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Effectiveness of structured teaching programme on aromatherapy in management of stress related hypertension among nursing students

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Abstract

Background: Stress affects blood pressure regulation leading to an increase in blood pressure by producing stress related hormones. Beyond cost it leads to significant mortality and morbidity. Those with hypertension die more often, have more heart attacks, strokes and heart failure. Rates of cardiovascular disease doubles for each 20/100mmHg increase in blood pressure over 115/75mmHg. It is important that the student nurses should be taught regarding stress related hypertension and the measures that can be taken to reduce the stress related hypertension. Since aromatherapy is one of the most affective complimentary therapies for treating stress related hypertension, the student nurses should learn regarding this complimentary therapy in order to educate the public.

Objectives: 1) To assess the existing level of knowledge regarding aromatherapy in management of stress related hypertension among nursing students.

2) To assess the effectiveness of structured teaching programme on the level of knowledge regarding aromatherapy in management of stress related hypertension.

3) To associate the pre-test level of knowledge regarding aromatherapy in management of stress related hypertension with their selected demographic variables.

Design: One group pre-test post-test Quasi-experimental design was selected for the study.

Subjects: The participants were 40 B.Sc Nursing students from Sri Krishna Rukmini College of Nursing, Bangalore.

Method: A purposive sampling technique was used to select the samples for study.

Data collection tool: A structured questionnaire was used to collect data from the subjects.

Data analysis: The obtained data was analysed using descriptive and inferential statistics and interpreted in terms of objectives and hypothesis of the study. The level of significance was set at 0.05 levels.

Results: In the pre-test, the subjects had moderate knowledge with a mean of 22.6 and standard deviation of 2.27 whereas in the post test there was a significant mean knowledge gain of 31.57 and standard deviation of 1.73. A significant association was found between family history of using essential oil with mean pre-test knowledge score. 13

Conclusion: In the pre-test 87.5% of the respondents had moderate knowledge where as in the post test all the subjects (100%) had improved their knowledge. The study findings indicated that structured teaching programme was effective in enhancing the knowledge of 2nd year B.Sc Nursing students regarding aromatherapy in management of stress related hypertension.

Keywords: Hypertension, 2nd year B. Sc Nursing students, Structured Teaching Programme, Heart Attack, Stroke

1. Introduction

Modern life is full of hassles, deadlines, frustrations and demands for many people; stress is so common place that it has become a way of life. Stress isn't always bad. In small doses, it can help you perform under pressure and motivate to do best but when constantly running in emergency mode, mind and body pay the price. We can protect by recognizing the signs and symptoms of stress and taking steps to reduce its harmful effects^[1].

Stress is one of the causes that can produce a significant spike in blood pressure levels. But it is not certain how closely related to permanent hypertension (Mayo clinic). Temporary stress can cause dramatic increase in blood pressure but the levels return to normal when the stress is gone^[2].

Kantha, K and Indira, A. (2015) conducted a cross sectional study on prevalence of hypertension among the adults in coastal and non-coastal areas. A total of 5000 samples were included in the study. In that 2500 samples belongs to coastal areas and 2500 samples belongs to non-coastal areas. The prevalence of stage-I hypertension in coastal areas is 460 (18.4%) but in non-coastal areas it is 1413(56.50%). The results indicate that there is high prevalence of hypertension in non-coastal areas than coastal areas [3].

Arumugam Indira *et al.* (2015) conducted a study on prevalence of prehypertension among the adults in coastal and non-coastal areas. The study results shown that regarding prehypertension in SBP, in coastal areas 1129 (45.16%) and in non-coastal areas 971(38.84%). The results indicate that there is high prevalence of pre hypertension in coastal areas than non-coastal areas. Further studies are needed to find out the reasons and measures to control high blood pressure is necessary [4].

Many health problems are caused by stress such as pain of any kind, depression, hypertension, sleep problems etc. There are many things you can do to reduce its impact and cope with symptoms. You can't completely eliminate stress from your life, but can control how much it affects. Yoga, aromatherapy, deep breathing are some of the ways to reduce the level of stress [5].

