A study to assess the effect of aromatherapy on quality of sleep among elderly people at selected old age home, Lucknow.

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Abstract: “A study to assess the effect of aromatherapy on quality of sleep among elderly people at selected old age home, Lucknow”.

Introduction: Sleep disturbances are more prevalent among the elderly people. Poor sleep in the elderly is typically undertreated or treated with pharmacological interventions with adverse consequences. So it is relevant to investigate alternative strategies for sleep management. Aromatherapy is the method of using pleasant fragrance in treating the different health problems of the people. Aim: Assess the effect of aromatherapy on quality of sleep among elderly people. Objectives: To evaluate the quality of sleep among elderly people, determine the effect of aromatherapy on quality of sleep among elderly people, associate the quality of sleep among elderly people with selected demographic variables.

Methodology: the study was conducted using quantitative evaluative approach, pre-experimental one group pre test-post test research design. 37 elderly were selected as sample by purposive sampling technique and the data was collected using modified Pittsburgh sleep quality index. 2 drops of lavender oil (aromatherapy) was applied as intervention for 30 minutes for 15 consecutive days before sleep. Result: the result shows the effect of aromatherapy on quality of sleep among elderly people at selected old age home. The mean pretest quality of sleep was 12.56±3.6707. After providing aromatherapy the mean score was 3.8108±1.83844. Improve in the quality of sleep was statistically tested by paired ‘t’ test. The calculated ‘t’ value 22.781 with the degree of freedom 36 at p < 0.05 is higher than the tabulated ‘t’ value 2.02, which indicates aromatherapy was effective. Conclusion: From the result of the study, it was concluded that providing aromatherapy to the elderly people was effective on quality of sleep. Therefore the investigator felt that more importance should be given for aromatherapy to improve quality of sleep among the elderly people.

Key wards: aromatherapy, quality of sleep, elderly people, old age home.

INTRODUCTION
Sleep is important physiological process with many restorative functions [1]. Sleep constitutes about one-third of human life. A restful sleep helps regain physical and mental health [2]. Sleep quality and quality of life decreases when a person gets older [3]. Some older adults may have no significant disruptions in their sleep, others complain about getting less sleep and having worse sleep quality. Experts have found several common sleep disturbances in older adults: shifting sleep schedule, waking up at night, day time napping, longer recovery from changes in sleep schedule [4]. Aromatherapy has been used widely for modification of mood disorders and sleep problems [14]. There is a rising concern over the high prevalence of poor quality sleep, disorders in the elderly people, and the negative consequences of sleeplessness on health and quality of life. Lavender proved to have special effects on the quality of sleep. Moreover, the use of aromatherapy was found to be an easy, safe, and cost-effective treatment of sleeplessness, even for the elderly people [15].

Problem Statement
“A study to assess the effect of aromatherapy on quality of sleep among elderly people at selected old age home, Lucknow”.

Objectives

• Evaluate the quality of sleep among elderly people.
• Assess the effect of aromatherapy on quality of sleep among elderly people.
• Associate the quality of sleep among elderly people with selected demographic variables.

Operational Definition:

Aromatherapy: It refers to the method of using dry inhalation of the fragrance of lavender angustifolia 2 drops of lavender oil on a cotton bolls which was placed near the pillow at night before sleep for a period of 30 minutes for 15 consecutive days by the researcher and its effect on the sleep pattern among the elderly people of the selected old age home.

Quality of sleep: It refers to the subjective measurement of the ability to initiate and maintain sleep in term of latency, duration, efficiency, disturbances, use of medication, daytime dysfunction by the elderly as measured by modified Pittsburgh sleep quality index.

Elderly people: Elderly people refers to male and female age above 60 years residing at astha old age home, Lucknow.
Old age home: It refers to an institution run by a private agency which gives food, shelter and care to the elderly on the basis of payment.

HYPOTHESIS:
- H1- There is a significant difference between pre test and post test quality of sleep among elderly people.
- H2- There is a significant association between post test quality of sleep among elderly people with selected demographic variables.

RESEARCH METHODOLOGY

Research approach: Quantitative Evaluative research approach.
Research design: Pre experimental, one-group pre- test and post-test research design.

Variables
- Independent variable – Aromatherapy, lavender oil.
- Dependent variable – The quality of sleep among elderly people in selected old age home.
- Socio-demographic variables: It includes baseline information like age, gender, marital status, duration of stay in the old age home, day time sleeping habit, co-morbid disease.

