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A study to evaluate the effectiveness of reflexology on progress of first stage of Labour among Primiparturients at selected hospital, Salem

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Abstract

Aim: To Evaluate the Effectiveness of Reflexology on Progress of First Stage of Labour among Primiparturients.

Participants & Settings: Quasi Experimental time series design was adopted for this study. The study was conducted in Vijaya Hospital and Salem Polyclinic, Salem. The investigator selected 60 primiparturients, 30 in Experimental group and 30 in Control group who fulfilled the inclusion criteria by using Non-Probability Convenience Sampling Technique.

Intervention: Structured interview was used to collect the demographic variables, Numerical Pain Intensity Scale to assess the level of pain and observational checklist to assess the duration of first stage of labour among primiparturients.

Measurement and findings: The analysis finding indicates the 't' value for level of pain was 8.073 and for duration of first stage of labour was 12.349. According to association of level of pain during first stage of labour, only educational status in control group shows significant association at $p < 0.05$, and according to association of duration of first stage of labour in experimental group, variables like age, educational status, monthly family income, type of family and no. of antenatal visit shows significant association at $p < 0.05$, in control group variables like occupation, monthly family income and type of family shows significant association at $p < 0.05$.

Conclusion: The use of Reflexology reduces the level of pain and duration of first stage of labour. Reflexology is an effective intervention on progress of first stage of labour.

Keywords: evaluate, reflexology, Primiparturients, experimental

Introduction

Labour is the period during which the mother's physical, mental and social process alter [1]. Mother will be occupied with full of pressure, tension, stress and mainly of labour pain during the labour process. Mother feels comfortable when there is reduced pain and stress, which makes the mother to deliver the baby happily. The management of labour pain is a major goal of nursing care. There are two general approaches pharmacological and non-pharmacological. Pharmacological approaches are directed in eliminating the physical sensation of pain, whereas the non-pharmacological approaches are largely directed towards the prevention of suffering [2]. There are various complementary therapies which are available to induce the labour process and reduce pain. The human body has tremendous energy to heal itself. This healing energy surges through the body in specific pathways and could be tapped at different points which are called reflex points [3]. Reflexology is the technique of massage which has a definite effect on the internal organ. When pressure is applied on the reflex points the functioning of the corresponding internal organs could be rectified and regulated [4]. Reduction of pain in response to reflexology is documented in thirty six studies including individuals of all ages and health status. One of the best ancient forms of healing therapy is the reflexology. The human body has tremendous energy to heal itself. This healing energy surges through the body in specific pathways and could be tapped at different points which are called reflex points [5]. Reflexology is the technique of massage which has a definite effect on the internal organ. When pressure is applied on the reflex points the functioning of the corresponding internal organs could be rectified and regulated. Reduction of pain in response to reflexology is documented in thirty six studies including individuals of all ages and health status [6].

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Reflexology eases pregnancy, delivery and post-partum effects. Women who received reflexology has experienced short duration of labour and used less analgesia. Reflexology was also used as an alternative to labour-stimulating drugs [7]. Reflexology is found to be safe during pregnancy in terms of helping the mothers to go all the way to term and beyond, with a reduction of common symptoms of pregnancy.

Reflexology is one of the simple complementary therapies which include applied pressure and stretching movement. The midwives are able to find the deposits and blockage and break up patterns of stress, restoring balance and relieving tension. Reflexology also improves the mother’s circulation thereby maintaining good health and well being [8]. In the research on reflexology given to women during labour showed a 90% effective rate as a pain killer during delivery. Another study showed an effective analgesia rate of 94.4% [9]. A study conducted at Gentoft Country Hospital (Great Britain), 103 women who gave birth chose reflexology as an alternative therapy to reduce pain and to stimulate labour. Out of which 89.71% stated that reflexology had helped them to reduce pain [10].

Since, there is an excessive benefit of reflexology on the labour process; the researcher felt that there is a need to conduct a study on effectiveness of reflexology on progress of first stage of labour.

