CHAPTER 4

Research Methodology
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As is evident from the topic of research, the research was to study stress amongst the residential faculty members of Bundelkhand University and Jiwaji University. It was a comparative study of the environmental, organizational and individual causes and effects of stress on the performance and general well-being of their residential faculty members. These two universities are state universities of Uttar Pradesh and Madhya Pradesh respectively.

Objectives of the Research

The research was conducted with the following objectives:

1. To measure the level of job stress amongst the residential faculty members of Bundelkhand University and Jiwaji University applying satisfaction with university infrastructure, working conditions, interpersonal relations, growth prospects etc. as the basis.

2. To identify the factors which are major stressors for faculty members.

3. To recognize the physiological and psychological effects of stress on the residential teachers of the two universities.

4. To make a comparative analysis of the level of job stress, stressors as well as physiological and psychological effects of stress amongst the residential teachers of the two universities.

5. To suggest remedial measures for overcoming job stress amongst the residential teachers of the two universities.

6. To test the validity of the hypothesis, which was framed for this research viz., "High level of job stress is being experienced by the residential teaching faculty members in the higher education sector."

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Nature of the Research

The research was basically a descriptive work and it describes the level and effects of stress due to working conditions, infrastructure, interpersonal relations, growth prospects etc. amongst residential teachers of Bundelkhand and Jiwaji Universities.

Hypothesis

The following hypothesis was framed for this research:

"High level of job stress is being experienced by the residential teaching faculty members in the higher education sector." The hypothesis has been tested on the basis of responses received from the residential faculty members of Bundelkhand and Jiwaji Universities.

Sources and Method of Data Collection

Both primary as well as secondary data has been collected for this research. For primary data collection, a structured schedule of questions was prepared covering all aspects of possible job stress due to working conditions, infrastructure, interpersonal relations, growth prospects etc. In addition to this the schedule also consisted of questions related to the impact of stress on the physiology and behaviour of faculty members. (Annexure - 1)

The schedule consisted of closed end and rating scale type questions related to demographic status of the respondents and their satisfaction and opinion about different aspects of their job. The respondents were requested to rate these different aspects on a four point scale i.e. Very Great Extent (VGE), Large Extent (LE), Some Extent (SE) and Not at all (NA).

Census survey method was used for this research. All the available and cooperative teachers of Bundelkhand University residential campus and Jiwaji University residential campus were interviewed personally by the researcher with the help of the schedule.
The responses of the faculty members collected through the schedule were used as primary data. Apart from this secondary data was collected from the publications of University Grants Commission regarding the terms and conditions of service of teachers in higher education institutions of India. Information on higher education scenario of the country was obtained and consulted through various publications of Ministry of Human Resource Development from the library of Association of Indian Universities. Apart from this various articles on individual, environmental and organizational stress were also consulted from the various books, newspapers, magazines and journals.

Research Tool

The following three scales were developed for this research.

1. For the purpose of measuring stress, the rating was done on the basis of satisfaction level of the faculty members with a specific factor. For each factor four satisfaction levels with their corresponding ratings were developed as follows:

<table>
<thead>
<tr>
<th>Satisfaction level</th>
<th>Stress Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Great Extent (VGE)</td>
<td>Zero (0)</td>
</tr>
<tr>
<td>Large Extent (LE)</td>
<td>One (1)</td>
</tr>
<tr>
<td>Some Extent (SE)</td>
<td>Two (2)</td>
</tr>
<tr>
<td>Not at All (NA)</td>
<td>Three (3)</td>
</tr>
</tbody>
</table>

Zero rating or satisfaction to very great extent (VGE) was indicative of the factor not being a stressor to the respondent, whereas a rating of Three (3) or no satisfaction at all (NA) indicates that the factor causes maximum stress, in other words, the higher the rating, the greater the stress. Rating of the following 49 factors was used for the purpose of measuring stress:

