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3.1 INTRODUCTION

Methodology is a total sum of these steps/techniques being carried out by researchers in order to find out the actual dynamics function for any problem and behavioral outcome. It refers to systematic research and planning and also a kind of decision making process in which researcher has to select appropriate problem, careful and proper adaptation of objectives, hypotheses and other research design, standardized tools, tests, sampling techniques, sound procedures for data collection, tabulation and finally applications of an appropriate statistical techniques. This steps basically enhance the prognostic value of research findings by researcher, thus, the findings may be generalized to predict the behavior of population from which the sample has been drawn. The objectivity of scientific research is contingent upon the accuracy of research methodology or method adopt by the researcher. In any research Objectivity cannot be obtained unless it is carried out in a systematic and planed manner.

3.2 AIM

The study is mainly conducted to examine the Psychological well being, Self-Efficacy and occupational stress among Doctors and Nurses. In addition difference in Psychological well being, self Efficacy and occupational stress as a function of socio demographic variable such as age, gender, length of service are also examined.
3.3 OBJECTIVES

The present study assess the Psychological well being, Self-Efficacy and occupational stress among Doctors and Nurses.

The specific objectives of the study are

- To assess the level of Psychological well being among Doctors and Nurses.
- To assess self-efficacy of the Doctors and Nurses
- To assess occupational stress of Doctors and Nurses
- To study the influence of gender, age, length of service on psychological well being, self-efficacy and occupational stress.

3.4 HYPOTHESES

Based on the research questions and objectives the following hypotheses were formulated.

H1. Doctors and Nurses differ significantly on psychological well-being

H2. There will be significance difference in the level of self-efficacy among Doctors and Nurses

H3. Doctors and Nurses differ significantly in experiencing occupational stress.

H4. Gender, age, length of service will influence psychological well-being, self-efficacy and occupational stress
3.5 SAMPLE

Sample is the small portion of the population or group of people selected for the study. It is not possible for any behavior researchers to focus or cover on whole population, so a portion which represents the whole population is selected for research investigation. In the present research study data has been collected from Doctors and Nurses (doctors=300, nurses=300). The sample was selected randomly from different private and government hospitals located in Bangalore city. The age range of respondents was between 25-50 years. In order to yield a representative sample from different age, gender, and length of service was used. The sample was confined to male and female respondents. Therefore, their social frame of reference was different, mainly a length of service (up to 10 years and above 10 years). The sample composition was 300 doctors and 300 nurses, under these sample rate 150 male doctors and 150 female doctors, 150 of 150 of male nurses and 150 female nurses were selected for the present study.

Table 3.5.1 the following table shows the sample distribution of doctors and nurses

<table>
<thead>
<tr>
<th>Samples</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>150</td>
<td>150</td>
<td>300</td>
</tr>
<tr>
<td>Nurses</td>
<td>150</td>
<td>150</td>
<td>300</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>300</td>
<td>600</td>
</tr>
</tbody>
</table>
3.6 CRITERIA

3.6.1 Inclusion criteria

1. The study will cover only doctors with minimum qualifications of MBBS, and Nurses who have completed minimum three years of course (GNM, BSc Nursing)
2. Doctors and Nurses working for full time and employed at hospitals and organizations.
3. Doctors and Nurses working in Bangalore city limits.
4. Doctors and Nurses working in Private and Government Hospitals are included
5. Doctors and Nurses who have minimum 2 years of work experience.

3.6.2 Exclusion criteria

1. Allied health professions (Homeopathy, Ayurvedic, Unani, physiotherapist, etc) are exclusive from study.
2. Those who are doing private practice are excluded from the present study.
3. Female Doctors and Nurses who are on their family way are also excluded from the study.

3.7 TOOLS

In the present investigation only quantitative measure were used for data collection. The present study was basically designed to study the Psychological well being, self efficacy and occupational stress among Doctors and Nurses.
The following three tests were used, namely

1. Psychological Well-Being Scale (Ryff, 1995)

2. Self-Efficacy Scale (Singh and Kumar, 1990)

3. Occupational Stress Index (Srivastava and Singh, 1981)

The details of these tools are given below:

3.7.1 Psychological Well-Being Scale (PWS)

The test of psychological well-being was developed by Ryff (1995) which consists of 54 questions/statements, out of which, 26 statements/item numbers 1, 2, 3, 6, 8, 12, 16, 19, 20, 21, 24, 28, 30, 32, 33, 35, 37, 39, 40, 41, 47, 48, 49, 50, 51, and 54 are positively worded and 28 item numbers 4, 5, 7, 9, 10, 11, 13, 14, 15, 17, 18, 22, 23, 25, 26, 27, 29, 31, 34, 36, 38, 42, 43, 44, 45, 46, 52, and 53, are negatively worded. Each item has to be rated on 6-point scale on the continuum of strongly disagree to strongly agree. The possible scores for each item ranged from 1-6. In case of negatively worded items the scoring procedure will be reversed with a range of score 6-1 respectively. The minimum scores of a subject on this scale will be 54 and the maximum possible scores will be 324. For overall high score indicates that the respondent has a mastery of well-being in his or her life and low score indicates that the respondent struggles to feel comfortable with that concept.

