Chapter – 4

METHODOLOGY AND RESEARCH DESIGN

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A. Research methodology

(i) Importance of Subject

Modern managers recognize that an organization’s performance should be measured on human dimensions, as well as in terms of return on investment, market share, profit after taxes and the like. A variety of reasons support the desirability of attending to worker’s satisfaction. Perhaps the foremost reason is a moral one. Consider that working is a requirement for most people. The alternative, a subsistence level existence based on government and charitable support, is unacceptable to most people. Given that most people must work, and that most people will spend the major portions of their adult lives at work, it can be argued that employers have a moral obligation to make the experience personally rewarding.

Workers physical and mental well-being appear to be correlated with job satisfaction, in the sense that highly satisfied workers have better physical and mental health records. This evidence, however, is strictly correlation in nature. As a consequence it is difficult to say in which direction the “causal arrow” is pointing. It is also conceivable that other factors that may come into play (e.g., educational level and income) could be largely responsible for the observed correlations. Nonetheless, serious job dissatisfaction, as manifested by stress, can lead to a variety of physiological disorders, including ulcers and heart disease.

Job satisfaction can also play an important role in a company’s ability to attract and retain qualified workers. An organization’s very survival vests heavily on its ability to keep its employees happy and satisfied and a company that is known to mistreat its personnel will have difficulty in drawing the best people to staff its positions.

Low levels of job satisfaction have been related to such problems as job stress, accidents, absenteeism, turnover, increased grievances and union-organizing activities against management. Because such problems can be costly and disruptive to an organization, they cannot be dismissed lightly. Thus, job satisfaction is exceedingly important for the well-being of the organization as well as for the individual (Vecchio, Robert. P. and Dryden, 1988, p. 117).
Employees with higher job satisfaction:

- Believe that the organization will be satisfying in the long run
- Care about the quality of their work
- Are more committed to the organization
- Have higher retention rates and
- Are more productive (Bavendam, 2003)

The most important evidence, which indicates that the conditions of an organization have worsened, is the low rate of job satisfaction. Job satisfaction is the condition of establishing a healthy organizational climate and environment in an organization (Kaya, Ebru 1995, p.1-2).

Individuals generally want to maintain their status, high rank and authority by making use of their capabilities such as knowledge, skills and ability. The individuals who cannot meet their expectations with regard to their jobs become dissatisfied. Thus, this dissatisfaction adversely affects those individuals as well as the organizations for which they work.

Job satisfaction is very important for a person’s motivation and contribution to production. Job satisfaction may diminish irregular attendance at work, replacement of workers within a cycle or even the rate of accidents (Kahn, 1973, p. 94).

University employees are the indispensable cornerstones of society. Their qualifications and experiences are the fundamental determinants of the development of the institutions and organization of the academic services.

Rendering effective service in the university depends on job satisfaction of employees specially teachers. As a result, job satisfaction is very important for the persons and their families, organizations and the society at large.

Managers’ interest in job satisfaction tends to focus on its effect on employee’s performance. Researchers have recognized this interest, so we find a large number of studies that have been designed to assess the impact of job satisfaction on employee productivity, absenteeism and turn over etc. (Robbins, 2002, p. 79).
(ii) Statement of the Problem

To study the level of job satisfaction among the employees of AMU (India) and PNU (Iran) and to establish the relationship among various dimensions related to job satisfaction, we have the following questions:

1. What is the level of job satisfaction among the employees of both the universities, AMU and PNU?
2. What is the difference between AMU and PNU in terms of job satisfaction?
3. What is the relationship between age and degree of job satisfaction?
4. What is the relationship between sex and job satisfaction?
5. What is the relationship between marital status and job satisfaction?
6. What is the relationship between qualification and job satisfaction?
7. What is the relationship between teaching and non-teaching employees and job satisfaction?
8. What is the relationship between designations and job satisfaction?
9. What is the relationship between job status and job satisfaction?
10. What is the relationship between permanent and temporary employees and job satisfaction?
11. What is the relationship between level of income and job satisfaction?
12. What is the relationship between experience and job satisfaction?
13. What is the relationship between department and job satisfaction?
14. What is the nature of components of job satisfaction among employees of both the universities?

(iii) Objectives of the Research

The main objectives of the study are:

1. To know the difference in the level of job satisfaction between the employees of AMU and PNU.
2. To determine elements, levels and nature of job satisfaction among the employees in both the universities.

3. To know the relationship between age, sex, marital status, job status, qualification, designation, income, work experience and department with job satisfaction among the employees of both the universities.