RESEARCH SETTING:
The study was conducted in Aastha oldage home, Lucknow U. P.

POPULATION, SAMPLE AND SAMPLING TECHNIQUE:
Population: Elderly people.
Target population: Elderly people of Lucknow.
Accessible Population: Elderly people of Aastha old age home.
Samples: Elderly people who fulfilled the inclusion criteria.
Sample size: The sample size consists of 37 samples, According to Krejcie and Morgan calculation.
Sampling technique: Non- probability, Purposive sampling technique.

CRITERIA FOR SAMPLE SELECTION:
Inclusion criteria:
- Elderly people with sleep quality score >5 according to Modified Pittsburg Sleep Quality Index.
- People who willing to participate in the study.

Exclusion criteria:
- Being allergic to lavender oil.
- Sensory impairment.
- Suffering from asthma.

TOOLS AND TECHNIQUE DESCRIPTION:
- Section A: Demographic Performa of elderly people including- age, gender, marital status, duration of stay in the old age home, day time sleeping habit, co-morbid disease.
- Section B: Modified Pittsburgh sleep quality index (PSQI), was used to collect the data regarding pre intervention and post intervention quality of sleep.
- This index contains 18 items under 7 major components which includes: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication and day time dysfunction over the last 15 days. Separately each component scores 0-3 and total score was 21.
- Interpretation of the Score:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Score</th>
<th>Quality Of Sleep</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>≤5</td>
<td>Good sleep quality</td>
</tr>
<tr>
<td>2.</td>
<td>&gt;5</td>
<td>Poor sleep quality</td>
</tr>
</tbody>
</table>

CONTENT VALIDITY:

Validity: Content and tool validity was obtained from 6 experts from the field of medical and nursing department.

ETHICAL CONSIDERATION:
The study objectives and data collection procedure were approved by the ethical committee of the institution. Formal consent were obtained from the authorities, written consent were obtained from all participants. No human rights were harmed in any way during the study period. Respect for dignity and right to withdraw from study of the research participants were prioritized.

**PILOT STUDY:**
- Through pilot study the validity and reliability of tool was developed.
- The reliability co-efficient of the whole test was estimated by Cronbach’s alpha formula.
- The reliability score obtained r=0.84

**PLAN FOR DATA ANALYSIS:**
Data analysis was done according to objectives of the study. Both descriptive and inferential statistics were used.

**Descriptive statistics:**
Frequency, percentage and mean were used for analysis of pre- test and post- test assessment.

**Inferential statistics:**
Paired “t” test was used to determine the difference between pre- test and post- test in terms of effectiveness of aromatherapy. Chi square was used to determine the association between the selected variables.

**ANALYSIS AND INTERPRETATION OF DATA**

The data was organized to the objectives and presented under the following major sections:

**SECTION A:** Distribution of samples according to demographic variables.

**OBJECTIVE 1:** Evaluate the quality of sleep among elderly people.
- **SECTION B:** Evaluate the pre- test quality of sleep among elderly people.
- **SECTION C:** Evaluate the post- test quality of sleep among elderly people.

**OBJECTIVE 2:** Assess the effect of aromatherapy on quality of sleep among elderly people.
- **SECTION D:** Comparison of pretest and posttest quality of sleep among elderly people using paired t-test.

**OBJECTIVE 3:** Associate the quality of sleep among elderly people with selected demographic variables.
- **SECTION E:** Association of post- test quality of sleep among elderly people with selected demographic variables using chi square test.

Section A: Distribution of demographic characteristics of elderly people.

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>DEMOGRAPHIC DATA</th>
<th>CATEGORY</th>
<th>FREQUENCY (F)</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age in year</td>
<td>a) 60-64</td>
<td>3</td>
<td>8.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) 65-69</td>
<td>5</td>
<td>13.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) 70-74</td>
<td>5</td>
<td>13.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) 75-79</td>
<td>15</td>
<td>40.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e) ≥80</td>
<td>9</td>
<td>24.32</td>
</tr>
<tr>
<td>2.</td>
<td>Gender</td>
<td>a) Male</td>
<td>23</td>
<td>62.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Female</td>
<td>14</td>
<td>37.83</td>
</tr>
<tr>
<td>3.</td>
<td>Marital status</td>
<td>a) Married</td>
<td>18</td>
<td>48.64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Unmarried</td>
<td>1</td>
<td>2.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) Widowed</td>
<td>9</td>
<td>24.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) Divorced</td>
<td>9</td>
<td>24.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e) Separated</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>Duration of stay in old age home</td>
<td>a) &lt;1 year</td>
<td>6</td>
<td>16.21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) 1-2 years</td>
<td>11</td>
<td>29.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) 3-4 years</td>
<td>14</td>
<td>37.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) ≥5 years</td>
<td>6</td>
<td>16.21</td>
</tr>
<tr>
<td></td>
<td>Day time sleeping habit</td>
<td>a) No</td>
<td>9</td>
<td>24.32</td>
</tr>
</tbody>
</table>
Table Reveals,

