CHAPTER-III

RESEARCH METHODOLOGY
The study of stress has always been a subject of interest among the researchers, academicians and practitioners. In this chapter we attempt to present the methodology used in the present study. The methodology includes research design, population and sample, data collection and data analysis process are outlined. Methodology is the total strategy for the study and it starts from the identification of the problem to the final plans of for the data collection (Uys & Basson 1991). 

3.0 Need of the Study

In the context of the present study, little research has been conducted to investigate the role stress experienced by doctors in a developing country like India. India comprises of about 35% population who are below poverty line and it is this part of the population who approach government hospitals for their medical treatment because they cannot afford to get the treatment done in a private hospital.

Our study involves one of the prominent government hospitals in northern India i.e. Indira Gandhi Medical College & Hospital, Shimla (Himachal Pradesh). A typical day of a doctor in the hospital starts with attending patients in the OPD (in case of physicians) or performing surgery in the operation theatre (in case of a surgeon), then visiting the wards, taking lectures, guidance to doctoral students and research, attending emergency cases and working for long hours. Besides these activities, he/she has administrative duties and family responsibilities to perform as well. Moreover, this govt. job prohibits private practice which may also be a cause of dissatisfaction among the doctors.

This proliferation of roles that the doctors have to undertake during their everyday educational and clinical practice lead to stress which has
become an inherent feature of the work life of the doctors and growing evidence suggest that it may increase in severity. Medical knowledge is increasing exponentially, the disease patterns are changing, the approach to health care delivery and medical education is shifting and also professional roles and boundaries are being modified.

Work-related stress has been implicated as a major contributing factor to growing job dissatisfaction among doctors. It has been found that job stress impacts not only on doctor’s health but also their abilities to cope with job demands. This will seriously impair the provision of quality care and the efficacy of the health service delivery.

The productivity of the doctors is the most decisive factor as far as the success of the organization is concerned. The productivity in turn is dependant on the psychosocial well being of the doctors. In this age of highly dynamic and competitive world, a doctor is exposed to all kinds of stressors that can affect on all realms of life.

This particular study was intended to study the factors causing stress among doctors in a govt. hospital, the relationship between role stress and role satisfaction and the coping strategies adopted by the doctors.

The researcher expects to draw attention of the administrators, policy makers, researchers and academicians in related fields to resume further research on stress management.

The review of literature given in the preceding chapter has brought out certain gaps in the studies undertaken in the past. In order to fill this gap an attempt has been made through this study to fill this gap.
3.1 Objectives of the Study:

Before pursuing any study, it is essential to set some objectives so that the study can move in the right direction according to the set objectives. These objectives provide a basic framework for the study. The main objectives are:

1. To study the stress level among doctors.
2. To determine the factors causing stress among doctors working in Indira Gandhi Medical College & Hospital, Shimla (Himachal Pradesh).
3. To determine the relationship between Role stress and Role satisfaction.
4. To study the coping strategies adopted by the doctors working in the hospital.
5. To suggest remedial measures for coping stress.

3.2 Scope of the Study:

The present study has been undertaken in one of the prominent hospitals situated in Shimla (Himachal Pradesh). The study has been carried out on doctors who are considered to be “life and blood” of any hospital.

There are about 270 doctors having different specializations working in the hospital. For the purpose of this study we have taken one hundred and fifty (150) doctors as respondents in the present research.

The sample has been selected from all the departments in order to make a representative sample for the purpose of this study.
3.3 Research Design:

A research design is a blueprint for conducting the study that maximizes control over factors that could interfere with the validity of the findings (Burns & Grove, 2001). According to Polit & Hungler (1995), research design guides the researcher in planning and implementing the study in a way that is most likely to achieve the intended goal.

Research design is the overall plan for obtaining answers to the research questions or for testing the hypothesis and that it is the structural framework within which the study is implemented. In this study the factors causing stress experienced by doctors were identified, the relationship between role stress and role satisfaction and the coping strategies adopted by the doctors was described.