- Satisfaction with
  - Subjects assigned
  - Number of subjects assigned
  - Timing of Classes

\[4 - 3\]
Quality of students

Other Departmental Responsibilities

University's official/bureaucratic procedures

Equipments & facilities provided for teaching

Commutation to and from the University

- **Satisfaction with the status of**
  
  - Relations with the Vice Chancellor
  
  - Relations with the Head of Department
  
  - Interpersonal relations with Departmental Colleagues
  
  - Interpersonal relations with colleagues in other departments
  
  - Interpersonal relations with Administrative Staff
  
  - Interpersonal relations with Students
  
  - Availability of time to meet family obligations
  
  - Availability of time to maintain social contacts
  
  - Time for own self
  
  - Availability of time for academic research & publications
  
  - Availability of time for attending Conferences/Seminars/workshops/refresher or orientation Course

- **Satisfaction with Human Resource Development factors like**
  
  - Job security
  
  - Salary commensurate with experience & qualifications
  
  - Consideration of views by the university authorities on policy matters
  
  - Awareness about the latest advances in the area of specialization
  
  - Ability to handle the available latest technology & automation tools in departmental lab
  
  - Conduciveness of university environment for academic growth
  
  - Enhancement of self-esteem
  
  - Reliability of colleagues for counseling
  
  - Impartial approach of university administration
  
  - Open Door Policy of the Vice Chancellor’s (Top management)
Effect of frequent contact with other faculty members on productive hours

Level of departmental politics

Promotion policy of the University

Discipline in the Department

Discipline in the University

- Satisfaction with the infrastructure
  - Power supply in Office
  - Power supply in Class
  - Water supply in Conveniences
  - Water supply in Labs
  - Cleanliness in Departmental Office
  - Cleanliness in the Classroom
  - Availability of Classroom
  - Availability of Books and Journals in Library
  - Library Timings
  - Vehicle Parking facility
  - University Security System

- Use of personal organizer for scheduling assignments

- Adverse effect on performance due to the environmental factors like
  - Noise Pollution
  - Extreme Temperature
  - Sunlight Deprivation

The maximum rating a factor can obtain, was calculated as follows:

Total number of respondents (faculty members) in a particular category \times \text{Three (3)}

A scale was developed and tested on the faculty members of Bundelkhand University wherein the total score of each factor and the total score of each faculty member was calculated to ascertain the contribution and level of stress
respectively. The scale for calculating the contribution of individual factor towards stress was developed as explained in the example given below:

**Example**

**Bundelkhand University Regular Lecturers**

Number of Regular lecturers at Bundelkhand University - 22

Maximum rating for a stress causing factor \(22 \times 3 = 66\)

**Scale**

\[
\begin{align*}
0 - 17 & \quad \text{Factor is Not a stressor At All (NA)} \\
18 - 34 & \quad \text{Factor is a stressor to Some Extent (SE)} \\
35 - 51 & \quad \text{Factor is a stressor to a Large Extent (LE)} \\
52 - 66 & \quad \text{Factor is a stressor to a Very Great Extent (VGE)}
\end{align*}
\]

Similarly rating scales for the following categories of faculty members were also developed and applied.

**Bundelkhand University SFS Lecturers**

Number of SFS Lecturers at Bundelkhand University - 102

Maximum rating for a stress causing factor \(102 \times 3 = 306\)

**Scale**

\[
\begin{align*}
0 - 79 & \quad \text{Factor is Not a stressor At All (NA)} \\
80 - 158 & \quad \text{Factor is a stressor to Some Extent (SE)} \\
159 - 236 & \quad \text{Factor is a stressor to a Large Extent (LE)} \\
237 - 306 & \quad \text{Factor is a stressor to a Very Great Extent (VGE)}
\end{align*}
\]

**Bundelkhand University Regular Readers**

Number of Regular Readers at Bundelkhand University - 11

Maximum rating for a stress causing factor \(11 \times 3 = 33\)

