Original Research Article

A Study to Determine the Effectiveness of Aromatherapy on Back Pain among the Staff Nurses in a Selected Hospital at Bangalore

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ABSTRACT

The word Aromatherapy means 'treatment using scents'. According to the National pain foundation's recent study report (2009/OCT) reveals that pain has been considered as the fifth vital sign and 8 out 10 people experience back pain. Objective- 1. To assess the level of back pain among staff nurses. 2.To determines the effectiveness of aromatherapy on back pain among the staff nurses. 3. To associate the level of back pain among the staff nurses with their selected demographic variables. Hypothesis- H_1 - There will be a significant reduction on back pain among staff nurses after administration of aromatherapy. H_2 - There will be a significant association between the level of back pain and their selected demographic variables among staff nurses. Methodology - One group pretest – post-test design was used with evaluative research approach. Sample and Research Setting- The study was conducted with 30 sample selected by lottery method at selected hospital Bangalore. Tool- Visual Analogue Pain was used for data collection. Result- researcher found 17 (56.7%) of the subjects had moderate pain, 13 (43.3%) of the subjects had Severe pain before administering Aromatherapy, the same table also implies that 12 (40 %) of the subjects had mild pain, 18 (60 %) of them had moderate pain after administering Aromatherapy. Calculated mean in pretest was 6.07 with SD 1.258 Wherever calculated mean in post test was 3.70 with SD .915. Calculated t value was 16.94 at 29 the degree of freedom. Calculated p value was less than .01 which was showed that aroma therapy significantly reduces the back. There was a significant association found between gender and level of pain among Staff nurses. Conclusion- Aroma therapy significantly reduces the back pain significantly, and there is significant association between gender and level of pain among staff nurses.

Key Words- Study, Effectiveness, Aromatherapy, Back Pain, Staff Nurses

INTRODUCTION

"Aroma..... The magic of smell have tried many poets to reach deep into their vocabulary to capture their essences. Odours help to carry the meaning of their sources, evoking recognition and effect[1]. Today there is a worldwide revival in the art of aromatherapy and it has become a science that includes three fields aesthetic, commercial and clinical. The contemporary research is beginning to understand the scientific foundation of aromatherapy, which is one of the most important categories under complementary medicine.[2]

The word Aromatherapy means 'treatment using scents'. It is often related to complementary and alternative medicine (CAM), is definitely making use of volatile liquefied plant resources, referred to as essential oils (EOs), as well as other savory substances from plants to influence people's mood or wellness and thereby restoring the balance of the body.[3]

Need for the study-

The use of natural pain relief remedies such as Aromatherapy essential oils has become very popular. Aromatherapy oils are generally safe and easy to use and people have been successful

using Aromatherapy pure essential oil either on their own or combined in a blend to assist with pain relief.[4]

According to the National pain foundation's recent study report (2009/OCT) reveals that pain has been considered as the fifth vital sign and 8 out 10 people experience back pain at some point during their lives. Pain can affect the body both physically and emotionally.[5]

Due to hectic working schedule nurses will have back pain. Current statistics shows that back pain among staff nurses was highly prevalent with an annual prevalence varying from 73% to 76%.[6]

Problem Statement-
A study to determine the effectiveness of aromatherapy on back pain among the staff nurses in a selected hospital at Bangalore.
Objective-
- To assess the level of back pain among staff nurses.
- To determine the effectiveness of aromatherapy on back pain among the staff nurses.

- To associate the level of back pain among the staff nurses with their selected demographic variables (age, gender, working experience, educational qualification, job title).

Hypothesis-
H_1 - There will be a significant reduction on back pain among staff nurses after administration of aromatherapy.
H_2 - There will be a significant association between the level of back pain and their selected demographic variables among staff nurses.

Conceptual Framework-
This study aimed at determining the effect of Aromatherapy on back pain among the staff nurses. Based on discussion with experts and extensive review of literature, the investigator used that Ludwig Von Bertalanffy's General System model.