Benefits:
The study will benefit in several ways by providing:

- A clear picture of the items those are important to university employees for their job satisfaction.

- A clear picture of any gap that exists between teaching and non-teaching staff of both the universities that hinderable to better perform their duties. While attempting to improve employee job satisfaction and reducing employee replacement costs, this knowledge of existing gap will definitely help the university administration.

- A clear picture of employees’ awareness of the items of job satisfaction provided and supported by the university may lead to changes in the employee orientation process and holding information sessions to increase individual knowledge and awareness.

- An increased knowledge base for the frequent review of university policies and procedures.

(iv) Definitions:

**Job Satisfaction:** Job satisfaction is an attitude people have about their jobs. It results from their perception of their jobs and the degree to which there is a good fit between the individual and the organization. A number of factors have been associated with job satisfaction. Among the more important ones are as under:

1. **Job or work:** Some of the tasks carried out by an employee and in a wider context, the social and physical environment in which he carries them out. Job is virtually synonymous with role (Hano Johannsen and G. Terry, 1990).

   Work: use of bodily or mental power in order to do or make (Oxford Advanced Learners, 1991).

2. **Supervision:** The technical competence and the interpersonal skills of one’s immediate boss (include operational level to top level).
3. **Co-workers**: The extent to which co-workers are friendly, competent and supportive.

4. **Promotional opportunities**: The availability of opportunities for advancement.

5. **Pay**: The amount of pay received and the perceived fairness of that pay.

These factors of job satisfaction have also been depicted below with the help of a model:

**Figure No. 4.1**

*Model incorporating important Factors influencing Job Satisfaction*

- **Work**
  - Complex
  - Creative
  - Fascinating
  - Good
  - Satisfying
  - Respected
  - Useful
  - Pleasant
  - Healthy
  - Gives sense of accomplishment

- **Supervisor**
  - Competent
  - Intelligence
  - Around when needed
  - Tactful
  - Praises good work
  - Even-tempered
  - Flexible
  - Good
  - Leaves me on my own
  - Tells me where I stand

- **Co-Workers**
  - Stimulating
  - Loyal
  - Fast
  - Responsible
  - Smart
  - Active
  - Respect my privacy
  - Pleasant
  - Friendly
  - Broad interests

- **Pay**
  - Good
  - Secure
  - Highly paid
  - Adequate for normal expenses
  - What I deserve
  - Income provides luxuries

- **Promotion**
  - Fair
  - Regular
  - Promotion on ability
  - Frequent
  - Good opportunity for advancement
(vi) Hypotheses

The study has been designed to test the following hypotheses:

1. There will be no higher than average job satisfaction among the employees of both the universities – AMU and PNU.

2. There will be no significant difference in job satisfaction between the employees of AMU and PNU.

3. There will be no significant difference in job satisfaction between high and low age groups of employees.

4. There will be no significant difference in job satisfaction between males and females.

5. There will be no significant difference in job satisfaction between married and unmarried employees.

6. There will be no significant difference in job satisfaction between high and low qualified groups of employees.

7. There will be no significant difference in job satisfaction between teachers and non teachers.

8. There will be no significant difference in job satisfaction between managers/administrators and teachers.

9. There will be no significant difference in job satisfaction between managers/administrators and workers.

10. There will be no significant difference in job satisfaction between permanent and temporary employees.

11. There will be no significant difference in job satisfaction between high and low income employees.

12. There will be no significant difference in job satisfaction between the more experienced and less experienced employees.

13. There will be no significant difference in job satisfaction between support staff of academic and non-academic departments.
14. There will be no significant difference in the contributions of different dimensions of job satisfaction to total job satisfaction.

15. There will be no significant difference in job satisfaction between AMU and PNU employees on work dimension.

16. There will be no significant difference in job satisfaction between AMU and PNU employees on supervision dimension.

17. There will be no significant difference in job satisfaction between AMU and PNU employees on coworkers' dimension.

18. There will be no significant difference in job satisfaction between AMU and PNU employees on promotion dimension.

19. There will be no significant difference in job satisfaction between AMU and PNU employees on pay dimension.

20. There will be no significant difference in job satisfaction between AMU teachers and non-teachers on work dimension.

21. There will be no significant difference in job satisfaction between AMU teachers and non-teachers on supervision dimension.

22. There will be no significant difference in job satisfaction between AMU teachers and non-teachers on coworkers' dimension.

23. There will be no significant difference in job satisfaction between AMU teachers and non-teachers on promotion dimension.

