Chapter-III

Methodology
In any scientific investigation, methodology has a significant role to play. Objectivity cannot be obtained unless research is carried out in a careful and systematic manner. According to Redman & Mory (1923) who defined research as "a systematized effort to find out the solution of the problem". These efforts require certain techniques to be followed properly. Formulation of research problem is followed by research design - the scientific procedure within which research is conducted in a smooth and unbiased fashion. It is a kind of architecture prepared in advance by the research with minimum expenditure of effort, time, money and other inputs. Appropriate selection of research design, use of standardized tools and techniques, identification of adequate sample, Sound procedures for data collection etc. are to be given proper care.

The present endeavour is aimed to study job involvement in relation to organization culture, mental health and certain personality variable namely, hardiness and extraversion-introversion.

SAMPLE: The sample in the present study comprised of N = 230 engineers working in a thermal power plant located at Kasimpur in various hierarchical position viz. junior engineer, assistant engineer and executive engineer. Initially 350 engineers were contacted and persuaded to participate in this research program but finally N = 230 respondents caned return the questionnaire. The break up of the sample follows:
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Table 3.1

Sample Break up

<table>
<thead>
<tr>
<th>Nature of Group</th>
<th>Sample size (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Engineer</td>
<td>100</td>
</tr>
<tr>
<td>Assistant Engineers</td>
<td>83</td>
</tr>
<tr>
<td>Executive Engineers</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
</tr>
</tbody>
</table>

TOOLS USED: Psychological tests play major role for understanding human behaviour objectively. Due to complementary and dynamism of behaviour it is required to carefully select appropriate measure which could serve the purpose. For the present study questionnaires were used as its a most convenient and favourable for getting information from the respondents, hence, following measures are chosen for the present endeavour, details are given below.

Job Involvement Scale: For assessing job involvement Lodahl and Kejner's (1965) scale was employed. The scale consists of 20 items having four response alternatives: strongly agree, agree, disagree and strongly disagree. The maximum and minimum possible scores are 80 to 20 respectively. High scores indicates more job involvement and low score indicate less job involvement. The reliability of scale was ranging between .72 and .89 (Lodahl and Kejner) by test re-test method.

Organizational Culture Scale: To measure the organizational culture, a scale of organizational culture developed by Nasheed Imtiaz was used. The scale has 12 dimensions namely: fairness, mutual trust, openness,
organizational climate, synergy, organizational environment, autonomy, work values, organizational belongingness confrontation, pro-action and organizational loyalty. So far as the reliability of the scale is concerned split half reliability co-efficient was $r = .89$ systematically high and validity co-efficient was $r = .76$ which is again high, her high reliability co-efficients and high validity co-efficient confirm the reliability and validity of the scale leading to standardization.

**Mental Health Inventory**: To measure mental health among different groups of engineers a scale developed by Srivastava and Jagdish (1983) was used. Lower scores on the measure of mental ill-health has been supposed to indicate higher mental health where as higher scores as the indicative of poor mental health. This scale consist of 55 items based on 6 dimension - (1) Positive self-evaluation, (2) Realistic perception, (3) Integration of personality, (4) Autonomy, (5) Group-oriented attitudes; and (6) Environmental Mastery. The scale has 4 response categories viz., always, often, rarely and never. The reliability and validity coefficients were found significant as the value of split-half reliability coefficient was $r = .73$ and validity co-efficient i.e. construct validity was $r = .54$ which confirm the standardization of the scale.

**Hardiness Scale**: The short version of hardiness scale developed by Kobasa and S.R. Maddi (1982) was used to measure the hardiness level of the subjects. The original hardiness scale consisted of six sub-scales: (a) Alienation from work and Alienation from self scales measured the dimensions of commitment (Maddi, Kobasa & Hoover, 1979); the External
locus of control scale (Rotter, Seeman & Liverant, 1962) and powerlessness scale (Maddi, Kobasa & Hoover, 1979) assessed control and the security scale of the California Life Goals Evaluations Schedules (Hahn, 1966) and the cognitive structure scale of the Personality Research Form (Jackson, 1974) measured the component of challenge. Later on, Kobasa and Maddi conducted a principal component factor analysis for developing a more refined and shorter composite measure. To measure the dimensions of commitment, control and challenge, the scale contains 12, 16 and 8 items respectively. Kobasa and Maddi stated that the scale has a correlation of .89 with full scale and shows a reliability (Coefficient Alpha) of .86. Hull et al. (1987) also reported a correlation of .76 between 36 item revised hardiness scale and its original form.

Introversion-Extraversion: Eysenek's Personality Inventory (1963) was used to measure the Introversion-Extraversion Personality measure. The scale consists of 21 items. The scoring was done on a binary scale of Yes and No.

**STATISTICAL ANALYSIS:** Once the data collected the researcher tabulate and analyses the data to reach the findings of the whole research endeavour. Keeping in view the problem of the present endeavour, product moment co-efficient was used to explore the relationship among the various variables viz., organizational cultural, mental health and certain personality variables (hardiness, introversion-extraversion) as determinants job involvement for the various levels of engineers (junior engineers, assistant engineers and executive engineers) separately.
In the second step Zr was applied to compare the two groups on each variable.

Having completed the whole procedure of research investigation, the research obtain the results. Hence, the findings of the present study, hence been describe and discussed in the next chapter meant for results and discussion.