- Result shows, out of 37 samples majority 15 (40.54%) had belonged to 75-79 years of age group, 9 (24.32%) belonged to ≥80 years of age group, 5 (13.51%) belonged to 70-74 years of age group, 5 (13.51%) belonged to 65-69 years of age group, 3 (8.10%) belonged to 60-64 years of age group.
- Result shows, out of 37 samples 23 (62.16%) were male and 14 (37.83%) were female gender.
- Result shows, out of 37 samples 18 (48.64%) samples were married, 1 (2.70%) was unmarried, 09 (24.32%) samples were widowed, 09 (24.32%) were divorced and no one separated.
- Result shows, out of 37 samples 6 (16.21%) samples were stayed in old age home from <1 year, 11 (29.7%) samples were stayed from 1-2 years, 14 (37.83%) samples were stayed from 3-4 years and 6 (16.21%) samples were stayed ≥5 years in old age home.
- Result shows, out of 37 samples, 9 (24.32%) samples was not having day time sleeping habit and 27 (75.67%) was having 1-2 hours day time sleeping habit and 1 (2.70%) was having 3-4 hours day time sleeping habit.
- Result shows, out of 37 samples 9 (24.32%) samples were not having any co-morbid disease, 16 (43%) samples was suffering from hypertension (B.P.), 6 (16.21%) samples was suffering from arthritis and 6 (16.21%) samples was suffering from diabetes mellitus.
Fig. Percentage distribution of samples according to Gender

Fig. Percentage distribution of samples according to Marital Status
Fig. Percentage distribution of samples according to Duration of Stay in Old Age Home

<table>
<thead>
<tr>
<th>Duration of Stay</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 year</td>
<td>16.21%</td>
</tr>
<tr>
<td>1-2 years</td>
<td>29.7%</td>
</tr>
<tr>
<td>3-4 years</td>
<td>37.83%</td>
</tr>
<tr>
<td>≥5 years</td>
<td>16.21%</td>
</tr>
</tbody>
</table>

Fig. Percentage distribution of samples by Day Time Sleeping Habit

- No: 3%
- 1-2 hour: 24%
- 3-4 hours: 73%
Fig. Percentage distribution of samples according to Co- Morbid Disease

OBJECTIVE- 1: Evaluate the quality of sleep among elderly people.

SECTION B: Evaluate the pre test quality of sleep among elderly people.

TABLE 2

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SCORE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>POOR SLEEP QUALITY</td>
<td>&gt;5</td>
<td>37</td>
<td>100%</td>
</tr>
</tbody>
</table>

Above descriptive table shows that the pre- test quality of sleep among 37 subjects had poor quality of sleep.

SECTION C: Evaluate the post test quality of sleep among elderly people.

TABLE 3

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SCORE</th>
<th>FREQUENCY (F)</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD SLEEP QUALITY</td>
<td>≤ 5</td>
<td>32</td>
<td>86.49</td>
</tr>
<tr>
<td>POOR SLEEP QUALITY</td>
<td>&gt;5</td>
<td>05</td>
<td>13.51</td>
</tr>
</tbody>
</table>

Above descriptive table shows that the post test quality of sleep score of 37 subjects, 32 (86.49%) had good quality of sleep and 5 (13.51%) had poor quality of sleep.
OBJECTIVE 2: Assess the effect of aromatherapy on quality of sleep.

