International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 10 Issue 3, May-Jun 2026 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Health Hazard of Junk Food among Adolescence of Selected Schools of Barabanki Lucknow

MS. Shradha Mishra (Main Guide)[1], **Ms. Kannu Priya Tripathi** (Tutor)[2], **Mr. Aman Bharti**[3], **Mr. Ravi Yadav**[4], **Ms. Aditi Yadav**[5], **Mr. Yash**[6], **Mr. Nitin Singh**[7], **Mr. Aniket Verma**[8], **Ms. Mridula Padney**[9], **Ms. Neha Verma**[10], **Ms. Dipali Pal**[11], **Mr. Ankit Kumar**[12]

[1]Assistant Professor, Medical Surgical Nursing Department, Faculty of Nursing,
[1,2]Hind School and College of Nursing, Barabanki, Uttar Pradesh, India
[3,4,5,6,7,8,9,10,11,12]Student of BSc. Nursing, Hind School and College of Nursing, Barabanki, Uttar Pradesh, India

ABSTRACT

program on knowledge regarding health hazard of junk food among adolescence of selected schools of Barabanki Lucknow Uttar Pradesh'

Introduction:- Good nutritious foods play a key and vital role in maintaining good health of the individuals. The healthy foods are those which provides you all the nutrients which one need to sustain for well-being and also for retain energy as it includes carbohydrates, fats, proteins, vitamin, minerals and water that makes up a balanced diet. Its main function is to provides nutrients, energy to do activity, growth and functioning of body organs, helps in growth and repair of the body. Now a days nutritious food is replaced by junk food. As everyone is tasting junk food well because it is tasty, attractive, delicious, easily available and costs less than fruits and vegetables. Junk is very oily and lack of dietary fibres, so they are harder to digest and require more energy from body to digest. Fast foods is getting popular as it is appealing, easy to prepare, cheap and fast-food companies are fooling the public for their sales. Centre of Science said that most junk food falls into the categories of the either "snack food" or "fast food". Earlier 2011 Centre of Science has tested the 16 major brands of the junk food and found most of them loaded with high levels of the trans fats, salts and sugar. While excess salts and sugar are cause for concern, the real terror in the trans fats. Consumption of junk foods are increasing particularly among primary and secondary school adolescents. **Objectives:** To assess the pretest knowledge regarding hazards of junk food among adolescent students.2.To assess the post-test knowledge regarding hazards of junk food among adolescent students. 3.To assess the effectiveness of Structured Teaching Programme regarding hazards of junk food among adolescent students. 3.To find out the association between the pre-test level of knowledge with their selected socio demographic variables.

How to cite this paper: MS. Shradha Mishra | Ms. Kannu Priya Tripathi | Mr. Aman Bharti | Mr. Ravi Yadav | Ms. Aditi Yadav | Mr. Yash | Mr. Nitin Singh | Mr. Aniket Verma | Ms. Mridula Padney | Ms. Neha Verma | Ms. Dipali Pal | Mr. Ankit Kumar "A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Health Hazard of Junk Food among Adolescence of Selected Schools of Barabanki Lucknow" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-10 | Issue-3, June 2026, pp.602-619, URL: www.ijtsrd.com/papers/ijtsrd133264.pdf

IJTSRD133264

KEYWORDS: *effectiveness of ambulation on the progress of labour during first stage among low-risk parturient.*

INTRODUCTION

Good nutritious foods play a key and vital role in maintaining good health of the individuals. The healthy foods are those which provides you all the nutrients which one need to sustain for well-being and also for retain energy as it includes carbohydrates, fats, proteins, vitamin, minerals and water that makes

