Chapter III

Methodology

Research methodology is one of the essential parts of the scientific research. John Dewey calls the research as a systematic quest process to identify a certain subject. Thus the research is a process by which we can search for unknown things and acquire the necessary knowledge in order to recognize them. Scientific method or scientific research method is a systematic process to find out an indeterminate situation. Also research is a collection of regular activities that its aim is finding out the truth or is acceding from the less level of knowledge to higher level of knowledge.

In this chapter the explanation and description of doing the research has been discussed. hence, as it will be explained in the following, first there is an introduction of the scheme or type of the research, society and statistical sample and then the method, the instruments of data collection and research indices will be illustrated and finally the method of data collection and analysis will be elaborated. In this chapter, the validity and reliability of measurement of instruments will be experimented by valid tools. In addition, by using appropriate methods and formulae, the sample size will be determined and for statistical data analysis and various descriptive and inferential statistic methods which have used S.P.S.S software in order to calculate and draw the models and graphs will be consumed.

3.1. Research Methodology

The present study from the aim point of view is functional and it is descriptive-correlation from the method view of data collection and it is causal-comparative due to the relation between research variables and one of its significant advantage is the capability of generalizing its results. Moreover, with consideration of subject and research aims, the research methodology has been a survey which has used a reliable and standard questionnaire with high validity and reliability for data collection.
3.2. Statistical Population

In this research the statistical population contains all Colleges and Departments employees of Physical Education in Iran and Maharashtra State of India. Considering the matter that one of the research objectives was searching the Organizational Justice and Organizational Citizenship Behaviour in three scopes of Management, Members of Faculty and Staff, thus physical education groups will not be counted in statistical population and its requiring condition was the existence of an independent administrative, organizational and personnel establishments.

According to the collected data from the bureau of statistic and evaluation of Iranian Ministry of Science, Technology and Research, and also the existence data in some related websites to the Ministry of Science in India and examining the documents at University of Pune, 11 Departments of Physical Education in Iran and 10 Colleges and Departments of Physical Education in Maharashtra State of India are considered as the statistical society of present research. In other hand in the begging of this study the numbers of 401 persons were working at The Departments of Physical Education in Iran and 130 persons were working at Departments and Collages of Physical Education in Maharashtra of India.

3.3. The Sampling Method and Statistical Sample

According to the size and access to the statistical population, a different sampling method has been adopted, in order to sampling scope of Management in 11 Physical Education Departments in Iran, all the attendants under the Dean, Academic and Educational Coordinator, Deputy administrator, Deputy Research and Heads of departments have been selected respectively as the statistical population. Moreover in the scopes of Members of Faculty and Staff of each department, in relation to its employee’s population, the samples are selected randomly with the adequate allocation. Finally, to determine sample size in the module of Iran with considering Cochran Formula Size Sample (Bartlett, Kotrlik and Higgind, 2001), 201 people (N=201) were selected as sample size.
In Physical Education Colleges and Departments of Maharashtra with consideration to size and accessibility to the statistical population of sampling method in three scopes of Management, Members of Faculty and Staff, the available and targeted or census method of sampling has been used. Finally, to determine sample size in the module of Maharashtra, 130 people (N=130) were selected as sample size. Thus, here 130 questionnaires had been distributed; from these 107 of the same been duly filled up and handed over to the researcher.

3.4. Data Collection Method

In the present research, data collection in field method is performed by going to Iran’s and Maharashtra State of India’s Physical Education Departments. Therefore with the required coordination with university principal and related in charge persons, applying to each physical education colleges and departments are performed by direct attendance. Then the research objective is explained for university members. If the members (employees, members of faculty and heads) show interest to participate, the demographic information and questionnaires of Organizational Justice and Organizational Citizenship Behaviour are distributed among them. 20 to 30 minutes are given to each examinee to answer the questions. After answering the questions, the questionnaires are collected by researcher to perform the statistic operation of data collection. Giving total freedom to participator without identifying their names is the ethical considerations of the present research.

3.5. The Measurement Instruments

In the present study, in order to perform the basic research processes and to collect data; the field method including the questionnaires method has been used. In order to do that, the three independent and separate questionnaires have been employed.

