

Chapter III
METHODOLOGY

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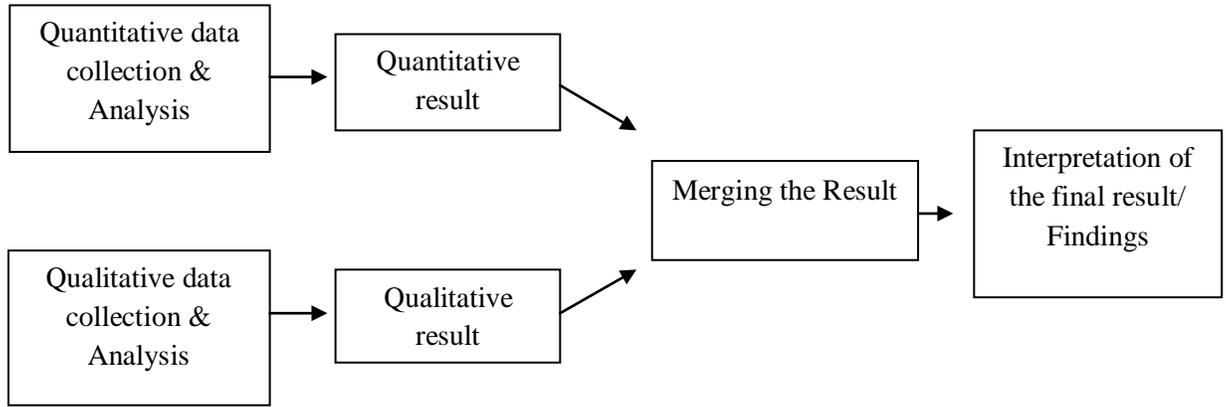
METHODOLOGY

The present study utilized a mixed method research, with the aim to strengthen the research and to reduce the shortcomings of both quantitative and qualitative method of data collection (Andrew et al., 2008). A mixed method provides for adopting the advantages of combination of both methods so as to provide a better understanding of the research questions (Creswell & Clark, 2007). Tashakkori and Creswell (2007) defined mixed method as a kind of research where a researcher collects and analyzes data, interprets the findings and draws suggestions using both quantitative and qualitative approaches in a single study.

Study Design

Convergent parallel design was used in this study. It gives deep and rich understanding of the topic. Both the quantitative and qualitative data were collected concurrently but separately and then they were analyzed. The result of the mixed method gives two data sets and finally they are merged to give a logical interpretation of the data that provides a better understanding of the problem (Creswell, 2009). Same priority was given to both quantitative and qualitative method. This method was designed to strengthen the purpose of the study and to arrive at a logical conclusion to the research questions. Visual diagram of convergent parallel design is graphically represented in figure 3.1.

Figure 3.1
Representation of a Convergent Parallel Design



Creswell and Clark (2011)

Mixed Method Used in This Study

The reason to select this design was to explore in detailed about, the training stress and its effect among athletes and burnout athletes of Kerala. But quantitative survey or qualitative interview alone could not be relied upon for complete results. Hence, both the quantitative and qualitative methods were used and specific issues were targeted. A survey was used to identify the level of training stress and recovery among athletes and to test it statistically whereas; interview explored the cause of burnout among athletes who were no longer active and also helped to understand the views of coaches on possible cause of athlete burnouts. It is significant for an investigator to combine both the data jointly to know the problem clearly. Mixing of data combined the strengths and weaknesses of each method and produce solidity in the study. Through this method the scholar attempted to identify if training stress could cause an athlete to burnout. For the better understanding of the study, quantitative (Phase I) and qualitative (Phase II) methods are described separately.

Quantitative Method (Phase I)

This phase describes about the Research design, Selection of the subjects, Tools of the study, Administration of questionnaire and Statistical techniques.

Research Design

Descriptive (Survey) research was used in this phase to obtain information concerning current training stress and recovery among athletes of Kerala state.

Selection of the Subjects

It includes the Sample, Sampling technique, Inclusion and Exclusion criteria. The sample of the study consists of 500 athletes who are training currently; it includes 18 International athletes, 36 Interuniversity athletes, 217 National athletes and 229 State level athletes. The sample includes both male and female from different training centers in Kerala state viz. SAI (Sports Authority of India) hostels, College hostels, School hostels and Centralized sports hostels under Kerala State Sports Council, and 58th school state champions. The subjects' age range between 15- 30 years. Multistage sampling technique was used as the method to collect data.

Multistage sampling technique

Stage 1: Identification of registered bodies

9 such bodies were identified

Stage 2: Identification of potential group from the selected bodies

In this stage the researcher selected 5 groups which were having more than 100 athletes based on the inclusion criteria.

Stage 3: Identification of sample and sub groups

The researcher adopted simple random sampling and extracted 100 samples from each group. From the above 5 groups, 34 sub groups were identified.