24. There will be no significant difference in job satisfaction between AMU teachers and non-teachers on pay dimension.

25. There will be no significant difference in job satisfaction between PNU teachers and non-teachers on work dimension.

26. There will be no significant difference in job satisfaction between PNU teachers and non-teachers on supervision dimension.

27. There will be no significant difference in job satisfaction between PNU teachers and non-teachers on coworkers' dimension.
28. There will be no significant difference in job satisfaction between PNU teachers and non-teachers on promotion dimension.

29. There will be no significant difference in job satisfaction between PNU teachers and non-teachers on pay dimension.

30. There will be no significant difference in job satisfaction between AMU and PNU teachers on work dimension.

31. There will be no significant difference in job satisfaction between AMU and PNU teachers on supervision dimension.

32. There will be no significant difference in job satisfaction between AMU and PNU teachers on coworkers’ dimension.

33. There will be no significant difference in job satisfaction between AMU and PNU teachers on promotion dimension.

34. There will be no significant difference in job satisfaction between AMU and PNU teachers on pay dimension.

35. There will be no significant difference in job satisfaction between AMU and PNU non-teachers on work dimension.

36. There will be no significant difference in job satisfaction between AMU and PNU non-teachers on supervisor dimension.

37. There will be no significant difference in job satisfaction between AMU and PNU non-teachers on coworkers’ dimension.

38. There will be no significant difference in job satisfaction between AMU and PNU non-teachers on promotion dimension.

39. There will be no significant difference in job satisfaction between AMU and PNU non-teachers on pay dimension.

(v) Scope of the Study

In this study job satisfaction has been considered as a summation of employee’s feelings in four important areas with their related aspect as follows:
1. **Job Area**: Nature of work, hours of work, fellow workers, opportunities on the job for promotion and advancement, overtime, overtime regulation, interest in work, physical environment, machines and tools etc.

2. **Management**: Supervisory treatments, participation, reward and punishment, praises and blames, leave policy and favoritism etc.

3. **Personal Adjustment**: Emotionality, health, home and living conditions, finances, relation with family members etc.

4. **Social relation**: Neighbors friends and associates’ attitude toward people in community, participation in social activities, sociability and caste barriers, etc. (Pestonjee, 1982, Singh, p. 13).

So the present study has been done in both the universities, AMU, Aligarh, India and PNU, Iran, about job satisfaction of employees that included whole of personnel, such as teachers and non-teachers which includes administrative staff and workers having different designations and qualifications and covers whole of the departments.

**B. Research design**

(i) **Sources of Data**

The data which constitute the raw material for statistical analysis are obtained from a variety of sources (Richmond Samuel, B, 1964, p.12).

(a) **Secondary sources**: Data that are already available i.e. they refer to the data which have already been collected; assembled and analyzed by some one else that is secondary data (Kothari, 2001, p. 117). Secondary sources are: (a) books, (b) journal, (c) magazines, (d) reports, (e) thesis, (f) internet sites, and news papers etc.

So when an analyst uses data or records compiled or published elsewhere. He is using secondary data, if these records are published by an organization which did not perform the original observation or computation, but which assembled them from the records of other organization, they are secondary sources (Richmond, p. 12).
(b) **Primary sources**: The primary data are those which are collected afresh and for the first time and thus happen to be original in character. We can obtain them by methods as interview, questionnaires, schedules and observations etc.

Primary sources are: (a) employees (academy members and staff members and administrators) (b) environment of universities (c) administrative documents (d) reports, etc.

They are complied by the analyst or by his organization; they are called primary data (Richmond, p. 12). If he or his organization published these studies the publications are referred to as primary sources.

(ii) **Population Definition and Sample Size and Method of Drawing Sample:**

(a) **Population**: We shall use the terms “population” and “universe” interchangeably (Dixon and Massey, Jr., 1969). Since that the present research is a comparative study between the two universities – AMU and PNU, so population has been divided into two categories. (a) The population of AMU, (b) The population of PNU.

(a/a) **The Population of AMU Aligarh, India:**

The population of AMU includes all the employees (academic members or teaching staff which includes Professors, Readers and Lecturers) and non-teaching staffing which includes administrators and other employees under various categories (both permanent and temporary). They are 7011 in number. The following tables presents a clear picture of the characteristics of AMU’s population mainly faculty wise and category wise.