up a balanced diet. Its main function is to provides nutrients, energy to do activity, growth and functioning of body organs, helps in growth and repair of the body. Now a days nutritious food is replaced by junk food. As everyone is tasting junk food well because it is tasty, attractive, delicious, easily available and costs less than fruits and vegetables. Junk is very oily and lack of dietary fibres, so they are harder to digest and require more energy from body to digest. Fast foods is getting popular as it is appealing, easy to prepare, cheap and fast-food companies are fooling the public for their sales. Centre of Science said that most junk food falls into the categories of the either "snack food" or "fast food". Earlier 2011 Centre of Science has tested the 16 major brands of the junk food and found most of them loaded with high levels of the trans fats, salts and sugar. While excess salts and sugar are cause for concern, the real terror in the trans fats. Consumption of junk foods are increasing particularly among primary and secondary school adolescents. Modification of food consumption pattern during few decades caused replacement of worthless food with nutritious foods. Increasing trend of urban life, extensive TV, advertising, attractive packaging and lack of nutritional knowledge are some of the major causes of junk food consumption. Continuous eating of junk food exposes the body to long term bad effects. Poor nutrition in adolescents leads to lack of energy and fatigue, obesity, constipation, headaches, loss of digestion and appetite, dental problems, abdominal bloating, skin problems like itching, puffy and irritated skin, adult onset diabetes, cognitive, polycystic ovarian syndrome disorder, stomach ache, constipation, emotional and self-esteem problems, psychological problems, learning problems, delayed growth and development, iron deficiencies, non-communicable diseases occupational disabilities leading to the increasing risk of getting prone to infections and also cause systemic changes in respiratory system, central nervous system, Reproductive system, Cardiovascular system and skeletal system. The National health and Nutrition examination survey in the United States finds during 2015-2018, over one third of children and adolescents consumed fast food. Adolescents aged 12-19 consumed a higher percentage of calories from fast food. Prolonged consumption of junk food makes prone to varied life-threatening diseases and other physical complications. Junk food is high in oils, fats while low in nutrition and health elements.2 Adolescent facing health related nutritional problems and biological process issues, when they enter the school environment there will be changes in their habits, lifestyle and particularly in their food habits. Adulthood obesity starts from childhood and effective prevention depends upon the way you coping with and control of obesity.

PROBLEM STATEMENT

'Pre experimental study to assess the effectiveness of structured teaching program on knowledge regarding health hazard of junk food among adolescence student UP''

OBJECTIVES:

1. To assess the pretest knowledge regarding hazards of junk food among adolescent students.
2. To assess the post-test knowledge regarding hazards of junk food among adolescent students
3. To assess the effectiveness of Structured Teaching Programme regarding hazards of junk food among adolescent students.
4. To find out the association between the pre-test level of knowledge with their selected socio demographic variables.

OPERATIONAL DEFINITIONS:

Pre-Experimental study- A pre-experimental study is a basic form of research used to explore initial cause-effect relationships without the rigor of true experimental designs. It's often used for feasibility testing or pilot studies.

Assess- Assessment is the systematic process of collecting, analyzing, and interpreting information to evaluate the knowledge, skills, attitudes, or performance of an individual, group, or system.

Effectiveness: Determines the extent to which the structured teaching programme has achieved the desired effect in improving the knowledge of early adolescents regarding the health hazards of junk food.

Structured Teaching Program: It Refers to the type of teaching focused on the effects of junk food and its health hazards, delivered to enhance the awareness of early adolescents.

Junk food: - Junk foods are foods that lack nutrients, vitamins and minerals, and are high in kilojoules (energy), salts, sugars, or fats Junk foods are foods that lack nutrients, vitamins and minerals, and are high in kilojoules (energy), salts, sugars, or fats

Knowledge: It Refers to the level of Understanding of health Hazards of Junk food**.**

Early Adolescent- Age Range: Roughly 10–19 years (can be divided into early [10–14], middle [15–17], and late [18–19] adolescence)

HYPOTHESES:

Null Hypothesis-H0- There will be no effect of intervention on control group.

Positive Hypothesis-H_1- The mean post-test knowledge score will be higher than mean pretest knowledge score.

H_2- There will be significant association between pretest knowledge score with their selected demographic variables.

Negative Effectives-
H1-The mean post-test knowledge score will be lower than mean pretest knowledge score.

Research approach- one group pretest, post-test interventional approach.

Research design- Quantitative research design

VARIABLES: Independent variables: hazards of junk food

Dependent variables knowledge of Adolescent Students.

Demographic Variable Proforma:
Demographic variable Performa consists of age in year, Gender, religion, educational, Previous knowledge level of adolescent.

SETTING OF THE STUDY: - This study was conducted on students of selected schools young stream academy inter college, Mamta Educational academy at Barabanki (UP) the setting is completely based on the availability and feasibility of the sample.

POPULATION: It is the entire set of individuals or objects having some common characteristics. (Polit and Beck 2008)**.**

SAMPLE AND SAMPLE SIZE: A part of subset of the population selected to participate in a research study. The sample size is the number of people who participate in the study.58The sample size in the present study was 60 adolescent students.