Inclusion criteria

- Athletes who are training currently.
- The Groups which are having more than 100 athletes.
- The athletes between the ages of 15-30 years.
- Both male and female athletes.
- Athletes who participated in International, National and State level competitions.
- Athletes belonging to Kerala state.

Exclusion criteria

- Athletes who are aged below 15 and more than 30 years.
- Athletes from States other than Kerala.
- Groups with less than 100 athletes.

Tools of the Study

The Recovery stress questionnaire for athletes by Kellmann and Kallus (2001) and Demographic information sheet were used in this study, to elicit the responses from the subjects.

Recovery Stress Questionnaire for Athletes (RESTQ)

RESTQ for athletes was developed to measure athletes stress and recovery associated activity. The current stress- recovery state depends on the activity of the athletes. Trough the simultaneous assessment of stress and recovery, the exact picture about the current status of athletes can be obtained. The RESTQ for athletes consists of 76 items questions plus an introductory item (warm up) which is not included in the scoring. It includes 7 general stress scales, 3 sports specific stress scales, 5 recovery scales and 4 recovery area scales. With the help of these 19 scales, the RESTQ assessed the stress full and rest full events and their consequences during the past 3 day/ night of the subjects.

Description of Test Items

The researcher converted the English version of RESTQ questionnaire to subject's mother tongue Malayalam language because all the subjects were from Kerala state and their understanding of English language may also be limited because they were less exposed to English language. Once the questionnaire was translated to Malayalam, translation and back translation was done with the help of language expert and the tool showed acceptable validity and reliability. A pilot study was conducted to pre test the questionnaire. 30 athletes were selected for the pilot study, which included 15 athletes from Kerala Air force team and 15 athletes from LNCPE Trivandrum. Modification was made to questionnaire based on the experience and feedback from the pilot study participants. Then, the researcher proceeded to the final data collection and the subjects were asked to fill out the questionnaire without taking any long break. A Likert- type scale was used with value ranging from 0 (never) to 6 (always) indicating how often the respondent participated in various activities during the past three day/ nights. The scale values were calculated by taking the mean of the item values. In the sleep quality scale, the item for disturbed sleep have to be inverted 6 (never) to 0 (always). The mean of each scale ranged from 0 to 6. High score in the stress associated activity scale reflected the subject in stress and low score in recovery oriented scale also reflected subject in stress. Whereas, high score in recovery oriented scales reflected plenty of recovery. Reliability analysis on RESTQ using Cronbach's alpha was .77.

Demographic Information sheet

Demographic data pertained to athletes age, gender, training age, event, level of performance, current competition, training hours, injury and education.

Administration of Questionnaire

The responses were collected over a period of four months. An informed consent was obtained from the participants after which questionnaire was administered to the subjects. The questionnaire contained a brief description about how to answer the questions and the participants were permitted to withdraw from the survey at any time. A complete set of questionnaire included a letter describing the study, purpose of the study

and assurance of confidentiality, consent form, demographic information sheet and recovery stress questionnaire.

Statistical Techniques

The collected data was analyzed by descriptive statistics, one way ANOVA, Tukey HSD post hoc test and by 't' test. Descriptive statistics were computed to describe the nature of the data and one way ANOVA was used to identify the difference between variables if any. Tukey HSD post hoc test was used to confirm where the differences occurred, and finally 't' test was used to measure the gender differences with respect to athletes training stress and recovery. The level of significance was fixed at 0.05 level.

Qualitative Method (Phase II)

In this section a semi structured interview was devised as a method to gather information about factors associated with burnout. Semi structured interview were conducted on five burnt out athletes and five athletic coaches. The goal was to gain information about causes and consequences of burnout among athletes who were no longer active (burnt out). Furthermore the researcher wanted to understand the views of athletic coaches on cause of athlete's burnout, because they two were the critical stakeholders in the training program. In this analysis, a basic qualitative method was used in an attempt to have an open outlook on the subject's descriptions and interpretations.

This phase was divided into four sections. First the Research design used in this study and interview procedures were discussed. Second was the Selection of the subjects, third was the Description about burnt out athletes and athletic coaches who participated in this study and fourth was the Design and development of the interview.

Research Design

A basic qualitative method/ interpretative method were used in this phase. It targeted to understand a fact, a procedure or a particular point of view from the viewpoint of those involved. The vital purpose of this method was to understand the word or the experience of another.

Basic interpretative studies are simpler when compared to other qualitative approaches. It is not restricted to a particular phenomenon as in case study; it does not seek to explain socio culture aspects as in ethnography, it does not seek to enter the subject's conceptual word to explain the essence as in phenomenology; it does not seek to define theory as in grounded theory research; it does not convey life stories through narrative analysis; develop in to history, or focus on analysis content. These studies are, as the name implies, basic. It describes and attempts to interpret experience of another.

