A Study To Compare The Effectiveness Of Music Therapy Versus Sacral Massage In Terms Reducing Pain During First Stage Of Labor Among Primigravidae Mothers In Selected Hospitals, Hassan, Karnataka.

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Abstract

The first stage labor pain is caused by uterine contractions and stretching of the cervice. The steady pain may negatively affect both mothers and neonates. Now a day many women would like to labour without using drugs due to well-known limitations and serious side effects. Nonpharmacological methods such as music therapy and sacral massage are broadly recommended to manage labor pain.

Objectives:

To assess the pain among primigravidae mothers with music therapy during first stage of labour., To assess the pain among primigravidae mothers with sacral massage during first stage of labour, To compare the effect of music therapy and sacral massage among primigravidae mothers in terms of reducing pain, To associate the outcome of music therapy with selected socio demographic variables , To associate the outcome of sacral massage with selected socio demographic variables.

Methods:

A quasi experimental approach with Multiple time series design was used to compare the effectiveness of music therapy versus sacral massage in terms of reducing labor pain and 50 primigravidae mothers [25 in music therapy group and 25 in sacral massage group] were selected by using Non-probability convenient sampling technique and Numerical category scale was used to measure the pain level. Pain was assessed during 3-4cm, 5-6cm and 7-8cm dilatation. The data were analysed by using descriptive statistics such as mean and standard deviation, and inferential statistics such as independent - t'test was used to find out the difference in the pain scores, chi-square was used to find out the association between demographic variables and post-test level of pain with music therapy and sacral massage group.

RESULTS:

The study findings revealed that 24% of primimothers in Music therapy group reported severe pain and 76% of primimothers reported very severe pain. Also 44% mothers in sacral massage group were reported severe pain, 52% were reported very severe pain and 4% were reported overwhelming. The result findings shows that there is significant association between the labor pain with selected socio- demographic variables like nature of pregnancy in music therapy and sacral massage group**.**

Conclusion:

The findings of this study revealed that the sacral massage therapy was an effective method for reducing and relieving labor pain compared with music therapy.

Keywords: -

Compare**,** Effectiveness, Music therapy, sacral massage, Labor Pain, Primigravidae mothers, First stage of labor

Introduction

Labor pain is one of the most severe pains a woman experiences in her life.[1]The pain of labor can be intense, with tension, anxiety and fear making it worse.[2] nonpharmacological pain control techniques, which are more and more becoming broad in coping with labor pain. These are the methods that allow women to completely relax without using any medications and direct them to perceive the pain at the lowest level. Music therapy has potential benefits such as it stimulates/ release of endorphins and reduces need for analgesic drugs, it distracts from the perception of pain and relieves anxiety and depression.[3] when a body part hurts, the first instinct is to rub that place and reduce the pain. It has proven beneficial for relaxation purposes. During first stage, uterine contractions may be felt as back pain because the nerves that supply the uterus also supply the skin on the lumbo-sacral area. Sacral massage during contractions reduces labor pain, lowered the level of concern and anxiety, promotes sense of well-being, reduces stress hormone level and improves sleep pattern.[4]

Statement of the problem

A study to compare the effectiveness of music therapy versus sacral massage in terms reducing pain during first stage of labor among primigravidae mothers in selected Hospitals, Hassan, Karnataka.

Objectives

To assess the pain among primigravidae mothers with music therapy during first stage of labour., To assess the pain among primigravidae mothers with sacral massage during first stage of labour, To compare the effect of music therapy and sacral massage among primigravidae mothers in terms of reducing pain, To associate the outcome of music therapy with selected socio demographic variables, To associate the outcome of sacral massage with selected socio demographicvariables.

METHODS AND MATERIALS

Hypothesis

There will be a significant difference in pain level among primi mothers with Music Therapy & sacral massage during first stage of labor, there will be a significant association with demographic variables and music Therapy in relieving pain among primi mothers, there will be significant association with demographic variables and sacralMassage in relieving pain among primi mothers.

Research approach: An evaluative approach was adopted to accomplish the objectives of the study.

Research design:- Quasi experimental approach with multiple time series design

E_1	X_1	O_1	X_1	O_2	X_1	O_3
E_2	X_2	O_2	X_2	O_2	X_3	O_3

TABLE -1

KEYS:-

E_1 =Experimental group 1 (Music therapy group)

E_2 =Experimental group 2 (sacral massage group)

X_1=Intervention 1 (Music therapy)

X_2 =Intervention 2 (Sacral massage therapy)

O_1- O_3=Assessment of pain after intervention at 3-4 cm, at 5-6 cm, and at 7-8 cmcervical dilatation.

