CHAPTER–3

PROCEDURE AND METHODOLOGY

This chapter presents the procedure and methodology of the present research study. It refers to the design, strategy and specific methods used for the attainment of the objectives of the present study in a justified way. The procedures adopted for the present study are being explained through varied dimensions inclusive of sources of data, tools used to collect data, development of opinionnaire, administration of the test for collection of the data and statistical analysis.

3.1. Selection of Subjects

Firstly, by applying simple random sampling a total of 60 sports goods industries were selected from the clusters of Jalandhar and Meerut (i.e., 30 + 30). Secondly, from the selected industries, one administrator/manager/director was chosen who was authorized to respond on behalf of the industry. The selected industries were chief producers and exporters of supplies and equipment.

The literature regarding sports management and sport industries in India had presented the fact that the nucleus of the industry in India is in and around the states of Punjab and Uttar Pradesh and thickly concentrated in two distinct places namely Jalandhar and Meerut, and they together account for nearly 81.8 per cent of total domestic production with more than 3,000 manufacturing units (micro, small, medium and large) registered and unregistered and 130 exporters present in these two towns ESGNPC (2008). Therefore for the present study these two states representing India’s sports industries were selected as subject.

3.2. Selection of Variables

SMEs, which constitute more than 90% of total number of industrial enterprises, are now facing a tough competition from their global counterparts due to liberalization, change in manufacturing strategies, technological changes, and turbulent and uncertain market scenario. This contribution is despite the sector being exposed to intensified competition since liberalization of Indian economy in 1991.
Small industry including the sports industry in India has been confronted with an increasingly competitive environment due to liberalization, the formation of the World Trade Organization (WTO), domestic economic reforms and many more such important issues, which are directly or indirectly affecting the performance of the sports goods industries. Challenges faced by sports goods industries in Meerut sports goods industry in Meerut faces many challenges. These challenges are due to many fundamental issues such as infrastructure, technical knowledge, human resources and lack of knowledge of government regulations. There is a huge scope of productivity improvement. Some of the issues related to sports industrial cluster in Meerut are listed as follows:

i) The cluster is highly fragmented.

ii) There are very few large factories due to which large orders are not given to the cluster by international buyers.

iii) The cluster is facing immense competition from mechanized units manufacturing similar products.

iv) The technology is changing very rapidly and the cluster firms are too small to make the required investments.

v) The range of products produced in the cluster is very narrow and limited to traditional items.

vi) Entrepreneurs lack the knowledge of government regulations and support system.

vii) Lack of world class testing facility of sports goods.

viii) Lack of availability of funds at low interest rates.

ix) Very little or no market research. Most of the industries rely on the experience and individual networking.

x) Lack of knowledge and awareness to adopt newly developed equipment, machinery and materials to improve quality, productivity and cost.

xi) Improper facilities of research and developments.

xii) Insensitivities to adopt established quality systems to achieve world class quality and productivity.
xiii) Improper information system to get the new development in the sports industry worldwide.

Challenges identified by other researcher in Meerut are similar as there of Jalandhar. Hence, scholar has identified the common areas which need indebt research in the area, keeping in mind the challenges faced and the literature available on sports management following variables were identified for the study:

- HR Upgradation
- Innovation and New Technology Upgradation
- Commercial Collaboration
- Business Development

3.3. Criterion Measures

For the purpose of the present study, the research scholar had consulted the Physical Education experts from University of Delhi, Amity University (Noida), O. P. Jindal University (Sonipat), L.N.U.P.E. University (Gwalior), C.C.S. University (Meerut) and Lovely Professional University (Jalandhar) for the development of the questionnaire. Guidelines for developing the questionnaire were obtained from the literature available in the management studies considering the variables selected for the study.

3.4. Tools

The self developed opinionnaire was established to survey the factors promoting sports goods industries in India. This opinionnaire measured perception of selected subjects related to the selected variables like HR Upgradation, Innovation & New Technology Upgradation, Commercial Collaboration and Business Development.

