Chapter III

RESEARCH DESIGN AND METHODOLOGY

Having taken a look at the context of the study, identified its objectives and justified the need for understanding such a study, we now need to put in place the research design and methods of data selection and analysis so that the results of the study are scientifically tenable.

3.1. SELECTING THE RESEARCH DESIGN

The present study is essentially a quantitative and exploratory research to explore the impact of work and personal factors on occupational patterns and job satisfaction. The research design broadly comprises the selection of subjects, variables for the study, reliability and collection of data, administration of tests, and statistical techniques.

3.2. SELECTING THE RESEARCH METHOD

The research method selected for conducting the research is the survey method.

3.3. SAMPLING

3.3.1 Universe of the Study-

The universe of the study comprises of the total number of students studying in physical education departments in different universities of Haryana. The total number of students had been calculated from 1990 batch onwards till 2010 passouts (HAU-Department now closed, CDLU-Department Started Post-2002-03).

3.3.2 Sample of the Study-

Stratified random sampling technique has been applied to collect a representative sample of alumni of Physical Education from the four universities i.e. Maharishi Dayanand University (MDU), Rohtak, Kurukshetra University (KU), Kurukshetra, Ch Devi Lal University (CDLU), Sirsa and CCS- Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar. The sample included people working both in private and public sectors. This is also in confirmation with the suggestions made
by Singhal and Srivastava (1982) who criticized the organisation bound definition of job in context of job satisfaction and suggested that whatever one undertakes as a sustained activity to his/her livelihood, salaried or non-salaried, in the organized sector or unorganized sector, this activity should be taken as a job for him/her. Professionals who did C P. ed have been excluded from the scope of the study.

3.4. TOOLS OF DATA COLLECTION AND MEASUREMENT TECHNIQUES

3.4.1 Collection of data (Questionnaire)

The present study has used the cross sectional design as a frame of reference for collection of primary data from the respondents. To collect primary data, the prepared questionnaire was administered to a sample of 500 professionals of Physical Education alumni from four different universities. During the process of data collection, the distribution of alumni of the above mentioned universities working in different sectors has also been kept in mind to obtain a representative sample i.e. 125 alumni per university.

The available literature on the topic had been searched and reviewed extensively to develop a clear, suitable and relevant questionnaire. Discussions with several eminent authors, organisational behaviourists and organisational psychologists had been made through E-mails and personal contracts for finalizing the questionnaire. Professionals in the field of Physical Education have also been interacted to get an insight of the field of the research. This helped greatly in finalizing the contents of questionnaire.

3.4.2 Variables

The data contains total 26 variables including 8 key variables and 18 demographic variables. The key variables include overall job satisfaction, intrinsic satisfaction, extrinsic satisfaction, intrinsic factor’s importance, external factor importance, predisposition, locus of control, self choice of profession. Some of other variables contain socio economic information (such as age, gender, income, marital status, working status, assets etc) of the respondent. Few are relating to the data on personality profile of the respondents, while some others are of the opinion of the
respondents about different job factors (such as the satisfaction scores or the importance score of different intrinsic and extrinsic job factors). Such as satisfaction scores or the importance score of different intrinsic and extrinsic job factors). Lastly a few more variables relate to the choice of profession and reasons for selecting the Physical Education professionals.

The data on some of the variables, such as demographic variables, belief in, on choice of job, have been readily usable while some other variables such as overall job satisfaction, intrinsic satisfaction, extrinsic satisfaction, locus of control and predisposition have been computed from the responses collected from the respondents on the applied summated rating scales. However, it includes both the categorical and continuous variables measured according to the considerations of the need, reliability and response rates. Selection of the variables for the study has been guided primarily by the research questions and objectives the review of the literature and research on the topic. To answer the research questions the overall satisfaction of Physical Education Professionals have been studied as the dependent variables whereas intrinsic satisfaction, extrinsic satisfaction, intrinsic factor’s importance, external factor importance, predisposition, locus of control and self choice of profession have been examined as both independent and dependent variables. Demographic variables have been studied as independent variables in the study.

3.4.3 Measuring the variables and testing of Hypotheses

A structured questionnaire, to measure the variables and test the hypotheses of the study, had been designed after a considerable amount of the research effort. Various well-established instruments for measurement of job satisfaction and other variables were studied for this. Developing new measurement instruments for measuring different variables of the study had been decided to avoid on two grounds. Firstly, there is an ample availability of already developed instruments in the field, designed by the experienced researchers after years of experiments and testing. Secondly, the measures already developed are well established as valid and reliable, and are in use for many years, it is not possible for an individual researcher to develop such an instrument due to the constraints of limited time and resources. Use of readily
available instruments proves economical and enhances the comparability as well as reliability of the study, provided the instruments are valid, reliable, suitable, and most importantly, carefully selected for the purpose of the study. Suitability, reliability, validity, ease of administration and availability were the criteria for selecting an inventory.