As such the numbers of institutions and departments in this university are larger than PNU which includes various schools if the university and consequently the population is bigger.
Table No. 4.1  Population of teaching staff at AMU in terms of faculty and designations

<table>
<thead>
<tr>
<th>Name of the Faculty/College/ Unit</th>
<th>Professors</th>
<th>Readers, Selection grade Lecturers</th>
<th>Lecturers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Sciences</td>
<td>04</td>
<td>06</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Arts</td>
<td>29</td>
<td>40</td>
<td>62</td>
<td>131</td>
</tr>
<tr>
<td>Commerce</td>
<td>06</td>
<td>12</td>
<td>09</td>
<td>27</td>
</tr>
<tr>
<td>Engg. &amp; Tech.</td>
<td>50</td>
<td>80</td>
<td>149</td>
<td>279</td>
</tr>
<tr>
<td>Law</td>
<td>04</td>
<td>02</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>Life sciences</td>
<td>23</td>
<td>18</td>
<td>21</td>
<td>62</td>
</tr>
<tr>
<td>Mgt. Studies and Research</td>
<td>03</td>
<td>06</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Medicine</td>
<td>66</td>
<td>61</td>
<td>84</td>
<td>211</td>
</tr>
<tr>
<td>Science</td>
<td>37</td>
<td>65</td>
<td>57</td>
<td>159</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>33</td>
<td>60</td>
<td>63</td>
<td>156</td>
</tr>
<tr>
<td>Theology</td>
<td>-</td>
<td>05</td>
<td>06</td>
<td>11</td>
</tr>
<tr>
<td>Unani Medicine</td>
<td>09</td>
<td>12</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>Women’s College</td>
<td>13</td>
<td>43</td>
<td>39</td>
<td>95</td>
</tr>
<tr>
<td>Interdisciplinary Biotechnology unit</td>
<td>-</td>
<td>01</td>
<td>3</td>
<td>04</td>
</tr>
<tr>
<td>Total</td>
<td>277</td>
<td>411</td>
<td>544</td>
<td>1232</td>
</tr>
</tbody>
</table>

Table No. 4.2  Population of school teachers in AMU, in terms of designations

<table>
<thead>
<tr>
<th>Principals</th>
<th>PG teachers</th>
<th>TG teachers</th>
<th>Primary teachers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>156</td>
<td>76</td>
<td>41</td>
<td>278</td>
</tr>
</tbody>
</table>

Table No. 4.3  Population of non-teaching staff in AMU in terms of categories

<table>
<thead>
<tr>
<th>Category A</th>
<th>Category B</th>
<th>Category C</th>
<th>Category D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>170</td>
<td>220</td>
<td>2255</td>
<td>2855</td>
<td>5501</td>
</tr>
</tbody>
</table>

Total of population = 7011, (source: registrar office, AMU, 2005)

(a/b) The Population of PNU – Iran:

It includes all of the employees, teaching and non-teaching, permanent and temporary, workers and administrators in PNU – Iran. The total number of employees in AMU is 3564 persons. The following table indicates the characteristics of population in PNU:
Table No. 4.4  Population of teaching staff in PNU in terms of designation

<table>
<thead>
<tr>
<th>Compared groups</th>
<th>Professor</th>
<th>Reader</th>
<th>Lecturer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>4</td>
<td>161</td>
<td>424</td>
<td>589</td>
</tr>
</tbody>
</table>

Table No. 4.5  Population of non-teaching staff in PNU in terms of qualifications

<table>
<thead>
<tr>
<th>Compared groups</th>
<th>High school and less</th>
<th>Intermediate</th>
<th>Graduate</th>
<th>Postgraduate</th>
<th>Ph.D.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1267 (HSC=747)</td>
<td>179</td>
<td>1369</td>
<td>148</td>
<td>2</td>
<td>2975</td>
</tr>
</tbody>
</table>

Table No. 4.6  Population of non-teaching staff in PNU in terms of designation

<table>
<thead>
<tr>
<th>Compared groups</th>
<th>Incharge = grades D</th>
<th>Assistance expert = Grade C</th>
<th>Skilled = Grade B</th>
<th>Expert and manager = Grade A</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>520</td>
<td>747</td>
<td>179</td>
<td>1519</td>
<td>2975</td>
</tr>
</tbody>
</table>

Source: registrar office, PNU

PNU has not grade system. It has job levels; so on the basis of salary and qualification, researcher has equated it.

