Method
CHAPTER III

METHOD

This chapter deals with the description of the procedures for carrying out the present investigation. It contains the research design, the tools used for data collection, the locale of the study, sampling techniques used for the investigation as well as the analysis of the data.

OBJECTIVES OF THE STUDY

The present study aims at:

(a) Studying the Normality of Distribution of Age, Educational Qualification and Years of Experience of the employees in Government Owned Textile Mills, Private Textile Mills and Engineering Industry.

(b) Analyzing how Organizational Commitment differs among three sets of employees employed in Government Owned Textile Mills, Private Textile Mills and Engineering Industry.

(c) Analyzing how Leadership Effectiveness differs among three sets of employees employed in Government Owned Textile Mills, Private Textile Mills and Engineering Industry.

(d) Analyzing how Perceptions of Stress differ among three sets of employees employed in Government Owned Textile Mills, Private Textile Mills and Engineering Industry.

(f) To identify the Latent Variables Contributing to the differences between the three Organizations.

**HYPOTHESES**

Based on the review of Literature, the following Hypotheses were formulated:

**Organizational Commitment**

H.1. There will be significant differences between the employees as a result of Organizational Ownership Control on Organizational Commitment.

   H.1.1 There will be significant differences between the employees as a result of Organizational Ownership Control on Affective Commitment.

   H.1.2. There will be significant differences between the employees as a result of Organizational Ownership Control on Continuance Commitment.

   H.1.3. There will be significant differences between the employees as a result of Organizational Ownership Control on Normative Commitment.

**Leadership Effectiveness**

H. 2. There will be significant differences between the employees as a result of Organizational Ownership Control on the Perceptions of Leadership Effectiveness.

   H.2.1. There will be significant differences between the employees as a result of Organizational Ownership Control on the perceptions of Interpersonal Relation in Leadership Effectiveness.
H.2.2. There will be significant differences between the employees as a result of Organizational Ownership Control on the perceptions of Intellectual Operations in Leadership Effectiveness.

H.2.3. There will be significant differences between the employees as a result of Organizational Ownership Control on the perceptions of Behavioural and Emotional Stability in Leadership Effectiveness.

H.2.4. There will be significant differences between the employees as a result of Organizational Ownership Control on the perceptions of Ethical and Moral Strength in Leadership Effectiveness.

H.2.5. There will be significant differences between the employees as a result of Organizational Ownership Control on the perceptions of Adequacy of Communication in Leadership Effectiveness.

H.2.6. There will be significant differences between the employees as a result of Organizational Ownership Control on the perceptions of Operation as a Citizen in Leadership Effectiveness.

**Occupational Stress**

H.3. There will be significant differences between the employees as a result of Organizational Ownership in Occupational Stress.

H.3.1. There will be significant differences between the employees as a result of Organizational Ownership Control on the Role Overload in Occupational Stress.

H.3.2. There will be significant differences between the employees as a result of Organizational Ownership Control on the Role Ambiguity in Occupational Stress.
H.3.3. There will be significant differences between the employees as a result of Organizational Ownership Control on the Role Conflict in Occupational Stress.

H.3.4. There will be significant differences between the employees as a result of Organizational Ownership Control on the Group and Political Pressure in Occupational Stress.

H.3.5. There will be significant differences between the employees as a result of Organizational Ownership Control on the Responsibility for Persons in Occupational Stress.

H.3.6. There will be significant differences between the employees as a result of Organizational Ownership Control on the Under Participation in Occupational Stress.

H.3.7. There will be significant differences between the employees as a result of Organizational Ownership Control on the Powerlessness in Occupational Stress.

H.3.8. There will be significant differences between the employees as a result of Organizational Ownership Control on the Poor Peer Relations in Occupational Stress.

H.3.9. There will be significant differences between the employees as a result of Organizational Ownership Control on the Intrinsic Impoverishment in Occupational Stress.

H.3.10. There will be significant differences between the employees as a result of Organizational Ownership Control on perception of Low Status in Occupational Stress.
H.3.11. There will be significant differences between the employees as a result of Organizational Ownership Control on Strenuous Working Conditions in Occupational Stress.

H.3.12. There will be significant differences between the employees as a result of Organizational Ownership Control on Unprofitability in Occupational Stress.