3.4.4 Pilot Study

For preliminary testing of the instrument so designed, a pilot study was conducted. The questionnaire was administered personally to 54 professionals for the pilot study. Responses received from these professionals had been properly coded and analysed for results. Preliminary results insisted on significant relationships between intrinsic satisfaction and overall job satisfaction, age and overall job satisfaction, and predisposition and overall job satisfaction.

Finalizing the contents of the questionnaire post-pilot study had been the next crucial step in the study. Corrections and revisions were incorporated in the questionnaire used for the pilot study on the basis of the suggestions made by the respondents and limitations highlighted by the preliminary testing of the instrument. The final questionnaire had been administered to the subjects for their responses. Duly filled and usable questionnaire had then been coded and entered in a computer data file to be further analysed statistically using SPSS. The data has been analysed for results and inferences by using univariate, bivariate and multivariate methods of analysis. Both descriptive and international statistics have been used in the analysis. This had been followed by the research report in which the results and inferences have been presented systematically at the end, with the suggestions and future means of research.

3.4.5 Measurement Tools and Techniques

The complete questionnaire set, finally designed after the pilot study, is shown in Appendix B. It has been broadly divided in six parts as mentioned below.

3.4.5.1 Demographic Profile: The first part includes the questions relating to the personal and demographic information of the subjects.
3.4.5.2 Brayfield and Rothe Index of Job Satisfaction: The second part of the questionnaire measures the overall job satisfaction among the Physical Education professionals. For this, an inventory developed by Brayfield and Rothe (1951) has been adopted in the questionnaire. The inventory is one among the most applied scale to measure global or overall job satisfaction. It is based on the summated rating technique and is known for its reliability, validity, ease to administer and scoring, and applicability to a wide variety of jobs. The inventory consists of 18 items with Likert scoring system to be answered on a 5 point scale ranging from strongly disagree to strongly agree.

3.4.5.3 Porter’s Need Satisfaction Questionnaire: Part three examines the satisfaction of Physical Education professionals on intrinsic and extrinsic factors of the job. An enlarged version of Porter’s Need Satisfaction questionnaire (1961, 1962) has been used for measuring satisfaction on these variables. It also measures the importance of intrinsic and extrinsic job factors.

The responses, thus, indicate both the satisfaction level of the respondents and the importance of the job factors. The satisfaction level of the respondent on a particular item has been computed according to the discrepancy hypothesis, i.e. by subtracting the rating of (a), that is 'how much there should be', from the rating on (b) that is 'show much is there now'. The higher scores represent the dissatisfaction and lower scores represent the satisfaction level of the respondents. The range of the discrepancy scores for individual factor is −6 to +6, including 0 for neutral point. This provides a 13-point scale, in which high scores represent high dissatisfaction. The ratings on importance scores range from 1 to 7, where high scores represent high importance attached to the variable and low score represents the low importance of the concerned variable. The compute intrinsic satisfaction, the scores of discrepancies on intrinsic factors have been totaled (retaining the signs) and divided by the total number of intrinsic factors, i.e. 15. Similar approach was followed to compute the extrinsic satisfaction. Part (c) of the questionnaire indicates the importance scores of individual job factors. To compute intrinsic factors importance scores, the importance score intrinsic factors have been totaled and divided by the number of intrinsic facts. Importance score of extrinsic factors has also been computed by using the six
methods. When computed the reliability of the measures of intrinsic satisfaction to extrinsic satisfaction, the Cronbach's alpha coefficients resulted in the coefficient scores of 90 and 79 respectively, both of which are fairly good.

3.4.5.4 Core Self Evaluation Questionnaire: Fourth part of the questionnaire measures the predisposition of the professionals to be satisfied on the job. For this, the Core Self Evaluation inventory has been adopted from Aamodt and Raynes (2001).

Porter's need satisfaction questionnaire (161; 1962) originally consisted 15 statement/items, pertaining five need areas including security, social, esteem, autonomy, and self-actualization, to measure the facet discrepancies of managers. The questionnaire is based on a need theory approach to job satisfaction and is generally used to measure the satisfaction on individual factors of job as well as overall satisfaction on the job by summing the facet scores. Job satisfaction is measured by the discrepancy between how much is there now and how much should there be? The smaller this discrepancy, the greater is the satisfaction on the job factor. The questionnaire is typically used for managers and professionals and helps to be more precise in diagnosis and corrective action.