SECTION D: Comparison of pretest and posttest quality of sleep among elderly people using paired t-test.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Mean</th>
<th>SD</th>
<th>Mean difference</th>
<th>df</th>
<th>Paired t value</th>
<th>P value</th>
<th>Table value at 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>12.5676</td>
<td>3.6707</td>
<td>8.756</td>
<td>36</td>
<td>22.781</td>
<td>.000**</td>
<td>2.02</td>
</tr>
<tr>
<td>Post-test</td>
<td>3.8108</td>
<td>1.83844</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significance at 0.05 level

Above table shows the effect of aromatherapy on quality of sleep among elderly people at selected old age home. The mean pretest quality of sleep was 12.5676 ± 3.6707. After providing aromatherapy the mean score was 3.8108 ± 1.83844. Improvement in the quality of sleep was statistically tested by paired ‘t’ test. The calculated ‘t’ value 22.781 with the degree of freedom 36 at p < 0.05 is higher than the tabulated ‘t’ value 2.02, which indicates aromatherapy was effective.

Hence it is proved that aromatherapy was effective for improving quality of sleep among elderly people at selected old age home.
OBJECTIVE 3: Associate the quality of sleep among elderly people with selected demographic variables.

SECTION E: Association of post-test quality of sleep among elderly people with selected demographic variables using chi-square test.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Demographic Data</th>
<th>Category</th>
<th>Frequency</th>
<th>Good Sleep Quality</th>
<th>Poor Sleep Quality</th>
<th>Chi Square ($\chi^2$)</th>
<th>Table value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age in years</td>
<td>60-64</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3.155 ($\chi^2$=4)</td>
<td>9.49</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>65-69</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>70-74</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>75-79</td>
<td>15</td>
<td>12</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥ 80</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>Male</td>
<td>23</td>
<td>20</td>
<td>3</td>
<td>0.0115 ($\chi^2$=1)</td>
<td>3.84</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>14</td>
<td>12</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Marital status</td>
<td>Married</td>
<td>18</td>
<td>16</td>
<td>2</td>
<td>0.874 ($\chi^2$=3)</td>
<td>7.82</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unmarried</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Widowed</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Divorced</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Separated</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Duration of stay in old age home</td>
<td>&lt; 1 year</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>4.46 ($\chi^2$=3)</td>
<td>7.82</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1-2 years</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>3-4 years</td>
<td>14</td>
<td>14</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥ 5 years</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Day time sleeping habit</td>
<td>No</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>0.77 ($\chi^2$=1)</td>
<td>3.84</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>28</td>
<td>25</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Co-morbid disease</td>
<td>No</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>1.86 ($\chi^2$=1)</td>
<td>3.84</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>28</td>
<td>23</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Above descriptive table discloses the association of post test quality of sleep among elderly people with selected demographic variables like Age in years, Gender, Marital status, Duration of stay in old age home, Day time sleeping habit, Co-morbid disease. The obtained $\chi^2$ value for age (3.155), gender (0.011), marital status (0.874), duration of stay in old age home (4.46), day time sleeping habit (0.77) and co-morbid disease (1.86) were lesser than the table value at 0.05 level of significance. Therefore, it is concluded, there is no significance association between post test quality of sleep among elderly people with selected demographic variables.

HYPOTHESIS TESTING:
H1: There is significant difference between pre test and post test quality of sleep among elderly people.
The study result shows that there is a significant difference in mean pre-test quality of sleep score 12.56 to a mean post-test quality of sleep score 3.81 with a p value of 0.00. so, H1 is accepted.

H2: There is significant association between post test quality of sleep among elderly people with selected demographic variables. The findings of the study revealed that there is no significant association between quality of sleep with any of the demographic variables of elderly peoples. Therefore, H2 is rejected.

**DISCUSSION, SUMMARY AND CONCLUSION**

**DISCUSSION:**

The discussion of the data analysis based on the objectives and hypothesis of the study. The purpose of the study was to assess the effect of aromatherapy on quality of sleep among elderly people at selected old age home, Lucknow.

**Objective 1 : Evaluate the quality of sleep among elderly people.**

In the present study, on evaluating the pretest quality of sleep among elderly people 37 were having poor sleep quality. The mean pretest score was 12.56. After providing aromatherapy, the post test quality of sleep 32 (86.49%) were having good sleep quality and 5 (13.51%) were having poor sleep quality. The mean posttest score was 3.81.

- The finding of the study was supported by Vineet Josheph (2018), aim of the study was to assess the effectiveness of aromatherapy and quality of sleep among elderly inmates of selected old age home. 60 inmates were assessed for general pattern of sleep. Among them who were having fairly and inadequate sleep were selected for the study. The pre test mean score (11.9) was significantly higher than the post test score (4.875). The computed ‘t’ value (10.184) was greater than the table value (t39 = 3.551, p<0.001). It indicated that there was a significant increase in the quality of sleep after aromatherapy.