Population:- In this study population consist all primigravidae mothers in the first stage of labor.

Sample :- Sample selected for this study were 50 primigravidae mothers.

Sample size:- A total of 50 primigravidae mothers [25 in music therapy group and 25 in sacral massage group].

Sampling technique:- In this study Non-probability convenient sampling technique was used.

Independent variables:- Music therapy & sacral massage

Dependent variables:- Level of pain perception

Method of data collection

The data collection was scheduled from 14th November to 15th December prior permission was obtained from concerned authority. The investigator established good rapport with the primimothers. Verbal consent was obtained from each sample. Appropriate orientation was given to all the samples about the aim of the study, the nature of the tool and adequate care was taken for protecting them from potential risk including maintaining confidentiality, security, identity etc. The subjects were asked to answer a structured knowledge questionnaire with socio-demographic data. The Investigator assessed the level of pain after intervention of 3-5 minutes in both music therapy and sacral massage group by using numerical category scale at 3-4 cm, at 5-6 cm and at 7-8 cm dilatation.

Tool used for the study:- The investigation developed the tool as follows

Section – I: semi structured questionnaire for collecting demographic variables.

Section – II: Numerical category scale for measuring labor pain.

Plan for data analysis

The collected data were statistically analyzed and tabulated by applying descriptive statistics such as mean and standard deviation, and inferential statistics such as independent ‚t' test, chi-square test. The independent ‚t' test was used to find out the difference in the pain scores in music and sacral massage group. The chi-square was used to find out the association between demographic variables and post-test level of pain with music therapy and sacral massage group.

RESULTS

Analysis of the study finding are categorized and presented under the following headings:

Section I- Distribution of the subjects according to socio-demographic variables.

Section II- Assessment of pain during first stage of labor among primigravidae mothers.

Section III- Comparison of pain between music therapy group and sacral massagegroup.

Section IV- Association between the selected demographic variable and the post-test level of pain

Table 2: Distribution of the subjects according to socio-demographic variables

Demographic variables		Music therapy group		Sacral massage group	
		Number	Percentage	Number	Percentage
Age	< 20years	6	24	5	20
	20-25 years	15	60	13	52
	25-30 years	4	16	7	28
Educationalstatus	Primary education	6	24	5	20
	Middle school	3	12	2	8
	High school	3	12	4	16
	PUC	9	36	9	36
	Graduate	4	16	5	20
Religion	Hindu	12	48	18	72
	Muslim	8	32	6	24
	Christian	5	20	1	4
Type of family	Nuclear	15	60	13	52
	Joint	10	40	12	48
Monthly Income Of The Family	Rs <5000	6	24	7	28
	Rs 5000-10,000	9	36	8	32
	Rs 10,000-15,000	7	28	7	28
	Rs >15,000	3	12	3	12
Occupation	Housewife	19	76	19	76
	Professional	4	16	5	20
	Others	2	8	1	4
Place of residence	Rural	9	36	7	28
	Urban	16	64	18	72
Nature Of pregnancy	Planned	10	40	12	48
	Unplanned	15	60	13	52
Social support	Mother	15	60	11	44
	Mother in law	10	40	14	56
Exposure To Parental Preparation Classes	Yes	1	4	0	0
	No	24	96	25	100

Table 3: Distribution of subjects according to level of pain during post-test.

Level of Pain	Music therapy group		Sacral massage group	
	Number	Percentage	Number	Percentage
Severe	6	24	11	44
Very severe	19	76	13	52
Overwhelming	0	0	1	4
Total	25	100	25	100

3=Severe, 4= Very severe, 5 = Overwhelming

Table 4: Association between the selected demographic variable and the posttest level of pain.