(b) Determination of Sample Size and Method of Drawing Sample:

(b/a) Sample Size at AMU Aligarh:

If we apply a formula for determining the sample size. It will be a method that may be used to take the value of \( P = 0.5 \) (initial estimate of satisfaction) in this case ‘\( n \)’ will be the maximum and the sample will yield at least the desired precision. This will be the most conservative sample size. In this case we have the following (Kothari, C.R. 2001, p. 218):
\[ N = 7011 \text{ (population size)}, n = \text{size of sample} \]
\[ e = 5\% \text{ (acceptable error (the precision))} \]
\[ z = 1.96 \text{ (as per table of area under normal curve for the given confidence level of 95%).} \]
\[ P = 0.5 \text{ (the P value being the proportion of defectives in the universe).} \]

We can determine the size of the sample using all this information for this research as follows:

\[
n = \frac{Z^2 \cdot p \cdot q \cdot N}{e^2 (N-1) + Z^2 \cdot p \cdot q} = \frac{(1.96)^2 (0.5) (1-0.5) (7011)}{(0.5)^2 (7011-1) + (1.96)^2 (0.5) (1-0.5\%)}
\]

\[
n = \frac{0.960 \times 7011}{0.0025 \times 7010 + 0.960} = \frac{6733.3644}{26.196} = 364
\]

As it is that the considered size of sample will be 364 employees but to increase confidence, validity and reliability, the sample size is chosen at 10% of population size of AMU. Thus the sample size in case of AMU comes out to be 701 employees in number.

**Table No. 4.7 Sample size of teaching staff in AMU in terms of Faculty and Designation**

<table>
<thead>
<tr>
<th>Name of the Faculty/College/ Unit</th>
<th>Professors</th>
<th>Readers</th>
<th>Lecturers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Sciences</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Arts</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Commerce</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Engg. &amp; Tech.</td>
<td>5</td>
<td>8</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>Law</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Life sciences</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Mgt. Studies and Research</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Medicine</td>
<td>7</td>
<td>6</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>Science</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Theology</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Unani Medicine</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Women’s College</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Biotechnology unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28</td>
<td>41</td>
<td>54</td>
<td>123</td>
</tr>
</tbody>
</table>
Table No. 4.8 Sample size of school teachers at AMU in terms of designation

<table>
<thead>
<tr>
<th></th>
<th>Principals</th>
<th>PG teachers</th>
<th>TG teachers</th>
<th>Primary teachers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>16</td>
<td>8</td>
<td>4</td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>

Table No. 4.9 Sample size of non-teaching staff at AMU in terms of designation

<table>
<thead>
<tr>
<th>Category A</th>
<th>Category B</th>
<th>Category C</th>
<th>Category D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>22</td>
<td>226</td>
<td>285</td>
<td>550</td>
</tr>
</tbody>
</table>

Total of sample = 701

(b/b) PNU sample size:

If we apply a formula for determining sample size it will become an appropriate method would be to take the value of $P = 0.5$ (initial estimate of satisfaction in this case ‘n’ will be the maximum and the sample will yield at least the desired precision. This will be the most conservative sample size. In this case we have the following:

$N = 3564$ (population size) $n = $ Size of sample

$e = 5\%$ acceptable error (the precision). $Z = 1.46$ (as per table of area under normal curve for the given confidence level of 95%, $p = 0.5$ (the $P$ value being the proportion of defectives in the universe). Now using all the relevant data in connection with the present study the sample size would determined as under:

$$n = \frac{(1.96)^2(0.5)(1-0.5)(3564)}{(0.05)^2(3564-1) + (1.96)^2(0.5)(1-0.5) + 0.064 	imes 3563 + (3.861)^2 	imes 0.25}$$

$$n = \frac{1.960 	imes 0.25 	imes 3564}{0.0025 	imes 3564 	imes 960} = \frac{3421.44}{9.8675} = 346$$

$n = 346$

As a result of the above calculation the size of sample (n) will be 346 employees. But to increase confidence, validity and reliability, the sample size is
selected at 10% of population size of PNU. Thus the sample size in case of PNU comes out to be 356 employees:

**Table No. 4.10 Sample size of teaching staff at PNU in terms of designation**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>1</td>
</tr>
<tr>
<td>Reader</td>
<td>16</td>
</tr>
<tr>
<td>Lecturer</td>
<td>42</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59</strong></td>
</tr>
</tbody>
</table>

**Table No. 4.11 Sample size of Non-teaching staff at PNU in terms of designation**

<table>
<thead>
<tr>
<th>Compared groups</th>
<th>Expert and Administrative= Grade A</th>
<th>Skillful = Grade B</th>
<th>Assistant expert= Grade C</th>
<th>Incharge = Grade D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>152</td>
<td>18</td>
<td>75</td>
<td>52</td>
<td>297</td>
</tr>
</tbody>
</table>