The main reason why qualitative methodology was used in this phase was that some of the very good athletes were disappearing from the sports may be due to the effect of training stress; this training stress may have an influence on burnout. Two areas were investigated, one was the cause and consequences of burnout among athletes who are no longer active, second was to understand the views of athletic coaches on the cause of athlete's burnout.

The data was collected through face to face interview and telephonic interview (Gustafsson et al., 2008). A semi structured interview was conducted to investigate individuals' experience and perspectives. These interviews were semi structured because there was an interview guide line. After listening to the participants' responses to each guided question, the researcher proceed with the questions to understand further in detail information related to the desired topic.

Selection of the Subjects

It includes the Sample, Sampling technique, Inclusion and Exclusion criteria. The sample included five burnt out athletes and they were selected on the basis of demographic information sheet and their age ranged between 15- 30 years. Among the five athletes one was an International athlete and the remaining four were National level athletes. Five athletic coaches were included in this study because they were also the critical stake holders in designing and executing training programs. Coaches from different parts of Kerala state were selected. Purposive sampling was used to identify the participants.

Inclusion criteria

- Athletes who were burnt out from the field less than a year ago.
- The athletes between the ages of 15-30 years.
- Both male and female athletes.
- Athletes who participated in International, National, and State level competitions.
- Athletes from Kerala State.
- The coaches who are training their athletes currently.

Exclusion criteria

- Athletes who are training currently.
- Burnt out Athletes below the age of 15 and above the age of 30 years.
- Burnt out Athletes from States other than Kerala.
- Coaches who had retired from their service.

Description about Burnt Out Athletes

The following information describes each burnt out athlete's background. The participant's names are indicated with one letter to protect confidentiality.

Burnt Out Athlete 1- F

F is a male burnt out athlete, previously he was a high jumper; then he changed his event to sprinting; he has more than ten years of experience in athletics and he has participated in National Federation Cup Junior Athletic Championship. He quit sports due to a serious ligament injury.

Burnt Out Athlete 2- R

R is a male burnt out athlete; he has participated in the World Police Meet, National Games 2015 and many national competitions; now he is working in Kerala Police. He was a sprinter and has 7 years of experience in athletics. He was not able to train well as before, because of some family issues and injury. Now he has dropped from the field due to lack of training.

Burnt Out Athlete 3- A

A is a woman burnt out athlete working in Indian Railways. She was a middle distance runner and is having more than eight years of experience in athletics. She has secured first position in Junior Nationals but now she has completely dropped out from sports due to various reasons; she is also undergoing treatment for shoulder injury.

Burnt Out Athlete 4- B

B is a male burnt out athlete, he has completely dropped out from sports due to lack of performance. He was a middle distance runner and having seven- eight years of experience in athletics and he has secured third position in Junior Nationals. When he dropped out he had a number of injuries like tendon injury, knee pain and back ache.

Burnt Out Athlete 5- N

N is a male burnt out athlete currently working in Services. He was a middle and long distance runner and is having more than eight years of experience in athletics. He had participated in Senior Nationals. Now he is not active as before because of poor performance.

Description about Athletic Coaches

Coach 1- A

A is a female Athletic Coach. She has started working recently in Kerala State Sports Council as an athletic coach. She has very less experience in coaching, and hence she is dealing with beginners.

Coach 2- S

S is a male Physical Education Teacher as well as a Coach in Athletics. He doesn't have a professional degree as a coach but with his experience he was able to produce many National athletes with National records.

Coach 3- N₁

N₁ is a male Physical Education Teacher; he has been teaching Physical Education and also Coaching Athletics. He has coached many National and International athletes. In the School State Championships his school was always in the best three.

Coach 4- N₂

N₂ is a male Athletic Coach. He is a coach under Sports Authority of India (SAI). He has specialized in coaching Sprinters and Jumpers and produced many National and International athletes.

Coach 5- P

P is a male athletic coach. He has been working in a women's college under Kerala State Sports Council. He has produced many National and International athletes and he is able to give training for all the events.

Design and Development of the Interview

The aim of the qualitative study was to investigate the experience of interviewees and get an “insider viewpoint” (Patton, 2002). Hence the scholar and supervisor was developed an interview guide line on the basis of a pilot study result (APPENDIX - E). Format of the interview was semi-structured and open ended.

Before starting the interview the procedure was described and the participants was informed of his or her right to refrain from answering any question and to withdraw from the interview at any time. The participants were also informed of the study objectives. There are two interviews in this study, the first interview was conducted for burnt out athletes and the second for athletic coaches. Initially the participants were asked to describe their career; the interview guide then focused on reasons for having withdrawn from sports. Six interviews were conducted either at a place of convenience for the participants or at their coaching sites and other four interview were conducted through telephone. Each interview was audio recorded and lasted between 20-30 minutes with no time restriction. The open ended questions and responses for each interview were manually coded.

Figure 3.2
Conceptual Frame Work