3.5.1. Demographic Information

Some data like Gender, Age, Educational Qualification, Educational Filed, Previous Service and Experience, Present Requirement, Presence and Attendance Score, have been used for the determining the demographic information of testers.
3.5.2. Organizational Justice Questionnaire

The questionnaire of Organizational Justice by Niehoff and Moorman (1993) which is containing 19 questions is used in order to determine Organizational Justice. This questionnaire contains three components: Distributive Justice (5 questions), Procedural Justice (5 questions) and Interactional Justice (9 questions). However a Likert scale with 5 point worthiness is used: I agree entirely 5 score, I agree 4 score, neither agree nor disagree 3 score, I disagree 2 score, and I disagree entirely1 score to make it quantitative (Niehoff and Moorman, 1993).

3.5.3. Organizational Citizenship Behaviour Questionnaire

The questionnaire of Organizational Citizenship Behaviour by Padsakoff and Mackenzie (1998) which is containing 24 questions is used in order to determine Organizational Citizenship Behaviour. This questionnaire contains 5 components: Conscientiousness (5 questions), sportsmanship (5 questions), Civic virtue (4 questions), Altruism (5 questions), and Courtesy (5 questions), however a Likert scale with 5 point worthiness is used: I agree entirely 5 score, I agree 4 score, neither agree nor disagree 3 score, I disagree 2 score, and I disagree entirely1 score to make it quantitative (Padsakoff and Mackenzie, 1998).

3.6. Research Variables

In the present research the relationship between two organizational variables has been studied in the field of organizational industrial management.

3.6.1. Relationship Variables include:

a) Independent variables:
   Organizational Justice and Organizational Citizenship Behaviour

b) Dependent variables:
   Iranian and Indian Managers
   Iranian and Indian Members of Faculty
   Iranian and Indian staff
3.6.2. Comparison variables include:

a) **Independent variables:**
- Iranian and Indian Managers
- Iranian and Indian Members of Faculty
- Iranian and Indian Staff

b) **Dependent variables:**
- Organizational Justice and Organizational Citizenship Behaviour

3.7. Validity and Reliability of the Questionnaire

It has been truly said about the scientific researches that “without the proper data you cannot get the good results” and sufficient validity and reliability in the method of measurement is the meaning of the proper data.

3.7.1. Validity

It bringing our attention to this point that how the evaluation and measurement of instruments were evaluated the intended concept. In other words, the measurement device that can measure characteristic and feature of intended concept is the meaning of validity. There is no single formula to identify an observing validity of scale and as Oppenheim demonstrates that “validity is the most difficult problem in the social researches and so far the researches didn’t find any solution for that”. Thus, in order to establish the validity of this research, in the way that its outcomes could be generalized after measurement; some interviews have been conducted with the experienced individuals in the areas of science management and physical education management in Iran and India. All the individuals were Masters in the required specialties in the statistic and research method fields. The above mentioned tasks were performed after preparing and translating the questionnaires into Persian and Marathi languages. All the experienced individuals confirmed the truthfulness and the validity of the questionnaires (Oppenheim, 1992).

3.7.2. Reliability

For investigating the reliability of the Organizational Justice and Organizational Citizenship Behavior questionnaires, The Cronbach’s alpha Scale for Organizational Justice questionnaire by Niehoff and Moorman was (α=0.83). The
Cronbach’s alpha coefficient for Organizational Citizenship Behavior questionnaire by Padsakoff and Mackenzie was ($\alpha=0.81$).

In this research to calculate the reliability of questionnaires the pre-test method has been used, for this reason in two samples of Iran and Maharashtra of India, 10 individuals have been given the questionnaires and they filled up the questionnaire duly and return back to the researcher. Here, the Pearson Correlation Coefficient is used by researcher.

To start with the questionnaires of Organizational Justice and Organizational Citizenship Behavior were distributed among 10 individuals in statistical population of Iran. Then after one week the same questionnaires were distributed among the same individuals. In which the high correlation was appeared in the answers. The results indicate that the Pearson Correlation Coefficient for Organizational Justice questionnaire in Persian translation is $r=0.80$ and the Pearson Correlation Coefficient for Organizational Citizenship Behavior questionnaire with the Persian is $r=0.76$.

