METHOD

This chapter explains the method adopted for the present study. It deals with objectives of the present study, sampling procedure, method of data collection, instrument and scoring procedure and statistical procedures adopted. The order of the presentation is as follows:

01. Objectives
02. Operational definitions
03. Sample selection
04. Instrument
05. Collection of data
06. Scoring procedure
07. Analysis

Following the review of literature and the proposed model in the Introduction chapter, wherein novation is hypothesized to be a join moderator along with GNS, the general objective of the present study is to know the moderating effects of GNS and novation in the job characteristics - internal work motivation relationship. To test this, the following specific objectives have been formulated.
OBJECTIVES

01. To know how the employees who have high growth need strength react to jobs having low motivating potential in terms of internal work motivation.

02. To know the relation between motivating potential of the job and novation.

03. To know the relationship between growth need strength and novation.

04. To know the relationship between motivating potential of the job and internal work motivation.

05. To know the relationship between growth need strength and internal work motivation.

06. To know the relationship between experienced meaningfulness of work and internal work motivation.

07. To know the relationship between experienced responsibility of work and internal work motivation.

08. To know the relationship between knowledge of results and internal work motivation.

09. To know the relationship between nature of tasks and experienced meaningfulness of work.

10. To know the relationship between autonomy and experienced responsibility of work.
11. To know the relationship between feedback and knowledge of results.

12. To know the relationship between motivating potential score and critical psychological states.

OPERATIONAL DEFINITIONS

Skill Variety: The degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the employee.

Task Identity: The degree to which the job requires completion of a “whole” and identifiable piece of work—that is, doing a job beginning to end with a visible outcome.

Task Significance: The degree to which the job has a substantial impact on the lives or work of other people—whether in the immediate organization or in the external environment.

Autonomy: The degree to which the job provides substantial freedom, independence and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out.
Feedback: The degree to which carrying out the work activities required by the job results in the employee obtaining direct and clear information about the effectiveness of his or her performance.

Experienced Meaningfulness of Work: The degree to which the employee experiences the job as one which is generally meaningful, valuable and worthwhile.

Experienced Responsibility of Work: The degree to which the employee feels personally accountable and responsible for the results of the work he or she does.

Knowledge of Results: The degree to which the employee knows and understands, on a continuous basis, how effectively he or she is performing the job.

Internal Work Motivation: The degree to which the employee is self-motivated to perform effectively on the job - that is, the employee experiences positive internal feelings when working effectively on the job, and negative internal feelings when doing poorly.

Nature of Tasks: The total score obtained by adding the scores of skill variety, task identity and task significance given by the respondents in JDS.
**Growth Needs Strength**: The degree to which the employee has the strong needs for personal challenge and accomplishment, for learning, and for professional development.

**Critical Psychological States**: The total score obtained by adding the response scores given by the respondents in JDS on skill variety, task identity and task significance.

**Motivating Potential Score**: The total score obtained by using the formula explained in the scoring section, which includes all five core job dimensions.

**Stages**: The employees performance level rated by the supervisor or manager based on the four stages career model by Dalton and Thompson.

**SAMPLE**

For the present study only engineers have been considered as target population. A list of large scale engineering firms were obtained from the Chamber of Commerce; Coimbatore. Engineering industries which had less than five hierarchy levels were approached. Though every industry falling in the category was approached only four industries came forward to participate in the study. From the HRD division of the four organizations the list of the engineers were obtained. All the names were arranged alphabetically and the total
population came to be 156. Since the total population was small it is decided to have fifty percent of the population as sample for the study. Hence every second person from the list was selected for the study.

**INSTRUMENT**

The Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975) was used to collect data on concerned variables in the present study. The JDS measures motivating potential score, growth needs strength, critical psychological states and Internal work motivation. The motivating potential score comprises five core job characteristics namely, skill variety, task identity, task significance, autonomy and job feedback. All the five job characteristics were measured by separate items in JDS. There are three critical psychological states measures i.e., experienced meaningfulness of work, experienced responsibility of work and knowledge of results. All the three psychological states are measured by separate items in JDS.