**Personality Factors**

H.4. There will be significant differences between the employees as a result of Organizational Ownership in Personality Dispositions.

H.4.1. There will be significant differences between the employees as a result of Organizational Ownership in Neuroticism in NEO FFI Personality factors.

H.4.2. There will be significant differences between the employees as a result of Organizational Ownership in Extraversion in NEO FFI Personality factors.

H.4.3. There will be significant differences between the employees as a result of Organizational Ownership in Openness in NEO FFI Personality factors.

H.4.4. There will be significant differences between the employees as a result of Organizational Ownership in Agreeableness in NEO FFI Personality factors.

H.4.5. There will be significant differences between the employees as a result of Organizational Ownership in Conscientiousness in NEO FFI Personality factors.
OPERATIONAL DEFINITIONS OF THE VARIABLES OF THE STUDY

Organizational Commitment

According to Meyer and Allen (1988), Organizational Commitment is a feeling of dedication to one’s employing organization, willingness to work hard for that employer, and the intent to remain with that organization. The theory proposed by Meyer and Allen (1988) consists of three components to Organizational Commitment which has been used in the present study. They are affective, continuance and normative commitment.

- **Affective Commitment**: Affective Commitment denoted a sense of belonging and emotional attachment to the organization

- **Continuance Commitment**: Continuance Commitment refers to the emphasized and the perceived costs of leaving the organization

- **Normative Commitment**: Normative Commitment reflects the perceived obligation to remain with the organization

Leadership Effectiveness

Leadership Effectiveness in the present study has been defined as a group process with the leader as the main directive element (Taj, 2001). Leadership Effectiveness in the present study has been evaluated in terms of six dimensions namely:

- **Interpersonal Relations**: Leadership Effectiveness is evaluated based on how followers perceiving and responding to the leader's display of competence, fairness and identification
• **Intellectual Operations**: Intellectual Operations refers to versatility and flexibility that enables them to adapt exhibit a greater degree of versatility and flexibility behaviour to the changing and contradictory demands made on them

• **Behavioural and Emotional Stability**: It is the ability to control his or her emotional and behavioural expressions while still maintaining the right mind to make rational and professional decisions

• **Ethical and Moral Strength**: The leader who has ethical and moral commitment/strength is fully committed to the goals of the organization and his role in accomplishing these goals

• **Adequacy of Communications**: Effective Leadership uses communication to get people committed to a joint activity with a common plan

• **Operation as a Citizen**: An effective leader should be a friendly Liaison Officer between the Organization and the Community. He should adapt in fostering good public relations, securing community participation for improving and developing his institution, making institution conscious of the need to serve the community better

**Occupational Stress**

The scale developed by Srivastava and Singh (1981) was used to measure the extent of job-related stress that patients of both categories perceived as arising from various constituents and conditions of their jobs. The items on the scale relate to most of the relevant components of a government official’s daily official work that can potentially cause stress. The authors explain that the instrument may be conveniently
administered to employees of all levels working in various organizations. This scale has been found to have high reliability and has proved its validity.

- **Role Overload**: Role Overload covers job situations like work load, staff insufficiency, lack of time, personal problems, job dissatisfaction, etc.

- **Role Ambiguity**: Role Ambiguity is characterized by vague and insufficient information related to job role, vague and poor planning of job, vague expectations by colleagues and supervisors, etc.

- **Role Conflict**: Contradictory instructions from higher officers, interference of officials into the working conditions, vague instructions and insufficient facilities regarding new assignments, contradiction between office instructions and formal working procedures, difficulty in implementing new procedures and policies etc., are included in this dimension.

- **Group and Political Pressures**: This dimension covers the difficulty to adjust with the political and group pressures and formal rules and instructions, compulsion to perform unwillingly, maintenance of group conformity, violation of formal procedures and policies, etc.

- **Responsibility for Persons**: This dimension covers such aspects as the thrust of responsibility of other persons, the responsibility of other employees’ future, responsibility for the progress of organization, etc.

- **Under-participation**: This dimension covers job areas such as the position of the person in the organization - that with high or low power; the acceptance of suggestions made by other persons, etc.
• **Powerlessness**: This dimension covers areas such as acceptance of decisions taken by the person among employees, acceptance of suggestions regarding training programmes of employees, lack of coordination of interest and opinion in making appointments for important posts, etc.

