activities being performed in the organization. Out of 40 items 5-items were negatively phrased and hence, these items were scored in reverse direction.

Through item analysis, the contingency coefficient ‘C’ value converged in to chi-square \( (X^2) \) value of all items shows high significance beyond .01 level of confidence except the item no. 26 and 35, which confirm their significance beyond .05 level of confidence. Split-half reliability coefficient \( r = .78 \) and the congruent
validity $r = .79$ both attained high significance level, hence, standardization of HRD-scale gets confirmed.

**Upward Mobility Questionnaire**

The scale developed by Shah and Ansari (2002) was used to measure upward mobility. This questionnaire consisted of nine items, out of which four were negatively phrased. The items measure employees’ perception about their chances of advancement, fairness in the promotion policies of management, and the mode of promotion. In this Likert type questionnaire, responses were measured from Highly Disagreement ‘1’ to Highly Agreement ‘5’. Higher the score, more the employees’ perception about the chance of their upward mobility in the organization. While calculating contingency coefficient ‘$C$’, it was found that all the items confirm their significance beyond .01 level of confidence. Split-half reliability coefficient $r=.86$ and congruent validity $r=.88$ were found highly significant.

**Biographical Information Blank (BIB)**

Biographical information blank was prepared for recording biographies of employees’ viz., age, family status, number of dependents, marital status, rural/urban background. Moreover, information regarding qualification, work experience, number of promotions earned, and monthly income of employees was also incorporated in the biographical information blank.

**Statistical Analyses**

Once the data collected from the respondents, then it requires certain kind of statistical treatment to reduce long wide-spread scores into intelligible and interpretable form, so that results can be easily and conveniently understood. Analysis means categorizing, reduce, and summarizing data to obtain results of research problems (Kerlinger, 1984).

Different types of statistical techniques are available which require proper care in giving care in giving statistical treatment to data. Hence, keeping in view the nature and objectives of the research problem multiple regression (stepwise) method of statistics was found best suited for analyzing the data and obtaining the appropriate results.
Multiple Regression method is quite flexible to access two or more predictors (IVs) at a time to see their influence on criterion variable (DV). This method not only tells us about the relationship between independent and dependent variables but also the strength of influence i.e., the contribution of predictors (IVs) to criterion variables (DVs). Generally, there are three techniques of using Multiple Regression viz., Standard, Hierarchical, and Stepwise, depending on the way predictor variable entering the equation. In stepwise method predictors enter to the equation step-wise i.e., one after the other on the basis of their highest simple correlation with criterion variables. This process continues until no more useful information is obtained from the further addition of predictors. In the present study this method i.e., Stepwise Multiple Regression was used for giving statistical treatment to the data.

The above description provide clear picture of the various aspects which were undertaken very cautiously for empirical investigation. Hence, it ascertains that reliable results would have been obtained which are being presented in the proceeding Chapter – Four.