Demographic variables		Number	Level of pain		Chi SquareTest
Music therapy group			<Median	≥Median	
Age	< 20 years	6	2	4	Chi Square value= 0.333 P=0.847
			33.3%	66.7%	
	20-25 years	15	6	9	
			40.0%	60.0%	
	25-30 years	4	1	3	
			25.0%	75.0%	
Educationalstatus	Primary education	6	3	3	Chi Square value= 2.575
			50.0%	50.0%	
	Middle school	3	0	3	
			.0%	100.0%	
	High school	3	1	2	
			33.3%	66.7%	
	PUC	9	3	6	P=0.631
			33.3%	66.7%	
	Graduate	4	2	2	
			50.0%	50.0%	
Religion	Hindu	12	4	8	
			33.3%	66.7%	
	Muslim	8	3	5	
			37.5%	62.5%	
	Christian	5	2	3	
			40.0%	60.0%	
Type of family	Nuclear	15	8	7	Chi Squarevalue= 3.19
			53.3%	46.7%	

	Joint	10	1	9	P=0.074
			10.0%	90.0%	
Income of thefamily	Rs <5000	6	3	3	
			50.0%	50.0%	
	Rs 5000-10,000	9	5	4	
			55.6%	44.4%	
	Rs 10,000-15,000	7	1	6	Chi Square value= 5.124 P=0.163
			14.3%	85.7%	
	Rs >15,000	3	0	3	
			.0%	100.0%	
Occupation	Housewife	19	7	12	
			36.8%	63.2%	
	Professional	4	2	2	Chi Square value= 1.471 P=0.479
			50.0%	50.0%	
	Others	2	0	2	
			.0%	100.0%	
Place of residence	Rural	9	1	8	Chi Square value= 3.781 P=0.052
			11.1%	88.9%	
	Urban	16	8	8	
			50.0%	50.0%	
Nature Ofpregnancy	Planned	10	7	3	
			70%	30%	
	Unplanned	15	2	13	Chi Square value= 6.084 P=0.013
			13.33%	86.67%	
Social support	Mother	15	7	8	
			46.7%	53.3%	
	Mother inlaw	10	2	8	Chi Square value= 0.875 P=0.349
			20.0%	80.0%	
			1	0	
			100.0%	.0%	

Exposure ToParental Preparation Classes	Yes	1			Chi Square value=
			8	16	0.089
			33.3%	66.7%	P=0.766
	No	24			

Table 5: Association between the selected demographicvariable and the posttest level of pain

Demographic variables			Level of pain		Chi SquareTest
Sacral massage group		Number	<Median	≥Median	
Age	< 20years	5	3	2	Chi Square value= 0.332 P=0.847
			60.0%	40.0%	
	20-25 years	13	9	4	
			69.2%	30.8%	
	25-30 years	7	4	3	
			57.1%	42.9%	
Educationalstatus	Primary education	5	4	1	Chi Square value= 2.985 P=0.56

					Chi Square
			80.0%	20.0%	
	Middleschool		1	1	
		2	50.0%	50.0%	
	High school		3	1	
		4	75.0%	25.0%	
	PUC		4	5	
		9	44.4%	55.6%	
	Graduate		4	1	
		5	80.0%	20.0%	
Religion	Hindu	18	11	7	
			61.1%	38.9%	
	Muslim	6	4	2	Chi Square value= 0.646 P=0.724
			66.7%	33.3%	
	Christian	1	1	0	
			100.0%	.0%	
Type offamily	Nuclear	13	9	4	Chi Square value= 0.023 P=0.881
			69.2%	30.8%	
	Joint	12	7	5	
			58.3%	41.7%	
Income ofthe family	Rs <5000	7	6	1	
			85.7%	14.3%	
	Rs 5000-10,000	8	5	3	
			62.5%	37.5%	
	Rs. 10,000 - Rs. 15,000	7	3	4	
			42.9%	57.1%	
	Rs >15,000	3	2	1	Chi Square value= 2.808 P=0.422
			66.7%	33.3%	
Occupation	Housewife	19	11	8	
			57.9%	42.1%	
	Professional	5	4	1	Chi Square value= 1.425 P=0.49
			80.0%	20.0%	
	Others	1	1	0	
			100.0%	.0%	
	Rural		5	2	

Place of residence		7	71.4%	28.6%	Chi Squarevalue= 0 P=0.985
	Urban		11	7	
		18	61.1%	38.9%	
Nature Ofpregnancy	Planned		12	0	Chi Square value= 8.216 P=0.004
		12	100%	0%	
	Unplanned		5	8	
		13	38.5%	61.5%	
Social support	Mother	11			
			7	4	
			63.6%	36.4%	
	Mother-in-law	14	9	5	Chi Squarevalue= 0 P=1.0
			64.3%	35.7%	

* Significant at P≤0.05 ** highly significant at P≤0.01 *** very high significant at P≤0.001

Discussion

The findings of this study shows that level of pain has decreased in the sacral massage group during first stage of labor than in music therapy group. It proves that sacral massage is effective in decreasing pain level in primigravidae mothers than music therapy during first stage of labor.

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