According to General System Model "Science of wholeness and its purpose is to unite scientific thinking across discipline and provide framework for analysing the whole of any system''[7]
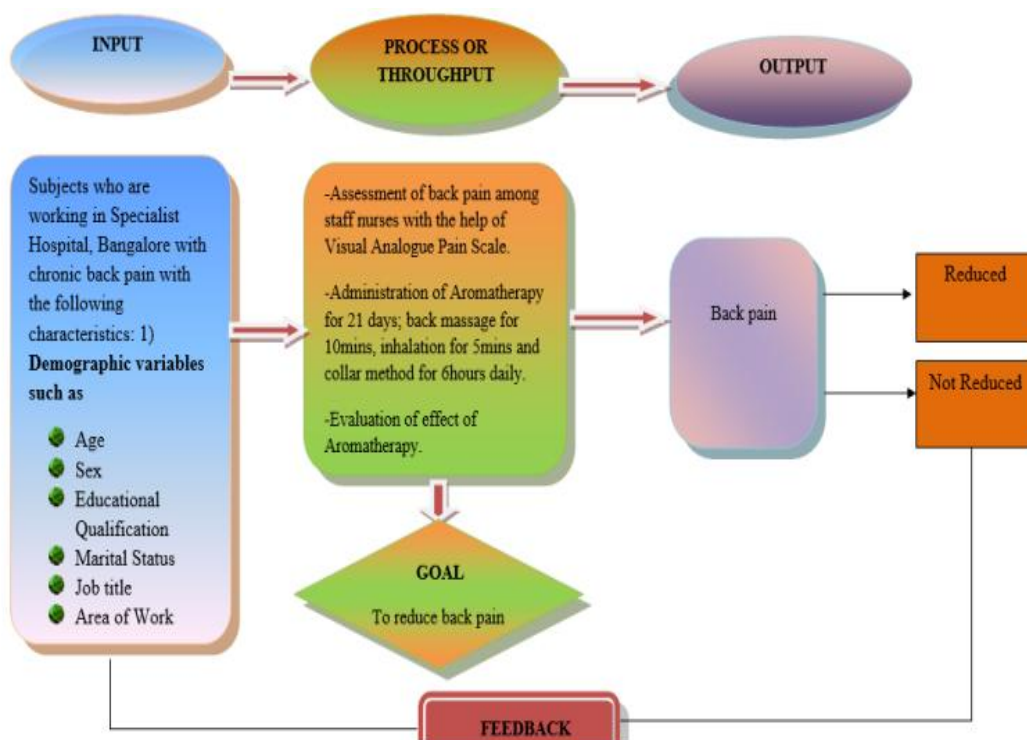

Figure 1- conceptual framework based on general system model

Review of literature-

A literature review involves the systematic identification, location, scrutiny and summary of written materials that contain information or a research problem. Researcher has presented the reviewed literature under the following headings.
1. Literature related to the prevalence of back pain among nurses
2. Literature related to effect of aromatherapy on pain

METHODOLOGY
Research Approach:- The research approach applied for this study was evaluative research.
Research Design:- One group pretest – post-test design was used in this study.
Variables:- The concepts that can take on different quantitative values are called variables. Following variables was included in this study –

- **Independent Variables-** Aromatherapy.
- **Dependent Variables-** back pain among staff nurses.

Setting of the study- The study was conducted at Specialist Hospital, Bangalore.
Sampling – 30 sample was selected with the use of simple random sampling lottery method
Tool- A Visual Analogue Pain Scale was used to measure the Pain level for the present study. It is a standardized tool consisting of 10 items. The total score is 10.
Data collection and analysis -The study was conducted during the month of January and February 2019. Data was collected after getting informed consent. Data was analyzed with Descriptive and Inferential statistics.

RESULT

The data collected through the Visual Analogue Pain Scale were analyzed by using descriptive and inferential statistics

which are necessary to provide substantive summary of results. The analyzed data has been organized and presented in the following sections.
Section A: Distribution of subjects according to demographic variables.
Section B: Analysis of the level of pain among the staff nurses.
Section C: Analysis of the effectiveness of Aromatherapy on pain among the staff nurses.
Section D: Analysis of the association between the levels of pain with the selected demographic variables.

Section A: Distribution of subjects according to demographic variables.
N-30

Characteristics		Frequency	Percentage (%)
Age	21-30	9	30
	31-40	14	46.7
	41-50	7	23.3
	51-60	0	0
Gender	Male	3	10
	Female	27	90
Educational Qualification	GNM	21	70.0
	B.Sc (N)	3	10.0
	Post Basic BSc (N)	5	16.7
	MSc (N)	1	3.3
Job Title	Staff Nurse	15	50.0
	Ward-in-charge	8	26.7
	Supervisor	7	23.3
Area of work	Emergency	5	16.7
	Intensive care unit	10	33.3
	Operation Theatre	7	23.3
	General Ward	8	26.7
Working Experience	Above 1 year	4	13.3
	Above 6 years	8	26.7
	Above 11 years	9	30.0
	Above 16 years	9	30.0
Marital Status	Single	4	13.3
	Married	26	86.7
	Divorced	0	.0
	Widow	0	.0