Aromatherapy helps to reduce the level of stress. The scents stimulate positive emotions in the area of the brain responsible for memories and emotions, but the benefits seem to be related to relation caused by the scents [6].

Many studies of essential oils have found that they have antibacterial, antiviral and antifungal effects. Essential oils are highly volatile and flammable so that they should never be used near an open flame. Lavender citrus and vanilla are some of the most well-known fragrances for reducing stress but because smell is a very personal experience, everyone should take time to experiment with different aromas until they find what works best for them [7].

Aromatherapy is one of the relaxation techniques to reduce the stress level among hypertensive clients, the investigator felt the need to provide structured teaching programme to

the nursing students so that they can deliver quality of care to the hypertensive clients.

2. Objectives

- 1) To assess the existing level of knowledge regarding aromatherapy in management of stress related hypertension among nursing students.
- 2) To assess the effectiveness of structured teaching programme on the level of knowledge regarding aromatherapy in management of stress related hypertension.
- 3) To associate the pre-test level of knowledge regarding aromatherapy in management of stress related hypertension with their selected demographic variables.

3. Detailed Research Plan

Research Approach: An evaluative research approach (quantitative Approach) was adopted for the study.

Research Design: quasi experimental design (one group pre-test post-test design). Was adopted for the study.

The design can be represented as, E= O1 X O2

E- Experimental group. O1- Pre-test.

O2- Post-test

X- Stands for intervention, structured teaching programme on aromatherapy in management of stress related hypertension.

Research Setting: Based on the feasibility, the investigator selected 2nd year B.Sc Nursing students in Sri Krishna Rukmini College of Nursing, Bangalore.

Sampling Technique: Purposive sampling technique

Sample Size: Sample size of the present study consists of 40 B.Sc Nursing students in Sri Krishna Rukmini College of Nursing, Bangalore

4. Results and discussion

Table 1: Percentage Distribution of the level of knowledge of 2nd year B.Sc Nursing students.

Sl No	Level of knowledge	Pre test		Post test	
		Frequency	Percentage %	Frequency	Percentage %
1	Inadequate knowledge	0	0.0	0	0.0
2	Moderately adequate knowledge	35	87.5	0	0.0
3	Adequate knowledge	5	12.5	40	100.0
4	Total	40	100.0	40	100.0

Table1 explains that 87.5 %(35) of the subjects had moderately adequate knowledge, (12.5%) 5 of the subjects had adequate knowledge and none of the respondents had inadequate knowledge before administering structured

teaching programme. The same table also implies that 100% (40) had adequate knowledge after administering structured teaching programme

Table 2: Over all enhancement Knowledge score of 2nd year B. Sc Nursing. N=40

Aspects	Max score	Respondents Knowledge			Paired "t" Test
		Mean	Mean (%)	SD	
Pre test	34	22.6	66.4	1.73778	19.368
Post test	34	31.57	92.85	2.27359	
Enhancement	34	8.97	26.4	0.53581	

The above table 2 shows that the overall pre test mean is 22.6 and mean% of 66.4 with SD of 1.73 and post test mean is 31.57and mean % was 92.85% with SD of 2.27. The

comparison of pre and post test knowledge of 2nd year B. Sc Nursing reveals that the overall improvement mean was 8.97 and mean % of 26.1% with standard deviation of 31.6.

The obtained value was higher than the table value, $t = 19.37$ which is highly significant at 0.05 level than the table value, so the research hypothesis (H1) is accepted and hypothesis (H0) is rejected. So it indicates that structured teaching programme was effective.

Association between selected socio demographic variables and Pre-test Knowledge level scores of 2nd year B.Sc Nursing: There was a significant relationship between the pre-test knowledge level with family history of using essential oil. There was no significant association between pre test knowledge score of 2nd year B. Sc Nursing students with the variables such as age, sex, religion, family income, type of family, race, and source of information.

5. Conclusion: In the pre-test 87.5% of the respondents had moderate knowledge where as in the post test all the subjects (100%) had improved their knowledge. The study findings indicated that structured teaching programme was effective in enhancing the knowledge of 2nd year B.Sc Nursing students regarding aromatherapy in management of stress related hypertension.

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