3.3.1 Quantitative Research

Polit & Hungler (1995) defines quantitative research as a systematic collection of numerical information and analysis of that information using statistical procedures. This is supported by Kennedy (1998) stating that a quantitative design is used when data is measured in numbers. Quantitative research was used because the study consisted of a larger number of subjects, who were scattered in the different units/departments and a survey method was found to be the relevant one. Descriptive statistics was used to describe and summarize the data obtained from the respondents.

3.3.2 Descriptive Research

According to Burns & Grove (2001), descriptive research provides an accurate portrayal or account of characteristics of a particular individual,
situation or group for the purpose of discovering new meaning, describing what exists, determining the frequency with which something occurs and categorizing information. These authors state that the purpose of descriptive research is the exploration and description of the phenomenon in real life situation. In this study descriptive research was used to investigate the differences in the stress levels among male and female doctors.

3.3.3 Correlational Research

Correlational research is conducted to examine linear relationship between two or more variables and to determine the type and degree of relationship (Burns and Grove, 2001). The primary intent of correlational studies according to these authors is to explain the nature of relationships, not to determine the cause and effect. In this study the relationship between Role stress and Role satisfaction was examined.

3.3.4 Survey

Uys & Basson (1991) state that survey research is an empirical and logical investigation that involves the systematic and impartial collection of data from a sample of cases, as well as the statistical analysis of the findings. According to Burns & Grove (2001) a survey is a technique of data collection in which questionnaires (collected by mail or person) are used to gather information about an identified population. It is used to collect data that can be collected through self-report. Seaman (1987) mentioned that in a survey, standardized information is collected from subjects from a larger population of more than one hundred. For the purpose of this study the researcher identified the sources of stress experienced by the doctors,
described the relationship between role stress and role satisfaction and
determine the coping strategies adopted by the doctors.

3.3.4.1 Motivation for the use of the survey.

A descriptive correlational survey was used. The respondents were
scattered in all units/wards/departments already stated at Indira Gandhi
Medical College & hospital. Because the nature of work of the doctors it
made difficult to conduct face interviews and a questionnaire was ideal as
the respondents used their own time and pace to complete the questionnaire.

Uys & Basson (1991)\(^1\) states that the questionnaire is less expensive,
time consuming, and have an advantage of involving a large number of
subjects. Babbie (1992)\(^6\) supports the choice of questionnaire stating that
the central element in survey research is the standardized questionnaire.

3.4 The Target Population

The target population is all elements (individuals, objects or
substances) that meet certain criteria for inclusion in a given universe (Burns
& Grove, 2001)\(^2\).

This is supported by Polit & Hungler (1995)\(^3\), who states that the target
population included all the members who are under study that conforms to a
designated set of specifications. In this study the population consisted of
doctors in all of the units/wards/departments at Indira Gandhi Medical
College & Hospital.

3.5 Sample and Sampling Method

Non probability (Judgment) sampling method was used to select the
sampled units within the hospital under study. Uys & Basson (1991)\(^1\) define
the sample as the number of units that the population under study and should
represent the characteristic of the population being studied. Polit & Hungler
(1995) 3 stated that sampling is the process of selecting a portion of the
population to represent the entire population and judgment sampling is the
selection of subjects from a population using non-random procedures. The
method was also found to be convenient and economical.

3.5.1 The sample size

Sample size is the number of subjects needed in a sample (Polit &
Hungler, 1995) 3. The population from which the subject sample was taken
was registered doctors from all the units/ departments of the hospital. The
sample consisted of one hundred and fifty (150) doctors working in the
hospital selected for this study on the days the study was conducted who
were distributed the questionnaire to complete.

3.5.2 Questionnaire response rate

Two hundred and fifty three (253) questionnaires were distributed to
the respondents and one hundred and fifty (150) questionnaires (duly
completed) were received back from the respondents. This means that about
59% of the questionnaires (duly completed) were returned. This according to
Seaman (1987) 5 is adequate as 10% of the sample should be sufficient to
control the sampling error. Sampling error according to Polit & Hungler
(1995) 3 is the fluctuation of the value of a statistic from one sample to
another drawn from the same population.

The academic rank of the faculty members and their experience is
shown in Table 3.1.
Table 3.1 showing the Academic ranks and experience of faculty members.