The following are example statements from each of the six areas of well-being measured.

Autonomy (item numbers are 2, 8, 14, 20, 26, 32, 38, 44 & 50)

Environment mastery (item numbers are 3, 9, 15, 21, 27, 33, 39, 45 & 51)
Personal growth (item numbers are 4, 10, 16, 22, 28, 34, 40, 46, & 52)

Positive relation with others (item numbers are 1, 7, 13, 19, 25, 31, 37, 43, & 49)

Purpose in life (item numbers are 5, 11, 17, 23, 29, 35, 41, 47 & 53)

Self-acceptance (item numbers are 6, 12, 18, 24, 30, 36, 42, 48 & 54)

Responses are totaled for each the six categories. The minimum scores of the each area will be 9 and the maximum possible scores will be 54. For each category, a high score is considered to be a respondent has mastery in that particular area. Conversely, a low score shows that the respondent feel of uncomfortable with that particular concept. The reliability of the psychological wellbeing test determined by the internal consistency (co-efficient alpha) for each dimension varies from 0.86 to 0.91. Validity of the test shows correlation with 20 items parent scale for each dimension varies from 0.83 to 0.99.

Table 3.7.1: Interpretation norms for psychological well being

<table>
<thead>
<tr>
<th>scores</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>235 and above</td>
<td>High</td>
</tr>
<tr>
<td>145 – 234</td>
<td>Average</td>
</tr>
<tr>
<td>144 and below</td>
<td>low</td>
</tr>
</tbody>
</table>

3.7.2 Personal Self-Efficacy Scale (PSES)

The scale of personal self efficacy is one of the popular scales to measure or assess efficacy of the individuals. This test was developed by Singh and Kumar (1990). It consists total 28 items, which include positive and negative items. Out of 28 items, item numbers 6, 8, 9, 10, 19, 20, 22, 23, 25, and 27 are negatively worded and, item numbers 1, 2, 3, 4, 5, 7, 11, 12, 13, 14, 15, 16, 17, 18, 21, 24, 26 and 28 are
positively worded. In this test the each items has to be rated on 5-point scale on the continuum of strongly disagree to strongly agree. The scores for each positive item ranged from 1-5 score. For negatively worded items the scoring procedure will be reversed with a range from 5-1 score respectively. The minimum scores of a subject on this scale will be 28 and the maximum possible scores will be 140. The high score indicates high level of self-efficacy and the low score indicates low level of self-efficacy of the respondent.

The items validity of the personal efficacy scale range from 2.1 to 0.54. This scale half reliability was determined by Spearman-Brown formula and it was found to be 0.72. The score of Social Reaction Inventory and Rosenberg Self Esteem questionnaire were used as the validation criteria for this scale. The coefficient of correlation between the score of social reaction inventory and personal efficacy scale was found to be +0.72 on a representative sample of 300 subjects. The coefficient of correlation between the score of Rosenberg Self-Esteem and Self-Efficacy Scale was found to be +0.81.

**Table 3.7.2: Interpretation norms for self-efficacy**

<table>
<thead>
<tr>
<th>scores</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>112 and above</td>
<td>High</td>
</tr>
<tr>
<td>57 – 111</td>
<td>Average</td>
</tr>
<tr>
<td>56 and below</td>
<td>low</td>
</tr>
</tbody>
</table>

**3.7.3 Occupational Stress Index (OSI)**

Occupational stress index was developed by Srivastava and Singh (1981). This test is one of the popular tests to assess and understand the level of employees’
occupational stress. This test consist total of 46 items. Out of 46 items, 28 items were ‘true keyed’ and rests 18 were ‘false keyed’. True keyed items ranged from 1-5 point scale ranging on a continuum of strongly agree, agree, uncertain, disagree and strongly disagree. For false keyed items the scoring procedure will be reversed with a range from 5-1 score respectively. Items were related to almost all relevant contents of job, which cause stress as 12 dimensions, they are role overload, role ambiguity, role conflict, unreasonable group and political pressure, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions, responsibility for person and unprofitability. The minimum scores of a subject on this scale will be 46 and the maximum possible scores will be 230. The scores were divided in to three categories i.e. high, moderate and low levels of occupational stress.

The reliability of the occupational stress index determined by the computation of alpha co-efficient that was 0.90. The internal consistency of the test was 0.93 determined by the odd even method. Index of homogeneity and internal validity of individual items was determined by computing point bursarial co-efficient of correlation. The value of co-efficient of co relation is ranged from 0.36 to 0.59.
Table 3.7.3: Interpretation norms for occupational stress