SAMPLING TECHNIQUE:
"Sampling is the process of selecting a representative segment of the population under study.59 In this study, Simple random Sampling Technique was used.

SAMPLING CRITERIA- INCLUSION CRITERIA:
The study includes adolescent who:

- School adolescent students who included in the study.
- Those who are available at the time of data collection
- Those who are willing to participate in the study.

SAMPLING CRITERIA-EXCLUSION CRITERIA:
The study excluded adolescent who

- Those who are not willing to participate in the study.
- Those students who are not coming under the adolescent age.

Interpretation of the tool- The instruments used in this structured teaching programme study were demographic variable proforma, lesson plan, Power point presentation and questionarrae.

Demographic Variable Proforma:
Demographic variable performa consists of age in year, Gender, religion, educational, Previous knowledge level of adolescent.

Pain Rating Scale:

S. NO.	LEVEL OF KNOWLEDGE	PRE- TEST F	%	POST- TEST F	%
1.	Inadequate knowledge	18	30%	0	0%
2.	Moderate knowledge	41	68%	37	62%
3.	Adequate knowledge	1	2%	23	38%
	TOTAL	**60**	**100%**	**60**	**100%**

Validity of Study Instruments:
Content validity of the tool was obtained by getting opinion from seven experts in the field of medical surgical nursing. Three of the experts were doctors and three were nursing personnel and one biostatistician. The valuators had suggested some specific modification in the objectives. The modification and suggestions of experts were incorporated in the final preparation of the observation instrument to assess the level Previous knowledge level of adolescent.

PILOT STUDY:
Polit and Hungler (2004) states that a pilot study is a miniative of some parts of actual study in which the instruments are administered to the subjects drawn from the same population.

Pilot study was conducted on 60 sample of adolescent in control and experimental group. The subjects were chosen by Simple random Sampling Technique selected schools young stream academy inter college, Mamta Educational academy at Barabanki (UP). Using the demographic variable proforma, questionaries method, lesson plan, power point presentation, data were collected and analysis was done. The study was found to be feasible, accepted and easy to understand by the Adolescent.

PLAN FOR DATA ANALYSIS:

Data analysis is the systematic organization and synthesis of research data and testing of research hypothesis by using the obtained data (Polit & Beck 2004). Analysis sand interpretation of data was carried out with descriptive statistics like frequency distribution, percentage, mean, stand deviation and inferential statistics like paired 't' test. The association between the demographic variables, obstetric variables and dependent variables were analyzed with the help of ANOVA.

ANALYSIS AND INTERPRETATION

Frequency and Percentage Distribution of Demographic Variables.

Association between the level of knowledge score with selected demographic variables of adolescent students.

Table No. 1: Association of knowledge level of adolescent students with selected demographic variables

n=60

Sr. No.	Demographic Variable	Inadequate	Moderate	Adequate	Chi- square Cal. Value	Table value	df	Inference
1.	**Age in years**							
a)	19-21	23	24	00	**12.62**	**12.59**	**6**	**S**
b)	16-18	04	04	00				
c)	13-15	05	00	00				
2.	**Gender**							
a)	Male	11	06	00	**13.96**	**5.99**	**2**	**S**
b)	Female	21	22	00				
3.	**Religion**							
a)	Hindu	23	28	00				
b)	Muslim	04	00	00	**21.25**	**12.59**	**6**	**S**
c)	Christian	02	00	00				
d)	Any other(specific)	02	00	00				
4.	**Previous knowledge**							
a)	Yes	27	26	00	**18.57**	**5.99**	**2**	**S**
b)	No	05	02	00				

In pretest among the subject 18 sample (30%) had inadequate level of knowledge, 41 sample (68%) had moderate level of knowledge and 1 (2%) had adequate knowledge and in post-test among the subject, 23(38%) adequate level of knowledge, 37 sample (62%) had moderate level of knowledge and no sample had inadequate level of knowledge.