3.5. Steps for Construction of the Questionnaire

- Initial Writing
- Focus Review Group
- Try Out
- Rewriting
- Second Trial Run
- Final Writing

3.6. Initial Writing

The questionnaire was constructed in relation to specific objectives of the study. A pool of items for questionnaire was created based on reference from literature reviewed and professional expertise from areas of sports management, physical education and sports. Also, while developing various statements, the intense focus of the research remained on extensive reviews of literature relevant to sports goods industries and the selected four variables. The following points were considered while writing the items in the form of statements:

- Language was kept as simple as possible
- Sentences were not complicated and brought in the direct question
- For the formation of items, due consideration was given to the target group of sports goods industries from Jalandhar and Meerut

3.7. Focus Group Review

Each statement framed was thoroughly evaluated by group of experts in the field of sports management and physical education. Experts were provided with the statements along with the objectives of the study and were requested to evaluate the statements in light of the variables selected for the purpose of the study. They were asked to give their opinion, whether the selected statements would help us to extracts the required information. The above process helped to eliminate unwanted words, sentences, and ambiguity in the meaning of the statements from the pool of available statements. Special care was also taken while drafting the questionnaire to avoid:

- Specialized terminology and jargons
- Guiding questions
- Irrelevant questions with the objectives
- Repetition of the questions
- Lengthy statements
- Complicated and complex statements
- Too difficult or time consuming statements
The focus group discussion concluded with 64 questions which were considered relevant to the objectives of the study.

3.8. First Try Out

Once the questionnaire was developed the questionnaire was administered on 15 subjects randomly selected from Meerut and Jalandhar region. The purpose of the trial run was to ensure that the meaning of all statements given in the questionnaire was clear and adequate to obtain the desired information. The participants of the trial run were requested to critically evaluate and answer the statements and return the questionnaire with suggestions, if any, so that questions prepared would be clear and having no ambiguity. The suggestions received were incorporated, resulting in reformation of 4 statements and deletion of 24 questions, Hence the final constituted questionnaire was retained with 40 questions.

3.9. Rewriting

On the basis of the received suggestions and information laid down by the respondents of the trial run, necessary changes were made in the construction of questionnaire formulated after the approval of the supervisor, and members of the research advisory committee.

3.10. Second Trial Run

After making amendments according to the suggestions received, the second draft was prepared after thorough analysis and reviews. Again the questionnaire was administered on 15 randomly selected subjects, other than those who were selected in the first trial run.

At this stage suggestions received were incorporated and 4 questions were further deleted.

3.11. Final Writing

Once final 36 questions were drafted, the questionnaire was considered to be having content validity, therefore, on the basis of the received suggestions, minor amendments like spelling, commas and grammatical mistakes were made in the final copy of the questionnaire. At this stage, a section was introduced to seek information on personal data of the subjects to have an understanding and confidential record of
how and from where the data emerged. A set of clear instructions were also added to help fill up the questionnaire. The final lay out was prepared for the print copy of the questionnaire which consisted of 36 questions.

3.12. Administration of the Questionnaire

For the purpose of collecting the required data the questionnaire was administered to all the selected subjects of the various sports goods industries from Jalandhar and Meerut region respectively. Before the questionnaire was administered, the research scholar contacted the administrator, director, manager of the selected industries and explained the very purpose of the study. They were assured that information provided by them will be kept confidential.

The scholar requested every subject to provide authentic information, in the case of any ambiguity arising out of any question from the part of the respondent the research scholar gave immediate assistance to the subject to clarify the doubts.

3.13. Collection of the Data

The data was collected from 60 sports goods industries, 30 each from Jalandhar and Meerut respectively. The research scholar visited all the 60 sports goods industries and explained in detail the purpose of the study to the administrator, manager, director. And they were affirmed that information given by them is confidential and solely will be utilized for the purpose of present research study only. The raw data collected after the filling up of the questionnaire was considered as the data for the study; thereafter the obtained data underwent the appropriate statistical techniques.

3.14. Statistical Techniques

The data was analyzed by computing the following statistics:

- Percentage method was used for assessing the frequency distribution of the responses availed from the subjects after the filling up of the questionnaire.
- Compound Annual Growth Rate was computed to assess the annual growth in terms of wages of the workforce; it was calculated by employing the following formula:

**Compound Annual Growth Rate (CAGR)**

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\text{CAGR} = \left( \frac{\text{Ending Value}}{\text{Beginning Value}} \right)^{\frac{1}{\text{# of years}}} - 1
\]

- The responses of the open ended questions were analyzed by employing SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis.

- The graphical representations of the collected data have been represented in the form of Pie Diagrams.