<table>
<thead>
<tr>
<th>Academic Rank</th>
<th>Number</th>
<th>Percentage</th>
<th>Years of experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td>32</td>
<td>12.8%</td>
<td>Between 15-25 Years</td>
</tr>
<tr>
<td>Associate Professors</td>
<td>28</td>
<td>18.8%</td>
<td>Between 10-15 Years</td>
</tr>
<tr>
<td>Assistant Professors</td>
<td>35</td>
<td>23.3%</td>
<td>Between 5-10 Years</td>
</tr>
<tr>
<td>Registrars/Demonstrators</td>
<td>55</td>
<td>33.3%</td>
<td>Less than 5 Years</td>
</tr>
</tbody>
</table>

The respondents comprised of 92 (61.3%) male doctors and 58 (38.7%) female doctors. We have made an attempt to form a representative sample which included all ranks of doctors working in the hospital. Due care has been taken in giving representation to female doctors as well.

3.6 Study Questionnaire

Questionnaire according to Polit & Hungler (1995) is a series of questions in a document used to gather self-report information from respondents through self-administration. The purpose of the questionnaire was to extract information from the respondents with regard to the objectives already stated.
Researchers are encouraged to use questions in exactly the same as those in previous studies to facilitate comparison of results between studies according to Burns & Grove (2001). These authors argue that, for some studies, the researcher can find a questionnaire in the literature that matches the questionnaire blueprint that has been developed for study. However, the researcher must frequently add items to or delete items from an existing questionnaire to accommodate the blueprint developed.

The first objective i.e. to know about stress among doctors can be studied from the preceding chapter of review of literature which throws light on the different types of stressors experienced by the doctors in hospitals. The proliferation of roles that the doctors have to undertake during their everyday educational and clinical practice makes them susceptible to stress. Medical knowledge is increasing exponentially, the disease patterns are changing, the approach to health care delivery and medical education is shifting and also professional roles and boundaries are being modified. Work-related stress has been implicated as a major contributing factor to growing job dissatisfaction among doctors. It has been found that job stress impacts not only on doctor’s health but also their abilities to cope with job demands. This will seriously impair the provision of quality care and the efficacy of the health service delivery.

### 3.6.1 Organizational Role Stress (ORS) Scale

The Organizational Role Stress scale (Pareek, 2002) was used as a tool to measure 10 role stresses, i.e. self-role distance, inter-role distance, role stagnation, role isolation, role ambiguity, role expectation conflict, role overload, role erosion, resource inadequacy and personal inadequacy. ORS
is a 5-point scale (0 to 4), containing five items for each role stress and a total of 50 statements. Thus, the total scores on each role stress range from 0 to 20.

**Instructions**

The following instructions were given to the doctors and the doubts were cleared before the proceedings started.

“People have different feelings about their roles. Statements describing some of them are given below. Read each statement and indicate, in the space against the corresponding number in the answer sheet, how often you have the feeling expressed in the statement in relation to your role in the organization.

If you find that the category to be used in answering does not adequately indicate your own feelings, use the one which is closest to the way you feel. Do not leave any item unanswered”.

**Scoring:** Five response choices of each question were given the weights from 0 to 4.

Write 0 if you never or rarely feel this way.
Write 1 if you occasionally (a few times) feel this way
Write 2 if you sometimes feel this way
Write 3 if you frequently feel this way
Write 4 if you very frequently or always feel this way.
3.6.2 Role Satisfaction: Motivational Analysis of Organization – Roles (MAO – R)

Motivational Analysis of Organization – Roles (MAO-R) scale (Pareek, 2002)\textsuperscript{7} consist of 25 statements, five relating to each of the five needs – Achievement, Influence, Control, Extension and Affiliation. The respondent is asked to rate each statement twice on a 4-point scale. Once, for the amount of opportunity he gets to do the things reflected in the statement, in his organizational role; the second time for the amount of opportunities he would like to have to do them in his organizational role.

Conceptual Framework

Among the basic human needs – Achievement, Influence, Control, Extension and Affiliation, although some needs may be higher than others, everyone has these needs and seeks to satisfy them in organizational roles. In this sense, the more opportunity one has to satisfy one’s needs, the more satisfying the role is. Role satisfaction can thus be defined in terms of the degree of satisfaction of psychological needs in one’s role in an organization.

