



Effectiveness of Aroma Therapy in Reducing Anxiety

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ABSTRACT

Objectives: The study was conducted to evaluate the effect of aroma therapy in reducing anxiety among pregnant mothers. **Materials and methods:** Evaluative approach was employed with quasi experimental pre test post test control group design. The sample consisted of 60 pregnant mothers selected using non-probability purposive sampling technique with random assignment of the subjects to experimental and control group.

Results: The mean post intervention anxiety scores (51.33 ± 14.267) were significantly lower than the mean pre-intervention anxiety scores (68.70 ± 15.601) of the pregnant mothers. The result revealed that there was effectiveness of aroma therapy on the reduction of anxiety among pregnant mothers ($t_{58}=21.076$, $P < 0.05$) at 0.05 level of significance. There was no association between pre intervention anxiety scores and baseline variables such as age, type of family, place of residence, religion, educational status, occupation, and family income per month, year of conception after marriage, previous experience of bad obstetrical history and duration of present pregnancy in weeks.

KEYWORDS

Effect, Aromatherapy, Anxiety, Pregnant mothers

INTRODUCTION

A degree of anxiety during pregnancy is normal for most of the women. As pregnancy proceeds altered body image can increase anxiety and external factors such as stress at work, financial, social difficulties may also contribute. Anxiety is a complex phenomenon which may increase between 18 and 32 weeks of gestation, a period which coincides with various antenatal screening tests and can easily be exacerbated by an over zealously supportive professional structure and excessive medicalisation, antenatal testing for fetal abnormalities can increase anxiety in pregnancy. Women's fear of pregnancy, child birth, lack of support, financial and unrealistic work expectations manifests as anxiety. Although pregnancy is normal physiological life event, high levels of anxiety increase physiopathological complications and adversely affect maternal and fetal outcome.¹

Fortunately, there are many treatments for anxiety disorders. These include the use of relaxation techniques, psychotherapy and medications. Frequently with effective treatment, the person can handle the challenges of their life.² Aroma therapy is widely adopted as a cost-effective and better alternative therapy among elder adults to reduce stress and anxiety. It is the method of using pleasant fragrance in treating the different health problems of the people.³

MATERIAL AND METHOD

Settings and design

It was an evaluative study conducted in a selected hospital at Mangalore, Karnataka in September 2011.

Sample size and sampling design

Based on the pilot study findings, the samples selected for this study were 60 pregnant mothers from selected hospital by purposive sampling technique random assignment of the subjects to experimental and control group.

Study instrument

Mainly 2 tools were used to gather data from the participants. Background information of the participants was collected with the help of tool 1: Baseline proforma. 2: Self-Rating Anxiety Scale. Reliability was established and pilot study was administered among 12 pregnant mothers.

Study variables

Study had independent variables like aromatherapy and dependent variable was level of anxiety. Extraneous variable included in the study were age, type of family, place of residence, religion, educational status, occupation, and family income per month, year of conception after marriage, previous experience of bad obstetrical history and duration of present pregnancy in weeks.

Data collection procedure

The study was approved by the ethical committee and permission was obtained from the medical officers of respective hospitals. Written consent was obtained from all the participants. The baseline data was collected from all the pregnant mothers and the pre-intervention level of anxiety was assessed using self-rating anxiety scale in both experimental and control group. For experimental group of pregnant mother's lavender oil inhalation was given for 2 minutes, daily in the morning and evening for a period of 5 days. On the last day (on 5th day) post test was conducted for the participants by using self-rating anxiety scale. The same procedure was followed with control group without lavender oil inhalation.

Statistical methods

The data was analyzed in terms of descriptive (mean, standard deviation, percentage) and inferential statistics (paired 't' test, independent 't' test). Chi test was used to find the association of pretest anxiety score with selected demographic variables.

RESULTS

PART I: Description of demographic characteristics: In experimental group majority 63.3% of the pregnant mothers belonged to the age group between 18 -22 years and 36.7% of the mothers belonged to 23 -26 years of age group. In the control group majority 60% of the mothers belonged to the 18 -22 years of age and 40% of the mother's belonged to 23 -26 years of age. In the experimental group most of the pregnant mothers 50% belonged to nuclear family whereas 46.7% belong to joint family and only 3.3% belonged to extended family. In the control group 56.7% of the pregnant mothers belonged to nuclear family, 40% of the mothers belonged to joint family and only 3.3% of the mothers belonged to extended family. In the experimental group majority 60% of the pregnant mothers are from the rural area and 40% of the pregnant mothers are from urban area. In the control group 70% of the pregnant mothers are from the rural area

and 30% of the pregnant mothers are from urban area. In the experimental group about 56.7% of the pregnant mothers are Hindus, 40% of the pregnant mothers are Muslims and only 3.3% of the pregnant mothers are Christians. In the control group 56.7% of the pregnant mothers are Hindus 30% of the pregnant mothers are Muslims and 13.3% of the pregnant mothers are Christians. In the experimental group most 46.7 % of the pregnant mothers have primary education, 26.7 % have higher primary education, 23.3 % have no formal education and about 3.3% have high school education. In the control group most 46.7% of the pregnant mothers have no formal education, 36.7% have primary education and 16.7% have higher primary education. In the experimental group majority 70% of the pregnant mothers are home managers, 20% are skilled workers, 6.7% are office workers and 3.3% are professionals. In the control group majority 50% of the pregnant mothers are home managers, 33.3% are skilled workers and 16.7% are office workers. In the experimental group majority 63.3 % of the pregnant mothers have family income between Rs.2001 – Rs.4000, 20% of pregnant mothers has family income between Rs.4001 – Rs.6000 and 16.7% have family income less than Rs.2000. In the control group majority 56.7% of the pregnant mothers have family income between Rs.2001 –Rs.4000, 30% have income less than Rs.2000. In the experimental 66.7% of the pregnant mothers conceived within 1 year after marriage and 33.3% conceived within 2 years after their marriage. In the control group about half 50% of the pregnant mothers conceived within 1 year after marriage and half 50% conceived within 2 years after their marriage. In the experimental group and control group none 100% of the pregnant mothers had any previous experience of bad obstetrical history.