In statistical population of India after performing the primary processes of the research, the Organizational Justice and Organizational Citizenship Behavior questionnaires were distributed among 10 individuals. After one week the questionnaires were distributed to the same individuals. The Pearson Correlation Coefficient which is explained for both questionnaires that are evaluated by SPSS (Ver.17) software it that, the Pearson Correlation Coefficient for Organizational Justice questionnaire in Marathi is $r=0.77$, and for Organizational Citizenship Behavior questionnaire with the translation of Marathi which is $r=0.75$.

3.8. Scoring and Questionnaire Interpretation
3.8.1. Scoring of Organizational Justice Questionnaire: this questionnaire evaluates the Organizational Justice situation in the form of three components: Distributive Justice, Procedural Justice and Interactional Justice. Different questions have been used to evaluate the Organizational Justice which contains the five optional spectrum of entirely disagree to entirely agree. According to Likert Scale as it is considered for entirely agree 5 score, agree 4 score, neither agree nor disagree 3 score, disagree 2 score, entirely disagree 1 score respectively. For compilation and arrangement of questions for Organizational Justice questionnaire, the questions number 1, 2,3,4,5, of this questionnaire are related to Distributive Justice Index, the
questions number 6, 7, 8, 9, 10 are related to Procedural Justice Index and the questions number 11, 12, 13, 14, 15, 16, 17, 18, 19 are related to Interactional Justice Index as well.

**Interpretation:** with consideration of this matter, the minimum score in this questionnaire is 19 and the maximum score is 95; gaining the high score indicates this fact that Organizational Justice and its indices and its related dimensions in the examined organization possess the ideal situation.

### 3.8.2. Scoring and Interpretation of Organizational Citizenship Behaviour Questionnaire

This questionnaire evaluated the Organizational Citizenship Behaviour situation in the form of five components: Conscientiousness, Courtesy, Civic Virtue, Sportsmanship and Altruism. Different questions have been employed to evaluate the Organizational Citizenship Behaviour which contains the five optional spectrum of entirely disagree to entirely agree. As it is considered for quite agree 5 score, agree 4 score, neither agree nor disagree 3 score, disagree 2 score, quite disagree 1 score, in Likert Scale.

According to compilation and arrangement of questions for Organizational Citizenship Behaviour questionnaire, the questions 1, 2, 3, 4, 5 of this questionnaire are related to Conscientiousness, the questions 6,7,8,9,10 are related to Courtesy, the questions 11,12,13,14 are related to Civic Virtue, the questions 15,16,17,18,19 are related to Sportsmanship and the questions 20,21,22,23,24 are related to Altruism.

**Interpretation:** By considering of this matter, the minimum score in this questionnaire is 24 and the maximum score is 120, so gaining high score indicates this fact that citizenship behaviour and its indices and its related dimensions in examined organization possess the ideal qualification.
3.9. Methods for Analyzing and Interpretation of Data

In the present research, in order to analyze the data, the descriptive statistics, central tendency index (average), scattering index (deviation standard), number, percentage, tables and charts were used for describing the results.

Inferential statistics was used to test the research hypotheses. Before performing the tests which are related to enter the searching process of hypotheses; the Kolmogorov-Smirnow Test was used in order to find out the normal distribution of data. Levine test was also used to ensure the variance homogeneity of the research groups. Due to the fact that some of the variables did not possess the normal distribution and variance homogeneity; therefore instead of Parametric Tests, Nonparametric Equivalent Tests were used. In the present research Nonparametric Kruskal-Wallis H Test was used in order to compare the averages of three groups (Management, Members of Faculty and Staff), (P<0.05). When the Kruskal-Wallis test finds expression, the test of Mann-Whitney U was utilized to determine these two groups which are related to each other, the test of Mann-Whitney was used for comparing the two Iranian and Indian groups. To determine the relationship between Organizational Justice and Organizational Citizenship Behaviour, Pearson Correlation Coefficient was used; also relationship between these two variables and Demographic Information Pearson Correlation Chi-Square was used. All these tests are performed with the use of the version 17 of S.P.S.S statistical pack.
References