Satisfaction of a need is largely subjective; there cannot be any objective norms in this respect. If a person feels that he gets sufficient opportunities in his role to pursue matters of excellence, and that he would not like to have any more opportunities, we say he experiences role satisfaction for the achievement motive. If, on the other hand, a person feels that he does not get opportunities for working towards excellence but would like more opportunities than his present role gives him, we say his role satisfaction for the achievement motive is not high. Role satisfaction can
thus also be defined as the gap between perceived and desired satisfaction of the main psychological needs in one’s organizational role.

**Need or Motive Dimensions**

**Achievement:** Characterized by concern for excellence, competition with the standards of excellence set by others or by oneself, the setting of challenging goals for oneself, awareness of the hurdles in the way of achieving those goals, and persistence in trying alternative paths to reach one’s goals.

**Affiliation:** Characterized by a concern for establishing and maintaining close, personal relationships, by value on friendship, and a tendency to express one’s emotions.

**Influence:** Characterized by a concern to make an impact on others, a desire to make people do what one thinks is right, and an urge to change matters and (develop) people.

**Control:** characterized by a concern for orderliness, a desire to remain informed, and an urge to monitor and take corrective action when needed.

**Extension:** Characterized by concern for others, interest in super ordinate goals, and an urge to be relevant and useful to larger groups, including society.

**Instructions**

The following instructions were given to the doctors and the doubts were cleared before the proceedings started.

“Your role may provide you with opportunities for various matters in different degrees. Some of these dimensions are listed in MAO-R. Read each
statement carefully. Then indicate under P how much opportunity your role in your organization provides for that dimension; under D indicate how much opportunity you would like to have for that dimension”.

**Scoring:** Five response choices of each question were given the weights from 1 to 5

1. Means about no opportunity
2. Means very little opportunity
3. Means some opportunity
4. Means quite a good deal of opportunity.
5. Means a great deal of opportunity.

### 3.6.3 Coping Strategies

The questionnaire has been developed by the researcher. The possible coping strategies or styles were listed after consulting the past literature and the doctors were instructed to tick mark the possible combination of coping strategies they may have used.

**Instruction:** “In the following check list there are items related to different ways of coping. Put a tick mark against the coping strategies which you adopt or may have adopted to overcome stress.”

### 3.7 Ethical Considerations

Permission to conduct the study was requested. Letter clearly stating the purpose of the study was written to the Principal, Indira Gandhi Medical College & Hospital, Shimla requesting permission to conduct the study.
**Verbal consent:** All the doctors were invited to participate voluntarily in this study by verbal consent. Return of the completed questionnaires implied that the respondents had consented for the study. Participants were ensured not to feel obliged to complete the questionnaire and that they might withdraw from the study at any point of time if they so wished.

**Confidentiality:** All information was treated with strict confidentiality and used only for research purpose.

**Anonymity** was ensured. The questionnaires required no names of the respondents. Doctors were asked to complete the questionnaires anonymously and to return the completed questionnaire to the researcher. Participants were instructed that if they did not wish to participate in the study, they can return the blank questionnaires to the researcher.

**3.8 Data Collection Procedure**

In the present study both kinds of data – primary as well as secondary data were used. Primary data are originated by the researcher for a specific purpose of addressing a research problem. Whereas secondary data are collected for some purpose other than the problem at hand. Secondary data include information made available by sources like research firms, business and government sources and computerized databases. Analysis of available secondary data is an essential step in the problem definition process.

In this study the researcher used questionnaires to collect the data. Questionnaires were distributed to the doctors in all the units/wards/departments. All questionnaires were collected from the hospital within a month’s time. Phone calls were made to remind the subjects to return the completed questionnaire.
3.9 Data Analysis

The questionnaires were checked for missing data; items in which the subject provided two responses when only one response was requested; items in which the subject has marked a response between two options and items that ask the subject to write in some information such as role/position, gender and years of experience.

Data was entered into an Excel spreadsheet. Statistical analysis of the quantitative data was completed using Statistical Package for the Social Sciences version 11.0 (SPSS). Statistical treatment of the data included the techniques - Factor analysis, independent t-test, and Correlation and Regression analysis.
References