Section B: Analysis of the level of pain among the staff nurses.- researcher found 17 (56.7%) of the subjects had moderate pain, 13 (43.3%) of the subjects had severe pain before administering Aromatherapy, the same table also implies that 12 (40 %) of the subjects had mild pain, 18 (60 %) of them had moderate pain after administering Aromatherapy.
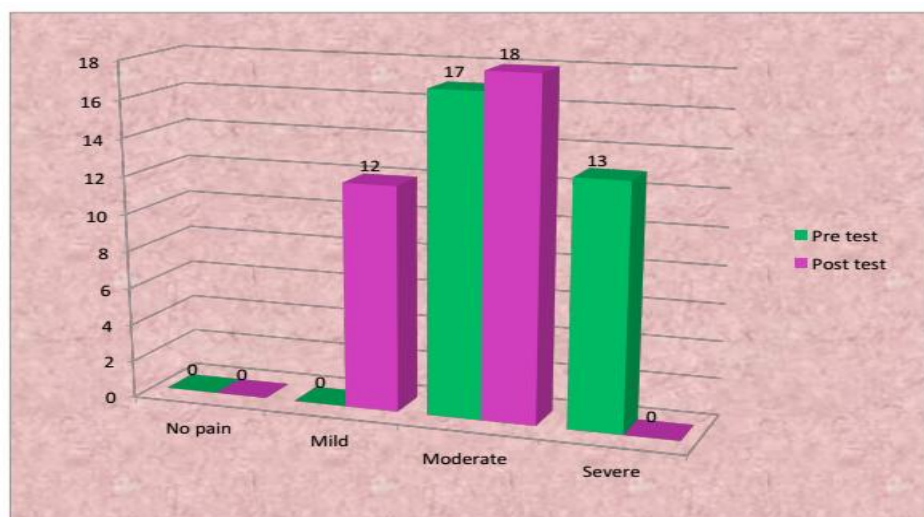
Figure 2 level of pain among staff nurses

SECTION: C- Analysis of the effectiveness of aromatherapy on back pain-

	Pre test		Post test		t value	DF	P value Inference
	Mean	SD	Mean	SD			
Pain	6.07	1.258	3.70	.915	16.947	29	P<0.01*

* is significant

Calculated mean in pretest was 6.07 with SD 1.258 Wherever calculated mean in post test was 3.70 with SD .915. Calculated t value was 16.94 at 29 the degree of freedom. Calculated p value was less than .01 which was showed that aroma therapy significantly reduces the back.

SECTION: D- ASSOCIATION WITH DEMOGRAPHIC VARIABLES

- pain and age group of staff nurses was 2.885 with degree of freedom, 2. Hence, there was no statistically significant association between the pain levels with the age group among staff nurses.
- pain and educational qualification of staff nurses was 1.067 with degree of freedom, 3. Hence, there was no statistically significant association between the pain level with the educational qualification among staff nurses.
- pain and job title of staff nurses was 0.213 with degree of freedom, 2. Hence, there was no statistically significant association between the pain level with the job title among staff nurses.
- Value for pain and area of work of staff nurses was 5.609 with degree of freedom, 3. Hence, there was no statistically significant association between the pain level with the area of work among staff nurses.
- Pain and working experience of staff nurses was 0.701 with degree of freedom, 3. Hence, there was no statistically significant association between the pain levels with the working experience among staff nurses.

- Pain and marital status of staff nurses was 0.084 with degree of freedom, 1. Hence, there was no statistically significant association between the pain level with the marital status among staff nurses.
- Significant association is present on gender. Here chi square calculated value was lesser than the chi square table value $P < 0.05$ level. The other variables, there was no statistically significant association between the pain level among staff nurses at the level of $P > 0.05$.

CONCLUSION

- The present study showed that during the pre-test period, the staff nurses most of them (56.7%) had moderate pain and 43.3% of them had severe pain, but following Aromatherapy, the post test scores showed that 60% of them had moderate pain and 40% of them had mild pain, so the Aromatherapy was effective.
- The comparison of pre and post test pain of staff nurses reveals the obtained value was higher than the table value, t= 16.947 which is highly significant at 0.01 level than the table value, so the research hypothesis (H_1) was accepted. So Aromatherapy was effective on back pain.

- There was a significant association found between gender and level of pain among Staff nurses.

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