Total = 356

**Composition of population and sample of both the universities:**

In addition, a combination of the population and samples of both the universities (AMU and PNU) are provided in the following table:

**Table No. 4.12 Composition of population and sample of AMU and PNU**

<table>
<thead>
<tr>
<th>Designation/ Name of University</th>
<th>Teaching</th>
<th>Non-teaching</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pop %</td>
<td>Sample %</td>
<td>pop %</td>
</tr>
<tr>
<td>AMU, Aligarh, India</td>
<td>1510</td>
<td>27</td>
<td>151</td>
</tr>
<tr>
<td>PNU, Iran</td>
<td>589</td>
<td>16</td>
<td>59</td>
</tr>
<tr>
<td>Total</td>
<td>2099</td>
<td>210</td>
<td>8476</td>
</tr>
</tbody>
</table>

Briefly as the same is considered, \( N = 10575 \), \( n = 1057 \) in both the universities.

Stratified random sampling method is used in the present research and the following steps have been taken for choosing sample (Hafezniya 2003, p. 127).
1. The universe is first divided and subdivided into various groups/strata.

2. Then a stratified random sample is chosen independently from each group. In this case groups/strata are designation, faculty/department, job status.

3. Firstly the universe is classified and stratified as mentioned above.

4. Then tables of universe items for each group were prepared.

5. Percentage and contribution of each stratum were also calculated.

6. Percentage and contribution of each stratum of the sample based on the contribution of universe strata were determined.

7. Finally all are combined to have an overall sample size of the whole universe. This by using a simple random sampling method sample from each stratum is drawn.

The researcher has drawn samples on the basis of above mentioned process/stages by Statistical Package for Social Science (SPSS) by a computer and has considered 10% of population for each department and designation on the basis of stratified random sampling. It has been selected from among the lists of employees prepared in the Registrar’s offices.
Figure No. 4.2

Assortment/Categorization of Samples

Samples of AMU and PNU

Age
- Nine category (18 to 60 and more years)

Sex
- Male
- Female

Marital Status
- Married
- Unmarried

Qualification
- High School
- Intermediate
- Graduate
- Post-graduate
- Ph.D.
- Other

Designation
- Teacher
- Worker
- Administrator

Job status
- Permanent
- Temporary

Monthly income
- Nine category (5000 Rs. To 40,000 Rs. and more)

Work experience
- Eight category (1 years to 36 years and more)

Department
- Training
- Financing
- Administrative
- Cultural and Student Welfare
- Proctorial
- Residential
- Other

In the above diagram those features have been considered which are necessary for every university to maintain good atmosphere regarding job satisfaction among teaching, non-teaching staff and administrative staff.
(iii) Research Instruments

The following tools of information were used together from the subjects.

Job Satisfaction Scale (J.S.S.): Job satisfaction questionnaire developed by Prof. S.Y. Wysocki and G.M. Kromm (2002) was used to measure the level of job satisfaction of employees. It contains 41 items and each item to be answered on a 5 point scale ranging on the continuum of maximumally to minimumally satisfied (Wysocki and Kromm, 2002). In addition to that the researcher has nine items rated for the demographic variables of the respondents. Also this questionnaire has been used by Stephen Robbins (2003).

Biographical Information: The subjects were also requested to provide biographical information such as age, sex, marital status, qualification, designation, job status, income, work experience and department. The investigator personally contacted each employee and explained briefly the purpose of the study. They were requested to spare 5-10 minutes for this purpose.

(iv) Variables and measures

In conformity with the hypotheses formulated the following variables were included in the investigation for studying their association with job satisfaction.

- Dependent variable is job satisfaction
- Independent variables are the following:

(1) Job satisfaction was measured through 41 items of questionnaire on a five point scale: (i) work (ii) supervisor (iii) co-workers (iv) promotions (v) pay (all of them are independent variables).

(2) Individual characteristics considered were as follows: (i) age (ii) sex (iii) marital status (iv) qualification (v) designation (vi) job status (vii) income (viii) work experience, (ix) department.

Measuring job satisfaction:

Job satisfaction: an individual’s general attitude towards his or her job.

Typical factors that have been included are the nature of the work, supervisor, relation with co-workers, promotion opportunities and pay. These factors are rated
on a standardized scale and then added up to create overall job satisfaction score (Robbins, 2002, p. 78-79).