**Scale**

\[
\begin{align*}
0 - 9 & \quad \text{Factor is Not a stressor At All (NA)} \\
10 - 17 & \quad \text{Factor is a stressor to Some Extent (SE)} \\
18 - 26 & \quad \text{Factor is a stressor to a Large Extent (LE)} \\
27 - 33 & \quad \text{Factor is a stressor to a Very Great Extent (VGE)}
\end{align*}
\]
Bundelkhand University SFS Readers

Number of SFS Readers at Bundelkhand University - 7
Maximum rating for a stress causing factor

Scale

<table>
<thead>
<tr>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5</td>
<td>Factor is Not a stressor At All (NA)</td>
</tr>
<tr>
<td>6 - 11</td>
<td>Factor is a stressor to Some Extent (SE)</td>
</tr>
<tr>
<td>12 - 16</td>
<td>Factor is a stressor to a Large Extent (LE)</td>
</tr>
<tr>
<td>17 - 21</td>
<td>Factor is a stressor to a Very Great Extent (VGE)</td>
</tr>
</tbody>
</table>

Bundelkhand University Professor

Number of Professors at Bundelkhand University - 6
Maximum rating for a stress causing factor

Scale

<table>
<thead>
<tr>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5</td>
<td>Factor is Not a stressor At All (NA)</td>
</tr>
<tr>
<td>6 - 9</td>
<td>Factor is a stressor to Some Extent (SE)</td>
</tr>
<tr>
<td>10 - 14</td>
<td>Factor is a stressor to a Large Extent (LE)</td>
</tr>
<tr>
<td>15 - 18</td>
<td>Factor is a stressor to a Very Great Extent (VGE)</td>
</tr>
</tbody>
</table>

Jiwaji University Regular Lecturers

Number of Regular Lecturers at Jiwaji University - 4
Maximum rating for a stress causing factor

Scale

<table>
<thead>
<tr>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3</td>
<td>Factor is Not a stressor At All (NA)</td>
</tr>
<tr>
<td>4 - 6</td>
<td>Factor is a stressor to Some Extent (SE)</td>
</tr>
<tr>
<td>7 - 9</td>
<td>Factor is a stressor to a Large Extent (LE)</td>
</tr>
<tr>
<td>10 - 12</td>
<td>Factor is a stressor to a Very Great Extent (VGE)</td>
</tr>
</tbody>
</table>

Jiwaji University SFS Lecturers

Number of SFS Lecturers at Jiwaji University - 22
Maximum rating for a stress causing factor

Scale

<table>
<thead>
<tr>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 3</td>
<td>Factor is Not a stressor At All (NA)</td>
</tr>
<tr>
<td>4 - 6</td>
<td>Factor is a stressor to Some Extent (SE)</td>
</tr>
<tr>
<td>7 - 9</td>
<td>Factor is a stressor to a Large Extent (LE)</td>
</tr>
<tr>
<td>10 - 12</td>
<td>Factor is a stressor to a Very Great Extent (VGE)</td>
</tr>
</tbody>
</table>
Scale

0 - 17  Factor is Not a stressor At All (NA)
18 - 34  Factor is a stressor to Some Extent (SE)
35 - 51  Factor is a stressor to a Large Extent (LE)
52 - 66  Factor is a stressor to a Very Great Extent (VGE)

Jiwaji University Regular Readers

Number of Regular Readers at Jiwaji University - 16
Maximum rating for a stress causing factor 16 x 3 = 48

Scale

0 - 12  Factor is Not a stressor At All (NA)
13 - 25  Factor is a stressor to Some Extent (SE)
26 - 37  Factor is a stressor to a Large Extent (LE)
38 - 48  Factor is a stressor to a Very Great Extent (VGE)

Jiwaji University Professors

Number of Professors at Jiwaji University - 12
Maximum rating for a stress causing factor 12 x 3 = 36

Scale

0 - 9  Factor is Not a stressor At All (NA)
10 - 19  Factor is a stressor to Some Extent (SE)
20 - 28  Factor is a stressor to a Large Extent (LE)
29 - 36  Factor is a stressor to a Very Great Extent (VGE)