There are two sections in JDS which measures the growth needs strength, one in “would like” format and other one in “job choice” format. In the former section, the respondents are asked to indicate directly how much they would like to have number of specified conditions present in their jobs. Some of which focus on growth relevant aspects of the work. In the job choice format respondents are
asked to indicate their relative preference for pairs of hypothetical jobs. In this section each item a job with characteristics relevant to growth need satisfaction is paired with a job which has the potential for satisfying one of a variety of other needs.

The JDS has separate items to measure the internal work motivation. The copy of job diagnostic survey used in the study is given in the appendix.

To collect the data on four stages career model, the four stages model was used. The model also is given in the appendix.

**COLLECTION OF DATA**

The researcher personally met the managers and they were requested to arrange for the meeting with the selected employees. They made arrangements to bring the engineers together in a hall at a particular time. The researcher met the employees and explained the purpose of his visit and the objectives. Then the researcher distributed the copies of JDS and requested the employees to read the instructions given in the first page, and to give the responses honestly. The employees also was assured that all the data will be kept confidential and only be used for research purposes.
However, in some organizations it was not possible for the researcher to collect the data collectively from all the employees. Hence, he made several visits to the organizations and met the employees separately and collected the data.

STAGES DATA

The list of selected employees was given to the managers, who closely supervise the selected employees. A four stage career model table was given to the managers. The career table explains each stage central activities, the psychological relationships and the roles (the model is given in the appendix). Based on that, the manager was requested to place the employees in the stages, taking into account of how employee contributes his/her valuable performance. The responses of the managers were carefully noted down in a separate card which carries the same number of JDS form, for each employee. Like wise all the managers who were managing or supervising the selected employees were approached and the stage data was filled in.

SCORING PROCEDURE

To find out the scores of MPS, GNS, Internal work Motivation and Critical Psychological States, scoring was done using the procedure given by
Hackman and Oldham (1980). As explained in the instruments topic to obtain the MPS score the following formula was used.

\[
\text{MPS} = \left( \frac{\text{Skill variety} + \text{Task identity} + \text{task significance}}{3} \right) \times \text{Autonomy} \times \text{feedback}
\]

Before using the formula the scores for skill variety, task identity, task significance, autonomy and feedback were scored. There were three items measuring each variable. All the three item scores on a 7-point scale, were added and averaged, to obtain the actual score of the core components.

There are two sections in JDS measuring growth need strength. One is “would like” format and another one is a “job choice” format. In the present study both the formats were used in order to get more precise measurement of GNS. There are 11 items in the ‘would like’ format section. Among the 11 items six are measuring the GNS. This section is rated on 7-point scale ranging from four to ten. Hence each item score was subtracted by three and all the six item scores were averaged.

The job choice format with 12 items measures the GNS on 5-point scale. The respondents indicate their relative preference for pairs of hypothetical jobs. The 12 item scores were averaged.
To get the combined growth needs strength the following procedure was used. First the job choice format score was transformed to 7-point scale, by using the following formula.

\[ Y = 1.5x - 0.5 \]

After transforming the scores from 5-point scale to 7-point scale, the scores of 'would like' format and 'job choice' format were averaged, to obtain the combined growth need strength score.

**ANALYSIS**

To know the nature of the sample on the various variables studied, simple tables have been drawn and percentages have been worked out.

To know the bivariate relationships the independent variables are categorized into groups. The raw scores of the dependent variables are used, to know the differences among the categories on the independent variables. From the raw scores means and standard deviations are worked out and one-way analysis of variance is carried out to know the significance of the difference among the categories. This will show the nature of relationship between a particular independent variable and particular dependent variable.
To know the moderating effect of GNS control tables have been drawn and analyzed with gamma test. Also for the same purpose, partial correlation has been used.

To test the model as hypothesized, regression analysis has been carried out.