On the basis of hypotheses as explained earlier we will have a number of questions for each hypothesis, as detailed out in the following table:

### Table No. 4.13 Relationship between Hypotheses and questionnaire

*[JS = Job satisfaction, Q = Question]*

<table>
<thead>
<tr>
<th>No. of Hypotheses</th>
<th>Hypotheses type (variable)</th>
<th>Number of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ho-1</td>
<td>There will be no higher than average job satisfaction among the employees of both the universities AMU and PNU combined</td>
<td>Q 1 to Q 41</td>
</tr>
<tr>
<td>Ho-2</td>
<td>There will be no significant difference in job satisfaction between the employees of AMU and PNU.</td>
<td>Q 1 to 41</td>
</tr>
<tr>
<td>Ho-3</td>
<td>There will be no significant difference in JS between high and low age groups of employees</td>
<td>Q 1 to Q 41 and 42</td>
</tr>
<tr>
<td>Ho-4</td>
<td>There will be no significant difference in JS between male and female employees</td>
<td>Q 1 to Q 41 and 43</td>
</tr>
<tr>
<td>Ho-5</td>
<td>There will be no significant difference in JS between married and unmarried employees</td>
<td>Q 1 to Q 41 and 44</td>
</tr>
<tr>
<td>Ho-6</td>
<td>There will be no significant difference in JS between high and low qualified groups of employees</td>
<td>Q 1 to Q 41 and 45</td>
</tr>
<tr>
<td>Ho-7</td>
<td>There will be no significant difference in JS between teachers and non-teachers</td>
<td>Q 1 to Q 41 and 46/1, 46/2, 46/3</td>
</tr>
<tr>
<td>Ho-8</td>
<td>There will be no significant difference in JS between Administrators and teachers.</td>
<td>Q 1 to Q 41 and 46/1, 46/2, 46/3</td>
</tr>
<tr>
<td>Ho-9</td>
<td>There will be no significant difference in JS between Administrators and workers.</td>
<td>Q 1 to Q 41 and 46/2, 46/3</td>
</tr>
<tr>
<td>Ho-10</td>
<td>There will be no significant difference in JS between permanent and temporary employees</td>
<td>Q 1 to Q 41 and 47</td>
</tr>
<tr>
<td>Ho-11</td>
<td>There will be no significant difference in JS between high income and low income employees</td>
<td>Q 1 to Q 41 and 48</td>
</tr>
<tr>
<td>Ho-12</td>
<td>There will be no significant difference in JS between more experienced and less experienced groups of employees</td>
<td>Q 1 to Q 41 and 49</td>
</tr>
<tr>
<td>Ho-13</td>
<td>There will be no significant difference in JS between support staff of academic and non academic departments</td>
<td>Q 1 to Q 41 and 50</td>
</tr>
<tr>
<td>Ho-14</td>
<td>There will be no significant difference in job in the contributions of different components of JS to total JS.</td>
<td>Q 1 to Q 41</td>
</tr>
<tr>
<td>Ho-15</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU employees on work dimension</td>
<td>Q 1 to Q 10</td>
</tr>
<tr>
<td>Ho-16</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU employees on supervision dimension</td>
<td>Q 11 to Q 20</td>
</tr>
<tr>
<td>Ho-17</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU employees on coworkers dimension</td>
<td>Q 21 to Q 30</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Ho-18</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU employees on promotion dimension</td>
<td>Q 31 to Q 35</td>
</tr>
<tr>
<td>Ho-19</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU employees on pay dimension</td>
<td>Q 36 to Q 41</td>
</tr>
<tr>
<td>Ho-20</td>
<td>There will be no significant difference in job satisfaction between AMU teachers and non-teachers on work dimension</td>
<td>Q 1 to Q 10</td>
</tr>
<tr>
<td>Ho-21</td>
<td>There will be no significant difference in job satisfaction between AMU teachers and non-teachers on supervision dimension</td>
<td>Q 11 to Q 20</td>
</tr>
<tr>
<td>Ho-22</td>
<td>There will be no significant difference in job satisfaction between AMU teachers and non-teachers on coworkers dimension</td>
<td>Q 21 to Q 30</td>
</tr>
<tr>
<td>Ho-23</td>
<td>There will be no significant difference in job satisfaction between AMU teachers and non-teachers on promotion dimension</td>
<td>Q 31 to Q 35</td>
</tr>
<tr>
<td>Ho-24</td>
<td>There will be no significant difference in job satisfaction between AMU teachers and non-teachers on pay dimension</td>
<td>Q 36 to Q 41</td>
</tr>
<tr>
<td>Ho-25</td>
<td>There will be no significant difference in job satisfaction between PNU teachers and non-teachers on work dimension</td>
<td>Q 1 to Q 10</td>
</tr>
<tr>
<td>Ho-26</td>
<td>There will be no significant difference in job satisfaction between PNU teachers and non-teachers on supervision dimension</td>
<td>Q 11 to Q 20</td>
</tr>
<tr>
<td>Ho-27</td>
<td>There will be no significant difference in job satisfaction between PNU teachers and non-teachers on coworkers dimension</td>
<td>Q 21 to Q 30</td>
</tr>
<tr>
<td>Ho-28</td>
<td>There will be no significant difference in job satisfaction between PNU teachers and non-teachers on promotion dimension</td>
<td>Q 31 to Q 35</td>
</tr>
<tr>
<td>Ho-29</td>
<td>There will be no significant difference in job satisfaction between PNU teachers and non-teachers on pay dimension</td>
<td>Q 36 to Q 41</td>
</tr>
<tr>
<td>Ho-30</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU teachers on work dimension</td>
<td>Q 1 to Q 10</td>
</tr>
<tr>
<td>Ho-31</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU teachers on supervision dimension</td>
<td>Q 11 to Q 20</td>
</tr>
<tr>
<td>Ho-32</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU teachers on coworkers dimension</td>
<td>Q 21 to Q 30</td>
</tr>
<tr>
<td>Ho-33</td>
<td>There will be no significant difference in job satisfaction between AMU and PNU teachers on promotion dimension</td>
<td>Q 31 to Q 35</td>
</tr>
</tbody>
</table>
There will be no significant difference in job satisfaction between AMU and PNU teachers on pay dimension