**Objective 2: Assess the effect of aromatherapy on quality of sleep among elderly people.**

- The mean and SD pre-test score of quality of sleep was 12.56±3.67. After providing aromatherapy, the mean and SD score decrease to 3.81 ± 1.83. Improve in the quality of sleep was statistically tested by paired ‘t’ test. The calculated ‘t’ value 22.78 with the degree of freedom 36 at p < 0.05 is higher than the tabulated ‘t’ value 2.02, which indicates aromatherapy was effective.

- Finding of this study was supported by Fatima Genc, Songiil Karadag, (may,2020),aim of the study was determined that aromatherapy administration improved sleep quality and decreased fatigue severity in the elderly. 59 elderly individual were sample. The data were collected using the elderly description form, Pittsburgh sleep quality index and fatigue severity scale. Result determine that aromatherapy administration improve sleep quality (P<.001) and the decrease fatigue severity in the elderly (P<.05) the study should be replicated in a different group.

**Objective 3: Associate the post test quality of sleep among elderly people with selected demographic variables.**

- The present study revealed that there was no significance association between post test quality of sleep among elderly people with selected demographic variables.

**SUMMARY:**

In present study, effect of aromatherapy on quality of sleep among elderly people and association of quality of sleep with selected demographic variables was investigated. The researcher found that there was a significant improvement in quality of sleep among elderly people after aromatherapy and there was no significant association of quality of sleep among elderly people with selected demographic variables.

**CONCLUSION:**

From the result of the study, it was concluded that providing aromatherapy to the elderly people was effective on quality of sleep. Therefore the investigator felt that more importance should be given for aromatherapy to improve quality of sleep among the elderly people.

**NURSING IMPLICATION:**

Aroma therapy is a nurse initiated intervention that has the advantage of being therapeutic for elderly people. Aroma therapy has proved to be valuable intervention for improving quality of sleep among elderly people. This complementary therapy is safe which is alternative to drug therapy for improve quality of sleep. Complementary therapies are of particular importance for people who are unable to (or) uninterested in taking medications. The finding of the present study have brought out certain facts that have far reaching implications for nursing in the areas of practice, education, administration and research.

**NURSING EDUCATION:**

- Current concepts and trends in holistic care of elderly people should be included in nursing curriculum.
- Nursing personal working in geriatric ward should be given in service education regarding aroma therapy.
- Encourage the students to learn about the techniques of aroma therapy.
- Make the students to understand the benefits of aroma therapy for improving quality of sleep.

**NURSING PRACTICE:**

- The study findings revealed the importance of nurses role in improving quality of sleep among elderly people using a cost effective, safe non pharmacological treatment that is aromatherapy.
- Study findings signify the importance of formation of guidelines in implementation of aromatherapy.
- Understand the importance of aromatherapy as an adjuvant to non pharmacologic therapy
- Encourage the use of aromatherapy as a form of relaxation among people in various settings.

**NURSING RESEARCH:**

- Nursing research helps to broaden the scope of nursing. Based on the results further recommendations can be made.
- Further studies can be done to find out the effect of aromatherapy.
It is vital that student researchers update their knowledge constantly and are always willing to examine and alter their practice in the light of new published evidences.

NURSING ADMINISTRATION:
- The administrators can encourage the nurses to use different safe, cost effective, alternative intervention in improving quality of sleep among elderly people.
- A considerable amount in the budget can be allocated for organizing then continuing nursing education programmers.
- A staff nurse can be trained specially to administer aroma therapy.
- Provide opportunities for nurses to attend training programmed on aromatherapy.
- Initiate measures for introduction of aromatherapy in various settings.

LIMITATIONS:
The limitations of the present study were:
- The study was limited to elderly people who are residing at astha old age home Lucknow.
- The study was restricted with limited sample size at astha old age home which limits the generalization of findings.

RECOMMENDATIONS
1. The study can be conducted with large sample to validate the findings and generalization can be made.
2. A similar study can be done as a comparative study in different settings.
3. A similar study can be replicated with a control group as quasi-experimental design or experimental design.
4. A comparative study can be undertaken to compare the findings using different essential oils.
5. The study can be undertaken among elderly in family setting.
6. A comparative study can be done to find the effectiveness of aromatherapy and other complementary or alternative therapies.
7. The effect of aromatherapy can be studied to reduce anxiety and stress among the elderly.
8. A similar study can be conducted focusing on different age groups.

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