CHAPTER 3: METHODOLOGY

3.1 Introduction

An overview of the development and status of leadership and job satisfaction in general and school leadership in particular was presented in Chapter 2. Methodology explains the entire plan of the study. In the present chapter, research design, population, sample, instruments, data collection procedures, and data analysis procedures are discussed.

3.2 Research Design

Quantitative, descriptive, correlational research design is used in this study. The descriptive research method is the most popular research method in education. Gall, Gall, and Borg (2003) opined that the direction and strength of relationship between variables was revealed by a quantitative, correlational research design. Leedy and Ormrod (2001) stated that quantitative descriptive research explores the possible relationship among two or more phenomena. Creswell (2003) opined that the process of correlational research helps in recognizing and understanding the best predictors that influence an outcome.

Quantitative method includes use of standardized instruments and deduction of the hypotheses being tested. Correlational research is an effective technique that portrays a relationship between variables indicating the co-relation of the two variables involved in the study (Salkind, 2003). Quantitative research is an empirical process that statistically measures the association of variables. Zikmund (1997) stated that a relationship between two variables may be indicated through correlational research through the process of two phenomena or events that vary together.
The term ‘normative survey’ refers to the determination of normal or typical conditions, facts or practices at the present time. Best (1978) opined that survey research requires expert and imaginative planning, careful analysis and interpretation of the data gathered, and skilful reporting of the findings.

A descriptive analysis of the leadership of the higher secondary school principals was followed by an analysis of the same with reference to principals’ background variables. Then a description of the job satisfaction of the higher secondary school teachers was attempted. Then the study attempted to find out if there was any relationship between the leadership practices of the principals, as perceived by the teachers they supervised, and the job satisfaction of teachers in the selected higher secondary schools in the northern region of the state of Kerala.

3.3 Population

The population refers to all of any specified group of human beings or non-human entities taken into consideration for a study. According to Johnson and Christensen (2008), population is the large group to which a researcher wants to generalize the sample results. The population of the present study consisted of all the higher secondary principals and teachers in the Navodaya Vidyalayas, Kendriya Vidyalayas, Government schools, and Aided schools in the state of Kerala, India. The sampling procedure is discussed in the next section.

3.4 Sample

Sample refers to a small proportion of the population from whom the information needed for the study is obtained. A good sample helps in saving resources without compromising the validity of the findings. The systematic process of selecting the sample from the population is called sampling.
In the present study, a two stage random sampling procedure was used, where at the first stage, the districts were selected and at the second stage, the schools were selected. Out of the 14 districts, 5 districts were selected using simple random sampling method.

In the second stage, four higher secondary schools were selected from different types of schools from each chosen district. There was only one Navodaya Vidyalaya in each district. It was selected into the sample. There were a few Kendriya Vidyalayas and around one hundred Government and Aided higher secondary schools in each district. The list of all the Kendriya Vidyalayas, Government schools, and Aided schools was collected from the official website of the concerned organizations. Then, simple random sampling method was used to select the schools. All the permanent teachers teaching at the higher secondary classes were selected as the sample of the study. Thus, the sample comprised of 203 teachers teaching at the higher secondary schools in the state of Kerala.

For a school to be eligible to be included in the sampling procedure, its principal ought to be in the present school for at least one year. For a teacher to be included in the sample, he/she ought to work with the principal for at least one year in the present school. These criteria were implemented to ensure that the principals’ leadership practices had the time to influence the teachers’ job satisfaction.

3.5 Instruments used in the Study

The selection and use of appropriate instruments is vital in the success of research. The main variables included in the study are principals’ leadership practices and teachers’ job satisfaction. The following instruments were employed for assessing these variables.
Leadership Practices Inventory (LPI) developed by Kouzes and Posner (2002)

Dixit job Satisfaction Scale (DJSS) developed by Dr. Meera Dixit (1993)

Personal Data Sheet developed by the researcher

The Personal Data Sheet was employed to gather background information about the higher secondary school principals. The main instruments are discussed in detail below.

3.5.1 Leadership Practices Inventory (LPI)

The leadership practices of the higher secondary school principals were assessed using Leadership Practices Inventory (LPI). “The actions that make up these practices (five leadership practices) were translated into behavioural statements” in LPI (Kouzes and Posner, 1995, p.342). There are two versions of the Leadership Practices Inventory, LPI-Self and LPI-Observer, the latter of which is utilized in this study. The LPI-Self is used to assess the principals’ perception of their own leadership practices. The LPI-Observer is used to assess the teachers’ perception of their principals’ leadership practices. The principals’ leadership practices are assessed from the perception of the teachers’ they supervise. This is because as the followers of the leader (principal), teachers are the direct receivers of the leadership practices of the principals. Assessing the principal’s leadership practices through the perception of a few teachers under his/her leadership makes sense than assessing through his/her own perception about himself/herself.