2. In addition to the above, another scale was developed to measure overall stress of an individual faculty member by adding up the ratings given by him/her to the 49 factors mentioned earlier. This scale which was applied to the faculty members of both the universities irrespective of their status was as follows:
No. of factors (49) X maximum rating of a factor (3) = 147

<table>
<thead>
<tr>
<th>Stress Level</th>
<th>Stress Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at All (NA)</td>
<td>0 - 36</td>
</tr>
<tr>
<td>Some Extent (SE)</td>
<td>37 - 72</td>
</tr>
<tr>
<td>Large Extent (LE)</td>
<td>73 - 107</td>
</tr>
<tr>
<td>Very Great Extent (VGE)</td>
<td>108 - 147</td>
</tr>
</tbody>
</table>

3. To measure the impact of stress on the physiology and behavior of the faculty members, the following 16 issues were taken into consideration. The same scales that were used for calculating the contribution of individual factors to stress, were applied for calculating the impact of stress on the faculty members.

The maximum rating a factor can obtain was calculated as follows:-

The total number of respondents (faculty members) in a particular category X Three (3)

A scale was developed and tested on the faculty members of Bundelkhand University wherein the total score of each factor and the total score of each faculty member was calculated to ascertain the impact of stress respectively. The scale for calculating the impact of individual factor on the physiology and behavior of the faculty member was developed as explained in the example given below:

**Example**

Bundelkhand University Regular Lecturers

Number of Regular lecturers at Bundelkhand University - 22

Maximum rating of impact on physiology/behaviour 22 x 3 = 66

Scale

0 - 17 No adverse impact on Physiology/Behaviour At All (NA)

18 – 34 Adverse impact on Physiology/Behaviour to Some Extent (SE)

35 – 51 Adverse impact on Physiology/Behaviour to a Large Extent (LE)
Adverse impact on Physiology/Behaviour to a Very Great Extent (VGE)

Similarly rating scales for all the categories of faculty members were developed and applied.

The overall impact of stress on individual faculty members was measured using the following scale:

Scale
0 - 12  No adverse impact on Physiology/Behaviour at all (NA)
13 - 24  Adverse impact on Physiology/Behaviour to Some Extent (SE)
25 - 36  Adverse impact on Physiology/Behaviour to a Large Extent (LE)
37 - 48  Adverse impact on Physiology/Behaviour to a Very Great Extent (VGE)

The following physiological and behavioural effects of stress were considered for the above mentioned scales:

- **Physiological**
  - Abnormal Blood Pressure
  - Indigestion
  - Migraine/Headache
  - Obesity
  - Spondylites
  - Hair loss
  - Acidity
  - Stomach ache
  - Schizophrenia
  - Depression

- **Behavioural**
  - Increase in consumption of Cigarettes
  - Increase in consumption of Alcohol
  - Lack of motivation to attend the University
Lack of feeling of pleasure in the overall development of
- Students
- Department
- University

The Universe
For the purpose of this research, which was a case study, Bundelkhand and Jiwaji Universities were treated as sub-universe and the higher education sector as the total universe.

Sampling Unit & Sample Size
Since a census survey has been adopted for this research, therefore, all available and cooperative teachers of the Bundelkhand and Jiwaji Universities residential wing were interviewed. The following is the status of the availability of residential teachers at the two universities and the number of teachers from whom response was obtained:

<table>
<thead>
<tr>
<th>Bundelkhand University</th>
<th>Jiwaji University</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
</tr>
<tr>
<td>Professors</td>
<td>7</td>
</tr>
<tr>
<td>Regular Readers</td>
<td>12</td>
</tr>
<tr>
<td>Regular Lecturers</td>
<td>24</td>
</tr>
<tr>
<td>SFS Readers</td>
<td>8</td>
</tr>
<tr>
<td>SFS Lecturers</td>
<td>152</td>
</tr>
</tbody>
</table>

Statements were generated on the basis of the ranking of the responses by tabulating and analyzing the data. These statements facilitated assessment of the level of stress being experienced by residential teachers of both the universities, the potential sources of stress and the effects of stress.