• **Poor Peer Relationships**: The area covered under this dimension refers to poor interpersonal relationships with colleagues, colleagues’ attempt to defame and malign the employee as unsuccessful, colleagues’ lack of cooperation in solving administrative and industrial problems, lack of cooperation and team spirit of employees of the organization, etc.

• **Intrinsic Impoverishment**: Monotonous nature of assignments, opportunity to utilize abilities and experience independently, opportunity to develop aptitude and proficiency, place of suggestion in problem solving etc., are included in this area.

• **Low Status**: This dimension covers respect received by an employee from others, the role of nature of the job in enhancing social status, due significance given by higher authorities to the post and work etc.

• **Strenuous Working Conditions**: This dimension covers tense circumstances in which work has to be done, risky and complicated assignments, unsatisfactory working conditions from the point of view of welfare and convenience etc.

• **Unprofitability**: Low salary, absence of rewards, lack of motivation etc., are included here.
Personality

The NEO-Five Factor Inventory (NEO-FFI), has 60 items measuring five domains (12 items per domain) namely Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C).

- **Neuroticism**: It refers to the tendency to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability. Neuroticism also refers to the degree of emotional stability and impulse control, and is sometimes referred by its low pole - "emotional stability".

- **Extraversion**: It refers to positive emotions, surgency, assertiveness, sociability and the tendency to seek stimulation in the company of others, and talkativeness.

- **Openness to experience**: It refers to appreciation for art, emotion, adventure, unusual ideas, curiosity, and variety of experience. Openness reflects the degree of intellectual curiosity, creativity and a preference for novelty and variety.

- **Agreeableness**: A tendency to be compassionate and cooperative rather than suspicious and antagonistic towards others.

- **Conscientiousness**: A tendency to show self-discipline, act dutifully, and aim for achievement; planned rather than spontaneous behaviour; organized, and dependable.
RESEARCH SETTING

The present research work was carried out in three production units namely textile mills and engineering production units situated in Coimbatore Industrial Areas. The comparison among the three has been done in terms of difference in Organizational Structure and Control i.e., Government Owned Textile Mills and Private Owned Textile Mills and an Entrepreneurial based firm in Engineering.

Government Owned Textile Mills

National Textile Corporation has five units in Coimbatore is an ISO certified Textile Mills involved in the production of Cones, Blended Yarn, Cloth, Cotton Sheeting, Poplin, P/C-Shirting Suiting, Cotton Drills, P/C Twills, Cotton Satins exported to USA. Due to sluggish market prior to the research work, the number of shifts has been reduced from three to two. The 5 NTC mills in Coimbatore have about 3500 employees (Both Temporary and Permanent Workers in their Payrolls).

Private Textile Mills

The Private Textile Mills for the study, established in 1992, is a Modern and Reputed ISO 9001: 2008 Certified Spinning Mill, producing 100% cotton and Viscose Yarn, Cotton / Viscose Blended Yarn, Open End Yarns and Quality Wider Width Gray with a production capacity of 4000kgs of yarn per day. Though started as an Entrepreneurial venture, the Private Mills now has 970 employees in its pay roll working in three shifts.

Entrepreneurial Firm (Engineering Industry)

The Entrepreneurial firm was in the field of Engineering since 1989. The venture which started manufacturing non standard machineries and spares slowly and steadily
developed Gears, Synthetic Water Tank Making Machineries (Pulverisers, Rock-N-Roll Roto-Mould oven and Extruder-Reprocessing Unit), wire cut shots machineries and special purpose gears and gear boxes through its continuous research and development in the field of Engineering. The proprietor of the company is a technically qualified drawn upon his experience from the field activities. The Unit which have four hundred people as permanent employees was engaged in the manufacturing of Gears and Gear Boxes, Textile Machineries and Spares, and Moulding machines. The workers of the welding department formed the part of the study.

TOOLS OF INVESTIGATION

1. PERSONAL INFORMATION SHEET (Appendix A)

   The personal information data included Age, Years of Experience and Education of the Employees in the three different types of Organization.