Materials and methods

In order to evaluate the effectiveness of Reflexology on progress of first stage of labour among primiparturients, Quasi experimental time series design was adopted. The study was conducted in Vijaya Hospital and Salem polyclinic, Salem. The investigator selected 60 samples, 30 in experimental group and 30 in control group who fulfilled

the inclusion criteria by using non probability convenient sampling techniques. Prior to data collection procedure, researcher gave self-introduction to each primiparturients and explained the purpose of the study. Structured interview was used to collect demographic variables, numerical pain intensity scale was used to assess the level of pain and observational check list to assess the duration of first stage of labour. The collected data were analysed using descriptive and inferential statistics.

Selection and development of tools

Section A

The structured interview schedule was used to collect demographic variables such as age, education, occupation, area of residence, monthly family income, type of family, number of antenatal checkup and weeks of gestation.

Section B

It consists of Numerical Pain Intensity Scale to assess the level of pain during first stage of labour and observational checklist to assess the duration of first stage of labour among primiparturients.

Scoring procedure

Score	Level of pain
0	No pain
1 – 3	Mild pain
4 – 6	Moderate pain
7 – 9	Severe pain
10	Worst possible pain

Data analysis & interpretation

Table 1: Frequency and percentage distribution of primiparturients according to their selected demographic variables, n=60

S. No	Demographic variables	Experimental group (n=30)		Control group (n=30)	
		f	%	f	%
1.	Age in years				
	a. < 20	5	16.67	9	30
	b. 21 – 25	13	43.33	14	46.66
	c. 26 – 30	8	26.66	5	16.67
	d. > 31	4	13.34	2	6.67
2.	Educational status				
	a. Illiterate	12	40	10	33.33
	b. Primary education	4	13.33	5	16.66
	c. Secondary education	8	26.66	5	16.66
	d. Higher Secondary education	2	6.66	6	20.01
	e. Undergraduate	3	10.01	2	6.67
	f. Post graduate	1	3.34	2	6.67
3.	Occupation				
	a. Employed	10	33.34	7	23.34
	b. Unemployed	20	66.66	23	76.66
4.	Area of residence				
	a. Rural	18	60.0	21	70.0
	b. Urban	12	40.0	9	30.0
5.	Monthly family income				
	a. Rs.2000 – 5000	21	70.0	19	63.33
	b. Rs.5001 – 10000	8	26.66	8	26.66
	c. > Rs.10000	1	3.34	3	10.0
6.	Type of family				
	a. Nuclear	13	43.34	14	46.67
	b. Joint	17	56.66	16	53.33
7.	No. of antenatal visit				
	a. No visit	5	16.67	11	36.66
	b. 1 – 3 visits	14	46.66	11	36.66

	c. >3 visits	11	36.67	8	26.68
8.	Weeks of gestation				
	a. 37 weeks	9	30.0	5	16.66
	b. 38 weeks	5	16.66	9	30.01
	c. 39 weeks	8	26.67	11	36.66
	d. 40 weeks	8	26.67	5	16.67

The data presented in Table-1 shows that in experimental group, 13(43.33%) of them belong to the age group of 21-25 years, 12(40%) of them were illiterate, 20(66.66%) of them were unemployed, 18(60%) of them were in rural area, 21(70%) of them have the monthly family income ranging from Rs.2000-5000, 17(56.66%) of them were in joint family, 11(46.66%) of them had 1-3 antenatal visits and 9(30%) of them were in 37 weeks of gestation.

In control group, 14(46.66%) of them belong to the age group of 21-25 years, 10(33.33%) of them were illiterate, 23(76.66%) of them were unemployed, 21(70%) of them were in rural area, 19(63.33%) of them have the monthly family income ranging from Rs.2000-5000, 16(53.33%) of them were in joint family, 11(36.66%) of them had no antenatal visits, 11(36.66%) of them had 1-3 antenatal visits and 11(36.66%) of them were in 39 weeks of gestation.

Table 2: Mean, Standard deviation and ‘t’ value on progress of first stage of labour among primiparturients in experimental and control group, n=60

Variable	Experimental group (n=30)		Control group (n=30)		‘t’ value	Table value
	Posttest		Posttest			
	Mean	SD	Mean	SD		
Level of pain	7.73	0.52	9.06	0.73	8.073*	2.01
Duration of first stage of labour	298.0	26.99	427.50	50.69	12.349*	

* significant at p<0.05 level; df = 58

The data presented in Table- 2 reveals the ‘t’ value on progress of first stage of labour among primiparturients in experimental and control group. The ‘t’ value for level of

pain was 8.073 and for duration of first stage of labour was 12.349. So, it was concluded that the reflexology was effective on progress of first stage of labour.