Since the major objective of the study has been to study the effect of intrinsic and extrinsic factors on overall job satisfaction amongst Physical Education professional, the adapted version of Porter's questionnaire, as recommended by Vecchio (2000), has been used in the study with some more items required according to the nature of the present study. The final questionnaire included 26 items, classified in intrinsic factors and extrinsic factors according to their nature. The classification of the items in intrinsic and extrinsic factors is displayed below.

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>QUESTION NUMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic factors</td>
<td>1, 2, 6, 7, 8, 10, 12, 13, 14, 16, 18, 21, 23, 24, 26</td>
</tr>
<tr>
<td>Extrinsic factors</td>
<td>3, 4, 5, 9, 11, 15, 17, 19, 20, 22, 25</td>
</tr>
</tbody>
</table>

The inventory in the present study to measure core self-evaluation, contains 36 statements to be ranked on a five-point scale to give an idea about the overall
personality or the outlook of the respondent. The maximum score on the core self-evaluation questionnaire is 18 the minimum score is 36, with 108 being neutral. High score represents predisposition to be happy and satisfied on job and life in general. Subjects scoring high are confident, optimistic, cheerful, take pride in what they do, and with positive bent of mind. On the other hand, the low score represents the low predisposition satisfied on the job (and also in life). Subjects scoring low on the scale an confident, pessimistic, have less faith or pride in what they do, less disposal happiness in life, and in general show a negative mindset of viewing the things reliability of the questionnaire, when tested by applying the Cronbach's method found to be 90, which is reasonably high.

3.4.5.5 Nowicki and Strickland’s Locus of Control Questionnaire : Part five of the questionnaire studies the locus of control of the respondents which has been measured through the Locus of Control inventory developed by Nowicki and Strickland (1981).

Nowicki and Srickland's locus of control questionnaire (1981) had been applied to measure the locus of control amongst the Physical Education professionals. The questionnaire is claimed to be better than the commonly used Rotter's I-E scale as it attempts to address certain criticisms leveled against Rotter's questionnaire (Marcic, Seltzer, and Vaill, 2001). Nowicki and Srickland's locus of control questionnaire is a valid inventory that measures the locus of control by summatng the scores on 30 questions asked from the respondents. The respondents are asked to answer each question by either 'yes' or 'no'. The minimum score on the scale in 0 while the maximum score is 30. The higher the score, more the person is inclined toward external locus of control and believe in external factors (such as fate, luck, or others) for the event and situations in his/her life. Similarly, the lower the score, more the person is with internal locus of control and has more confidence in him/her self. The middle score of 7-12 represents the situation specifics or those who may behave like internals in one situation and externals in other.
3.4.5.6 Self Choice of Profession and Reasons to Joins Physical Education Profession: The last part contains questions to collect information from the subjects on the self choice of profession and reasons to join the same.

To find out whether the Physical Education professionals in the profession are by self-choice or by other influences and forces, and also the reasons/motive to join the same, two statements were included in the last part of the questionnaire. To check the self-choice of the profession the respondents were asked to give the ratings of their levels of agreement on a five point scale, ranging from strongly disagree to strongly agree, with a neutral point in between. The scores of the response on the statement range from 1 to 5, where lower score shows the level of strong disagreement and higher score represents the strong agreement with the self-choice. To measure the scores on the reasons, the respondents were asked to provide the same ratings for five reasons compensation package, social status, social service, self-development, and job security with the category of 'any other reason' remaining open-ended. The ratings were scored and interpreted in the same manner as the self-choice of profession above.

The questionnaire, thus, includes questions about the demographic predictor variables such as gender, age, education, marital status, and others; non-demographic predictor variables such as overall job satisfaction. Some variables such as self-choice of profession are measured on the Likert-rating scales. Summated rated scales are used for computing overall job satisfaction, intrinsic satisfaction, extrinsic satisfaction, predisposition, and locus of control. While designing the questionnaire, predisposition have been taken to make the questions clear, to the point, and relevant for fulfilling the aim of the study.

3.5. METHODS OF DATA ANALYSIS

The variables have been analysed following a systematic statistical procedure prescribed for the survey studies (Burton 2000, Vaus 2002, Antonius 2003). The analysis combines univariate analysis, bivariate analysis and multivariate analysis. The statistical methods applied in the study have been used for both descriptive and inferential purposes. The data have been used for both descriptive and inferential
purposes. The data have been analysed by using the SPSS package (Statistical Package for Social sciences, renamed as Statistical Products and service solutions) for windows.

Various specific statistical techniques have been used to analyse the data including the descriptive and inferential statistics. More specifically these are comprised of summary statistics, correlation, multiple regression, student’s independent groups t-test and one way analysis of variance. Coefficients of determination, reliability analysis, multiple comparisons, multivariate partial correlations, partial regressions, Levene’s statistic for equality of variance, eta squared, and partial eta squared have also been computed as supplementary analysis. The result of the statistical analysis is being reported.