There will be no significant difference in job satisfaction between AMU and PNU non-teachers on work dimension

There will be no significant difference in job satisfaction between AMU and PNU non-teachers on supervisor dimension

There will be no significant difference in job satisfaction between AMU and PNU non-teachers on coworkers dimension

There will be no significant difference in job satisfaction between AMU and PNU non-teachers on promotion dimension

There will be no significant difference in job satisfaction between AMU and PNU non-teachers on pay dimension

(v) Statistical Treatment of Data

Statistical Analysis:

In this research, for the purpose of analysis of data, the researcher has used t-test, Friedman test and Chi square test through the computer by SPSS software. These techniques are suitable for this research because we have two samples and we have to test difference between two means of scores and hypotheses are null hypotheses.

(vi) Reliability of the Data

Reliability reflects the consistency of a set of scale items in measuring a particular concept. Reliability measurement is very important to check the internal consistency of all the items, concerning the impact on job satisfaction. Cronbach's alpha is completed by using SPSS reliability programme for the set of job satisfaction scale. Cronbach's alpha (α) value for 50 items (41 items for job satisfaction and 9 items for characteristics) in the questionnaire is calculated as Alpha 0.9419. Correlation each item with the total score are ranging high from 0.512 to 0.737. Although questionnaire was used that is standard because it already has been used by number of researchers.
In spite of the researcher’s honest attempt to maximize the accuracy and validity of the result for the given sample at the present study limits the generalization to the total population due to non-availability of a substantially large sample and the data collection technique of direct connection survey. In light of above stated reasons, it is further suggested (i) to control the research design like larger sample selection to minimize the statistical variation of the measured values and (ii) to employ better measures of job satisfaction and performance rating so as to strength the degree of relationship of these variables with job satisfaction.

(vii) Dependability of the Results

The present study has been used as statistical analysis and its contents have been tested by regression and alpha multiply.

The principles of research considered in the duration of analysis processing and this research also has collected by the supervisor’s excellence and valuable guides in research stages. Researcher’s himself has carried out this research.

A. Difficulties faced during the study:

1. In this study the researcher faced a lot of problems because during the study some employees did not cooperate with the researcher and they were not interested in filling the questionnaires.

2. The biggest problem was that of language because some of the employees specially belonging to D category were not able to understand English and the researcher understand English language.

3. The time availability for the study was also limited and the financial resource has also been the main limiting factor during the study.

4. The up to date personal informations were not available in the offices including central office.

5. The study on job satisfaction is more qualitative in nature rather than quantitative; because job satisfaction or otherwise is mainly dependent on the perception of the individuals apart from their factors.
6. The investigator was also not very conversant (much acquainted) with socio-economic milieu and polico-cultural.

B. Researcher’s Liability:

The Researcher’s also conducted whole of the research stages. He has written research design and questionnaire, distributing questionnaires, contacting with the selective employees, analysis and interpretation of data and writing report.
References:


21. www.employesatisfactions.com

22. www.norton.ednet