Table 3: Association on level of pain during first stage of labour among primiparturients in experimental and control group, n=60

Demographic variables	Experimental group (n=30)			Control group (n=30)		
	df	χ ²	Table value	df	χ ²	Table value
1. Age in years	3	2.44	7.81	3	3.69	7.81
2. Educational status	4	2.67	9.48	4	10.39*	9.48
3. Occupation	1	0.65	3.84	1	2.41	3.84
4. Area of residence	1	0.40	3.84	1	2.85	3.84
5. Monthly family income	2	0.95	5.99	2	3.62	5.99
6. Type of family	1	0.01	3.84	1	1.20	3.84
7. No.of antenatal visit	2	0.77	5.99	2	4.07	5.99
8. Weeks of gestation	3	2.85	7.81	3	5.58	7.81

* significant at p<0.05 level

The data presented in Table-3 shows that in control group, educational status had an significant association with the level of pain.

Table 4: Association on duration of first stage of labour among primiparturients in experimental and control group, n=60

Demographic variables	Experimental group (n=30)			Control group (n=30)		
	df	χ ²	Table value	df	χ ²	Table value
1. Age in years	3	9.76*	7.81	3	3.06	7.81
2. Educational status	4	9.77*	9.48	4	6.52	9.48
3. Occupation	1	0.34	3.84	1	6.67*	3.84
4. Area of residence	1	1.40	3.84	1	2.85	3.84
5. Monthly family income	2	10.19*	5.99	2	8.91*	5.99
6. Type of family	1	4.98*	3.84	1	4.69*	3.84
7. No.of antenatal visit	2	7.70*	5.99	2	2.37	5.99
8. Weeks of gestation	3	7.68	7.81	3	7.12	7.81

* significant at p<0.05 level

The data presented in Table-4 shows that in experimental group, the demographic variables like age, educational status, monthly family income, type of family and no. of antenatal visit had a significant association with the duration of first stage of labour.

In control group the demographic variables like occupation, monthly family income and type of family had a significant association with the duration of first stage of labour.

Discussion

The level of pain in experimental group 26(86.66%) had moderate pain whereas in control group 24(80%) had severe

pain. According to the duration of first stage of labour, in experimental group, the duration was 4 hours and 58 minutes, whereas in control group, the duration was 7 hours and 7 minutes. The present study was supported by Mohana, (2008) ^[11] in her study it was reported that in experimental group 22(76.6%) had severe pain and in control group 27(90%) had severe pain. The level of pain during active stage of labour in experimental group is less than the control group. The researcher found that the observation in experimental group is less than the control group, because of the effectiveness of reflexology on duration of first stage of labour. So, the remaining observation in the control group is excluded. The effectiveness of reflexology on progress of first stage of labour in experimental group.

Reflexology is highly significant at $P < 0.05$ level. The independent 't' value for level of pain was 8.073 and for duration of first stage of labour was 12.349. Hence the reflexology was significantly effective on progress of first stage of labour. The present study was supported by Margret. C, (2009) ^[12] found that 90% had a positive effect of reflexology as a pain killer during pregnancy and Barbara and Kevin Kunz reported that 70% of pregnant mother had progress of first stage of labour. The researcher observed that, when the reflexology is given during first stage of labour, it reduces the level of pain by blocking the transmission of pain impulses to the CNS and reduces the duration of first stage of labour by releasing oxytocin from the pituitary gland ^[13].

Conclusion

Our body is equipped with wonderful self-healing facilities, but these often fail to work properly because vital energy pathways are blocked due to the stresses and strains of life. Reflexology, an ancient form of healing, teaches that specific regions of the body called reflex zones are associated with particular organs, glands, and other parts of the body. Reflexology is one of the safest, most supportive, non-invasive complementary therapies. The use of reflexology reduces the level of pain and duration of first stage of labour. Reflexology is an effective intervention on progress of first stage of labour.

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