PART II: Level of anxiety in experimental and control group: The pre-intervention anxiety scores reveals that the highest percentage (60%) of the pregnant mothers had moderate anxiety and 23.3% of the pregnant mothers had severe anxiety and 6.7 % of the pregnant mothers extreme anxiety and 10% of the pregnant mothers had mild anxiety. The post-intervention anxiety scores reveal that 63.3 % of the pregnant mothers had mild anxiety and 26.7% of the pregnant mothers had moderate anxiety and 10 % of the pregnant mothers had severe anxiety. Thus findings indicate that aromatherapy is an effective adjuvant therapy for relieving anxiety among pregnant mothers.

Findings of the study discovered that the mean of pre-test level of anxiety was found to be

68.70 ±15.601 in the experimental group. The post test divulged that the mean score of level of anxiety is 51.33 ± 14.267. The detail information is shown in table 1.

Table 1: Comparison of pre-interventional and post-interventional anxiety score among experimental group - Median, Mean, SD and t' value

n=30						
	Anxiety score	Mean	Median	SD	Mean difference	t value
Experimental group	Pre-interventional anxiety score	68.70	66.00	15.601	17.37	21.25
	Post-interventional anxiety score	51.33	45.00	14.267		

PART III: Effectiveness of aroma therapy in reducing anxiety

The computed value of paired t test for the level of anxiety in experimental group was 17.37(p=0.001) which is highly significant. This reveals that aroma therapy is effective in reducing anxiety among pregnant mothers.

The Unpaired t test value of the difference of pre-test and post test score of experimental and control group was found to be 21.07(p=0.001) which shows high significance. Hence it is concluded that there was significant reduction in the level of anxiety among pregnant women in experimental group and aroma therapy is effective.

Table 2: Comparison of level of anxiety among pregnant mothers in experimental group and control group

N =60					
Variable	Group	Mean	SD	t' value	Table value
Level of anxiety	Experimental group	17.3667	4.47586	21.076	2.0000
	Control group	0.7000	1.41787		

PART IV: Association between the level of anxiety and selected variables.

The chi-square test was used to find out the association between the pre-test anxiety level and selected variables. Experimental group and control group were compared with variables such as age, type of family, place of residence, religion, educational status, occupation, and family income, year of conception after marriage, previous experience of bad obstetrical history and duration of present pregnancy in weeks. Result of Chi – Square indicated that no significant association emerged between the groups on any variables.

Table 3: Chi-square values and Fisher's exact test showing the association between the level of anxiety and the selected variables among the pregnant mothers

N=30							
Sl no	Variables	Median <66	Median ≥66	P value	Chi square (df)	Inference	
1	Age in years			.705	.144 (1)	NS	
		18 -22	10				9
		23 - 26	5				6
2	Type of family			.2731	.200 (1)	NS	
		Nuclear	6				9
		Joint & Extended	9				6
3	Place of residence			.062	3.472 (1)	NS	
		Rural	6				12
		Urban	9				3
4	Religion			.269	1.222 (1)	NS	
		Hindu	7				10
		Muslim & Christian	8				5
5	Educational status			.084	2.981 (1)	NS	
		No formal education	6				1
		Primary, higher primary & high school	9				14

6	Occupation					
	Professional, office works skilled works	4	5	1.000	.000 (1)	NS
	Home manager	11	10			
7	Family income per month					
	Lees than 2000 & 2001-4000	13	11	.648	.208 (1)	NS
	4001 -6000	2	4			
8	Within how many years after marriage did you conceive?					
	Within 1 year	10	10	1.000	.000 (1)	NS
	Within 2 year	5	5			
9	Previous experience of bad obstetrical history			There is only one category		NS
	None	15	15			
10	Duration of present pregnancy in weeks					
	28 - 32	10	5	.068	3.333 (1)	NS
	33 -37	5	10			

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Table value =3.84, p<0.05, NS –Not significant

DISCUSSION

Present study found aroma therapy is an effective adjuvant therapy in reducing anxiety among pregnant mothers. A study conducted in United Kingdom among 8058 mothers in child-birth; in the use of aromatherapy within a health-care setting. The study found that the practice of aromatherapy reduces the need for pain relief during labor, or the incidence of operative delivery. The evidence from this study suggests that aromatherapy can be effective in reducing maternal anxiety, fear and pain during labor, recorded an associated symptom⁴.

The findings are consistent with another study conducted in Korea to examine the effects of aroma hand massage on pain, state anxiety and depression in hospice patients with terminal cancer. The results showed that the aroma hand massage experimental group showed more significant differences in the changes of pain score (t=-3.52, p=.001) and depression (t=-8.99, p=.000) than the control group⁵.

CONCLUSION

The study finding reported that the risk of anxiety disorders among pregnant mothers is high. From the present study aromatherapy was found to be effective on identified cases of pregnant mothers with anxiety. It is very simple and easy to administer through a variety of methods that can be applicable even in wider settings.

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