The LPI assesses five distinct leadership practices – Challenging the Process, Inspiring a Shared Vision, Enabling Others to Act, Modeling the Way, and Encouraging the Heart. In the Leadership Practices Inventory, the total thirty statements are intended to rate the five leadership practices. Six statements rated each
of the practices. Each respondent teacher rated his/her principal’s frequency of engaging in a particular leadership behaviour in a ten point Likert-type scale, ranging from 1 (Almost never) to 10 (Almost always). The response options are:

1 = Almost never
2 = Rarely
3 = Seldom
4 = Once in a while
5 = Occasionally
6 = Sometimes
7 = Fairly often
8 = Usually
9 = Very frequently
10 = Almost always

Therefore, each leadership practice could be scored in a range of 6 to 60. “A higher value represents greater use of a leadership behaviour” (Kouzes and Posner, 1995, p.342). The range of LPI Total is, therefore, 30 to 300. “For the most part, findings are relatively consistent across people, genders, and ethnic and cultural backgrounds” (Kouzes and Posner, 1995, p.351). “The LPI, when used as a management/leadership development instrument, has also proven quite powerful in assessing individuals’ leadership behaviours and in providing useful feedback for enhancing one’s leadership capabilities” (Kouzes and Posner, 1995, p.351). The permission to use LPI is obtained from the developers and is presented in Appendix I. The instrument LPI-Observer is presented in Appendix V.
3.5.1.1 Reliability of LPI

Reliability is the extent to which an instrument contains measurement errors that cause scores to differ for reasons unrelated to the individual respondent. The fewer errors contained, the more reliable the instrument. Kouzes and Posner collected data from over 1.3 million respondents between 2005 and 2009. Internal reliability coefficients (Cronbach’s Alpha), as reported in the normative data for LPI, were .86 (Challenging the Process), .92 (Inspiring a Shared Vision), .86 (Enabling Others to Act), .85 (Modeling the Way), and .92 (Encouraging the Heart). Cronbach’s Alpha greater than .70 is generally regarded as very good. Thus, LPI has demonstrated strong internal reliability. “Internal reliabilities for the five leadership practices are very good and are consistent over time” (Kouzes and Posner, 1995, p.351).

Cronbach’s alpha coefficient, as calculated from the data in the present study, for LPI overall instrument is 0.969. All the five subscales of LPI, that is, Challenging the Process (.930), Inspiring a Shared Vision (.943), Enabling Others to Act (.954), Modeling the Way (.935), and Encouraging the Heart (.938) also show high level of internal consistency.

3.5.1.2 Validity of LPI

Validity measures whether or not an instrument truly measures what it purports to measure. The most common assessment of validity is called face validity. According to Kouzes and Posner (2012), “Validation studies that we, as well as other researchers, have conducted over a fifteen-year period consistently confirm the reliability and validity of the Leadership Practices Inventory and the Five Practices of Exemplary Leaders model” (p. 311). Many studies proved that the LPI was able to account for 80% of the leadership practices (Ottinger, 1990). “The underlying factor structure has been sustained across a variety of studies and settings, and support
continues to be generated for the instrument’s predictive and concurrent validity” (Kouzes and Posner, 1995, p.351).

3.5.2 Dixit Job Satisfaction Scale (DJSS)

The job satisfaction of higher secondary school teachers was assessed by using Dixit Job Satisfaction Scale (DJSS). The tool is presented in Appendix IV. It was developed by Dr. Meera Dixit in 1993, and was meant to measure job satisfaction of primary and secondary school teachers. The items in the scale were found to be appropriate to assess the job satisfaction of higher secondary teachers as well. Items were formulated based on information gathered from the teachers themselves. The 52 statements in the scale were intended to measure the important factors of job satisfaction, which are:

(i) Intrinsic aspect
(ii) Salary, service conditions and promotion
(iii) Physical facilities
(iv) Institutional plans and policies
(v) Satisfaction with authorities
(vi) Social status and family welfare
(vii) Rapport with students and
(viii) Relationship with co-workers

3.5.2.1 Reliability of Dixit Job Satisfaction Scale

Reliability of the scale was determined by split half method and test-retest method, both of which showed high reliability, which is given in Table 3.1
Table 3.1