<table>
<thead>
<tr>
<th>SL.N</th>
<th>Sub- scales</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>role overload</td>
<td>6-14</td>
<td>15-22</td>
<td>23-30</td>
</tr>
<tr>
<td>2</td>
<td>role ambiguity</td>
<td>4-9</td>
<td>10-12</td>
<td>13-20</td>
</tr>
<tr>
<td>3</td>
<td>role conflict</td>
<td>5-12</td>
<td>13-17</td>
<td>18-25</td>
</tr>
<tr>
<td>4</td>
<td>unreasonable group and political pressure</td>
<td>4-9</td>
<td>10-14</td>
<td>15-20</td>
</tr>
<tr>
<td>5</td>
<td>responsibility for person</td>
<td>3-7</td>
<td>8-11</td>
<td>12-15</td>
</tr>
<tr>
<td>6</td>
<td>under participation</td>
<td>4-9</td>
<td>10-12</td>
<td>13-20</td>
</tr>
<tr>
<td>7</td>
<td>Powerlessness</td>
<td>3-7</td>
<td>8-11</td>
<td>12-15</td>
</tr>
<tr>
<td>8</td>
<td>poor peer relations</td>
<td>4-8</td>
<td>9-13</td>
<td>14-20</td>
</tr>
<tr>
<td>9</td>
<td>intrinsic impoverishment</td>
<td>4-9</td>
<td>10-13</td>
<td>14-20</td>
</tr>
<tr>
<td>10</td>
<td>low status</td>
<td>3-6</td>
<td>7-11</td>
<td>12-15</td>
</tr>
<tr>
<td>11</td>
<td>strenuous working conditions</td>
<td>4-9</td>
<td>10-12</td>
<td>13-20</td>
</tr>
<tr>
<td>12</td>
<td>Unprofitability</td>
<td>2-4</td>
<td>5-7</td>
<td>8-10</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>46-122</td>
<td>123-155</td>
<td>156-230</td>
</tr>
</tbody>
</table>

3.7.4 Personal information schedule

Apart from the questionnaire, the researcher prepared a Biographical Information Blank to record various data such as name, age, gender and length of service. The personal data sheet was used before administrations the above tools.

3.8 OPERATIONAL DEFINITIONS OF VARIABLES

3.8.1 Psychological well being: psychological well being refers as a state that appears from feelings of happiness, advantages, person’s welfare, interest, utility, quality of life and satisfaction with ones physical health and interpersonal relationship as a person and with one’s personal relationship with society. In the present study Psychological well being includes six key dimensions scale of psychological well
being which are a) Autonomy, b) Environmental mastery, c) Personal growth, d) positive relation with others, e) purpose in life, d) self acceptance. (Ryff, 1995).

In this study it measured through total score obtained on the items in the questionnaire comprising of a series of 54 statements reflecting the six areas of psychological well being: Autonomy, Environmental mastery, Personal growth, positive relation with others, purpose in life and self acceptance.

### 3.8.2 Self efficacy

Self efficacy in the present study refers to the belief in ones capability to organize and execute the course of action required to attain targeted outcome or behavior. Self efficacy as one's belief in one's ability to succeed in specific situations or accomplish a task (Ormrod, 2006). In the present study it is measured through the total score obtained on the 28 items in the questionnaire by Singh and Kumar (1990).

### 3.8.3 Occupational stress

Occupational stress is defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the resources, capabilities and needs of the worker (Alves, 2005; Bianchi, 2004; Lindholm, 2006; Nakasis & Ouzouni, 2008). In the present study it is measured through the various components such as role overload, role ambiguity, role conflict, unreasonable group & political pressure, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions, responsibility for person and unprofitability.

### 3.9 PROCEDURE

The researcher first identified and listed the name of various hospitals located in Bangalore city; they are KIMS hospital, VIMS hospital, Rajarajeswari Hospital, ESI hospitals, Panacea hospital, Apollo hospital, Malya hospital, Victoria hospital,
Vanivillas Hospital, SDA Baptist Hospital. Researcher sought permission from the respective heads of the hospital, the Doctors and Nurses working in Private and Government hospital and organizations. It was decided to get consent of the potential participants written and to explain the purpose of the study and the procedure thoroughly to the participants before any data was collected. Each participant was given a set of three questionnaires along with personal data sheet in the hospital and was instructed to fill up the questionnaires while the researcher gave instructions. The participants were assured that information given was confidential and used only for research purpose. After the respondents completes of personal information schedule and questionnaires, the researcher checks out filled information schedule and questionnaires, if researcher finds out any unanswered items and mistakes he should inform them to correct it and submit.

**3.10 STATISTICAL ANALYSIS**

To test the hypotheses formulated for the present study following inferential techniques were employed.

### 3.10.1 Independent samples t test:

The independent samples t-test, also called the two sample t-test, independent-samples t-test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups. The independent-samples t-test compares the means between two unrelated groups on the same continuous, dependent variable.

In the present study, independent t’ test was used to find the difference between doctors and nurses on psychological well being, self efficacy and occupational stress.

### 3.10.2. Two way ANOVA:

The two-way ANOVA compares the mean differences between groups that have been split on two independent variables (called factors).
The primary purpose of a two-way ANOVA is to understand if there is an interaction between the two independent variables on the dependent variable.

In the present study two way ANOVA is used to know the difference in mean scores of gender, age and length of service on various components of Psychological Well being, self-efficacy and occupational stress. Also used to know the interaction effect of group and gender, group and age and group and length of service on various components of psychological well-being, self-efficacy and occupational stress.