2. ORGANIZATIONAL COMMITMENT QUESTIONNAIRE (OCQ) (Allen & Meyer, 1996) (Appendix B)

   Organizational Commitment Questionnaire (OCQ) developed by Meyer and Allen’s (1996) consisting of 18 statements measuring three components namely Affective Commitment, Continuance Commitment, and Normative Commitment was used in the present study. The Organizational Commitment Questionnaire (OCQ) is a self-scoring questionnaire. Responses to each of the 6 items are rated using a 5 Point Likert Scale with anchors labelled: 0 = Strongly Disagree, 1 = Disagree, 2 = Neither Agree Nor Disagree, 3 = Agree, 4 = Strongly Agree. Allen and Meyer’s (1990) examination of the relationships between the Commitment Scales revealed that the Continuance Commitment Scale was relatively independent: Affective Commitment
(p < .001, r = 0.06) and Normative Commitment (p < .001, r = 0.14). However, the correlations between the Affective Commitment and Normative Commitment scales were statistically significant and relatively strong (p < .001, r = 0.51). Cohen (1996) reported similar findings: Normative and Affective (p < .001, r = 0.54), Normative and Continuance (non-significant, r = 0.06), and Continuance and Affective (non-significant, r = 0.02). According to Allen and Meyer (1990), the reliability coefficients of the scale remained 0.87 for Affective Commitment, 0.75 for Continuance Commitment and 0.79 for Normative Commitment. Cohen (1996) discovered alphas of 0.79 for Affective Commitment, 0.69 for Continuance Commitment, and 0.65 for Normative Commitment.

3. LEADERSHIP EFFECTIVENESS SCALE (Taj, 2001) (Appendix C)

Leadership Effectiveness Scale developed by Taj (2001) consists of 79 statements (55 positive items and 24 negative items) with five alternate responses (Always (A) - 5 points, Often (B) - 4 points, Occasionally (C) - 3 points, Rarely (D) - 2 points, Never (E) - 1 point for positive items and vice versa for negative items). The respondents were asked to indicate the behaviour of their group leader or head on the five points given against each statement. The scale is measured in six dimensions namely, Interpersonal Relations, Intellectual Operations, Behavioural and Emotional Stability, Ethical and Moral strength, Adequacy of Communications, and Operation as a Citizen. According to Taj (2001) the test-retest reliability coefficient was found to be 0.60 and split-half reliability coefficient by odd and even and first half and second half method was found to be 0.64 and 0.67 respectively.
4. OCCUPATIONAL STRESS INDEX (OSI) (SRIVASTAVA AND SINGH, 1981) (Appendix D)

Occupational stress was assessed using “Occupational Stress Questionnaire” (OSI) (Srivastava and Singh, 1981). The questionnaire consists of 46 statements with five alternative responses e.g., 5 for Strongly Agree, 4 for Mildly Agree, 3 for Agree, 2 for Disagree and 1 for Strongly Disagree. Responses were obtained on a summated rating scale format ranging from “Strongly Agree” to “Strongly Disagree”. Out of the 46 items 28 are true keyed and the remaining 18 are false keyed. These items relating to the 12 factors of Occupational Stress i.e. Role Overload, Role Ambiguity, Role Conflict, Group and Political Pressure, Responsibility for Persons, Under Participation, Powerlessness, Poor Peer Relations, Intrinsic Improvement, Low Status, Strenuous Working Condition and Unprofitability.

5. PERSONALITY DISPOSITIONS (McCrae, Costa & Martin, 2005) (Appendix E)

The NEO-Five Factor Inventory (NEO-FFI), has 60 items measuring five domains (12 items per domain) namely Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C). The response pattern is a 5-point Likert Type Scale (0-4), ranging from ‘Strongly Disagree’ (0) to ‘Strongly Agree’ (4). According to McCrae and Costa, (2010), the internal consistency information of the NEO-PI-R was Neuroticism (N) = 0.92, Extraversion (E) = 0.89, Openness to Experience (O) = 0.87, Agreeableness (A) = 0.86, Conscientiousness (C) = 0.90 (McCrae & Costa, 2010).
PILOT STUDY

Sample Selection

A letter from The Research Supervisor, Department of Psychology, Bharathiar University, Coimbatore, was sent to the HR Managers and The Head of the Organizations chosen for the study requesting them to cooperate with the research project. A pilot study was conducted, in which 25 members from each organizations were randomly selected. The data from the textile industry was collected from Technical Employees of the Spinning and Weaving Department and Employees from Welding Department of the Engineering Industry. The investigator met the employees individually in order to establish personal rapport.