*Reliability of Dixit Job Satisfaction Scale*

<table>
<thead>
<tr>
<th>Method</th>
<th>N</th>
<th>r</th>
<th>Index of Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split half Method</td>
<td>100</td>
<td>.85</td>
<td>.92</td>
</tr>
<tr>
<td>Test-retest Method</td>
<td>100</td>
<td>.75</td>
<td>.86</td>
</tr>
</tbody>
</table>

3.5.2.2 Validity of Dixit Job Satisfaction Scale

Item validity was found out by item test. Correlation method using Pearson’s r taking 25% highest scores and 25% lowest scores was utilized to ensure validity of the scale.

3.5.2.3 Administration of Dixit Job satisfaction Scale

The instructions are printed on the scale. It can be used either individually or in group of any size. It can be completed in 15-20 minutes. The secrecy of the response should be assured. Frankness and sincere cooperation of the respondent is necessary.

3.5.2.4 Scoring

Scoring is on a five-point scale ranging from 1 to 5. The responses and their corresponding scores are ‘strongly agree’ (5), ‘agree’ (4), ‘undecided’ (3), ‘disagree’ (2), and ‘strongly disagree’ (1). The number of items corresponding to each job satisfaction factor varies from 5 to 9. Hence, for the purpose of comparison between job satisfaction factors, the raw score has to be averaged. The sum of scores of all the 52 items gives the job satisfaction total score of teachers. It can have a range of 52 to 260.
3.5.2.5 Level of Job Satisfaction – Normative Data

Using the normative data of Dixit Job Satisfaction Scale, the percentile value of the raw score can be calculated. The normative data presents the level of job satisfaction for each percentile value. Using this, the level of job satisfaction of teachers can be found out. The normative data is presented in Table 3.2.

Table 3.2

*Dixit Job Satisfaction Scale normative data*

<table>
<thead>
<tr>
<th>Percentile value</th>
<th>Raw score</th>
<th>Level of Job Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>93</td>
<td>Very low</td>
</tr>
<tr>
<td>1</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>141</td>
<td>Low</td>
</tr>
<tr>
<td>25</td>
<td>142</td>
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<tr>
<td>30</td>
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<td>40</td>
<td>148</td>
<td>Average</td>
</tr>
<tr>
<td>50</td>
<td>151</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>164</td>
<td>Good</td>
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<tr>
<td>75</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>175</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>192</td>
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</tr>
<tr>
<td>99</td>
<td>229</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>240</td>
<td></td>
</tr>
</tbody>
</table>
3.6 Procedure of Data Collection

The procedure of data collection was as follows:

First, the researcher mailed letters to the principals of each selected school, stating the purpose and importance and requesting permission and consent to conduct the survey (see Appendix II). The authentication letter from the research institute was attached (see Appendix III). Second, after a few days, the researcher contacted the principals over telephone, and all the principals consented to conduct the survey. The researcher also fixed dates for data collection, in consultation with the principals. Third, on the appointed day the researcher visited the school personally. Information regarding confidentiality of data collected along with a promise of a summary of the study results were given to the principals. The principal convened a staff meeting in which the researcher briefly explained the purpose and importance of the study and assured the confidentiality of the data. The survey instruments were distributed to all the participating teachers after collecting informed consent from them. The researcher had to spend one day in each school to get the filled in surveys back. The environment and procedure for all the subjects were kept uniform to the maximum possible. The permission to use the foreign tool, LPI-Observer was obtained (see Appendix I).

3.7 Statistical Techniques Employed

Objectives 1 and 2 were addressed by using descriptive statistics. Objectives 3 and 5 were addressed by calculating t values (2-tailed) and p values to test the significance of difference between means. Additionally, percentile rank was used in achieving objective 3. Objective 4 was addressed by computing ANOVA followed by post hoc test for each of the leadership practices. Objective 6 was addressed using Pearson’s coefficient of correlation (r), coefficient of determination (r-squared), and
regression analysis. Objective seven was addressed by computing Pearson’s coefficient of correlation ($r$). Objective eight was addressed by comparing Pearson’s coefficient of correlation ($r$) for different sample groups. An alpha level of 0.05 (two-tailed) was used in testing hypotheses. The software SPSS version 20.0 was used for analysis of data.

3.8 Summary

This chapter described the methods and procedures employed in the study. The research design, population, sample, instruments, data collection procedures, and data analysis procedures were discussed. The following chapter presents the analysis of the data, findings, and its interpretations.