With prior appointment with the employees, the Personal Data, Organizational Commitment Scale, Leadership Effectiveness Scale, Occupational Stress Index and NEO FFI Personality Test were administered. The time taken for the series of tests was roughly three to four hours for each respondent and the duration of the pilot study lasted for two months. After a month’s interval, all the tests were administered to the same group to find out the reliability of the tests.

RESULTS OF THE PILOT STUDY

The employees reaction was encouraging though it was considered somewhat time consuming by some respondents. However, they cooperated well as the researcher had personal rapport with them. Most of the employees were able to comprehend the questionnaire and clarified with the investigator wherever necessary and responded to them. Since no difficulty was mentioned by the respondents, there was no necessity to carry out any modifications in the test content and in their administration. Hence they were used for the main study as well.
RELIABILITY OF THE TOOLS USED

The reliability of the questionnaires was established by using “Test-Retest Reliability Method” in a sample of 25 employees. The reliability scores of the tests are given below:

TABLE 1: RELIABILITY SCORES OF THE TESTS

<table>
<thead>
<tr>
<th>S. No</th>
<th>VARIABLES</th>
<th>RELIABILITY SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Organizational Commitment</strong></td>
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</tr>
<tr>
<td></td>
<td>Affective Commitment</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>Continuance Commitment</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Normative Commitment</td>
<td>0.81</td>
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<td>2.</td>
<td><strong>Leadership Effectiveness</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interpersonal Relations</td>
<td>0.71</td>
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<tr>
<td></td>
<td>Intellectual Operations</td>
<td>0.88</td>
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<tr>
<td></td>
<td>Behavioural and Emotional Stability</td>
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<td></td>
<td>Ethical and Moral strength</td>
<td>0.70</td>
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<td></td>
<td>Adequacy of Communications</td>
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<td></td>
<td>Operation as a Citizen</td>
<td>0.80</td>
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<td>3.</td>
<td><strong>Organizational Stress Index</strong></td>
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<tr>
<td></td>
<td>Role Overload</td>
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<tr>
<td></td>
<td>Role Ambiguity</td>
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<td></td>
<td>Role Conflict</td>
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<td>Group and Political Pressure</td>
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<td></td>
<td>Responsibility for Persons</td>
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</tr>
<tr>
<td></td>
<td>Under Participation</td>
<td>0.91</td>
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### 1. Powerlessness

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<th>Factor</th>
<th>Score</th>
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<td>Powerlessness</td>
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<tr>
<td>Poor Peer Relations</td>
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<tr>
<td>Intrinsic Impoverishment</td>
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</tr>
<tr>
<td>Low status</td>
<td>0.74</td>
</tr>
<tr>
<td>Strenuous Working Conditions</td>
<td>0.85</td>
</tr>
<tr>
<td>Unprofitability</td>
<td>0.72</td>
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### 4. Personality

<table>
<thead>
<tr>
<th>Trait</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
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<tr>
<td>Extraversion</td>
<td>0.76</td>
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<tr>
<td>Openness to Experience</td>
<td>0.90</td>
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<tr>
<td>Agreeableness</td>
<td>0.72</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.73</td>
</tr>
</tbody>
</table>

### MAIN STUDY AND SAMPLE SIZE

Around 150 employees were approached from randomly selected from each Organization namely, two Textile Industries and the Engineering Industry. The final sample consisted of 400 questionnaires (Return Rate = 88.8%) (Government Owned Textile Mills, NTC Mills (N=129) and Private Owned Textile Mills (N=135) and Engineering Industry Producing Lathe Machines (N=136).

### STATISTICAL TECHNIQUES USED

The demographic data such as Age, Education, and Years of Experience was analyzed using the Chi-Square Test and the Kolmogrov–Smirnov Goodness of Fit Test. In order to examine whether there are differences among the employees in terms of Organizational Commitment, Leadership Effectiveness, Organizational Stress and Personality Dispositions as a result of varied ownership control, ANOVA was done.
among the employees (N=400) and Duncan Post-hoc tests were done to analyze the
differences between the groups. A direct Discriminant function analysis was performed
using the four psychological variables (with 26 sub-constructs) as predictors of role of
ownership control with three varied organizations.