The following outcome supported by A pre-experimental study was conducted by Amol deep Priyanka Kumari (2017): to assess the effectiveness of a structured teaching program regarding the harmful effects of junk food among adolescents. The study was conducted at Kala Amb School and comprised 100 adolescents, including 8 girls and 92 boys from 9th and 10th grades. Convenience sampling was used to select the sample. Data was collected using a structured questionnaire. The teaching program was planned and then implemented. The knowledge of adolescents regarding the harmful effects of junk food was assessed using pre-test and post-test methods. The pre-test was conducted on the first day, and the post-test was conducted 7 days after the program. The majority of adolescents (65%) had average knowledge before the program. After the teaching program, there was a significant increase in knowledge, with a mean post-test score of 16.76 compared to a pre-test score of 9.92 ($p < 0.05$). There was a significant difference between pre-test and post-test knowledge levels ($p < 0.0001$), indicating that the structured teaching program was highly effective in enhancing adolescents' knowledge regarding the harmful effects of junk food.

mean of pretest (12.5) and post-test (19.3) and mean percentage of pretest (20.8%) and post-test (32.1%),Standard deviation of pretest (3.6) and post-test (2.9).The finding was supported by A pre-experimental study was conducted by Vandhana (2016): to assess the effectiveness of a structured teaching program regarding the harmful effects of junk food among adolescents. The study was conducted in Jalan Dhan Schools, Punjab, with a total of 60 adolescents selected using a non-probability convenience sampling technique. The inclusion criteria were applied, and data was collected using a self-administered questionnaire. The study involved a pre-test and post-test design to evaluate the knowledge level of participants before and after the teaching program. The mean

score for the pre-test was 9.92, while the mean score for the post-test was 16.76. The results revealed a significant increase in knowledge about the harmful effects of junk food after the structured teaching program. The post-test scores were significantly higher than the pre-test scores, indicating that the teaching program effectively improved adolescents' knowledge regarding junk food.

The finding was supported by This study was conducted by Shubha devi, Supkota Neupam (2018):"to assess the junk food consumption and patterns of consumed junk food among secondary level students." This was descriptive cross-sectional research. One hundred forty-two respondents were drawn using a cluster sampling method. A self-administered semi structured questionnaire in Nepali was used, and the collected data was entered and analyzed in Epi Data and SPSS version 20 using simple statistical methods. The findings revealed that more girls (53.5%) consumed junk food than boys (49.6%), and those respondents were aware of the meaning of junk food. The majority of respondents (90.1%) preferred junk food for taste; it was faster to prepare (64.1%); preferred as influenced by TV advertisements (53.5%); because of peer influences (31.7%); and some (29.6%) preferred junk food because nothing else was available. Concerning patterns of consumed junk food, all respondents (100%) consumed 'chat pat' and noodles, Manipuri (97.2%), doughnuts (33%), chocolates (92.3%), biscuits (95.8%), ice cream (65.8%), and cold drinks (65.8%). Only 31.2% of respondents were aware of the risks associated with poor eating habits. It is recommended that the school and community conduct and implement awareness programs on junk food consumption.

Table -2 Comparison of mean and standard deviation of feotomaternal parameters beforeand after ambulation in control and experimental group of low-risk parturient mothers

(N=60)

Feo to maternal parameters	CONTROL GROUP					EXPERIMENTAL GROUP				
	Before therapy		After therapy		't' value	Before therapy		After therapy		t' value
	M	SD	M	SD		M	SD	M	SD	
Fetal Heart Rate	148.60	50.30	139.23	2.41	-1.03	139.45	1.56	139.58	1.55	1.466
Maternal Pulse Rate	82.66	8.35	82.18	6.84	-1.02	80.63	0.45	80.67	0.76	0.249
Uterine Contraction Frequency	2.90	0.49	3.1	0.25	2.31*	3.15	0.30	2.22	0.24	16.38
Uterine Contraction Duration	52.56	5.93	48.3	8.01	0.16*	53.69	6.31	68.10	7.86	9.02***
Systolic Blood Pressure	118.25	11.61	114.85	7.45	1.69	116.75	2.912	117.64	2.60	1.27
Diastolic Blood Pressure	74.81	6.92	74.52	3.43	0.22	78.15	2.93	77.59	4.39	1.363
Cervical dilatation	1.03	0.18	2.03	0.35	16.33	1.00	0.0	2.45	0.17	46.08***
Station descent	-2.00	0.0	-0.82	0.52	12.41	-2.00	0.0	-0.09	0.59	17.78***

***-Significance at P<0.001

Table 2:It is inferred that mean and standard deviation of frequency of uterine contraction in control group was high in after therapy (M=3.1,SD=0.25) in comparison with before therapy(M=2.9,SD=0.49). The mean and standard deviation of frequency of uterine contraction duration in control group was high in after therapy (M=52.56,SD=5.93) in comparison with before therapy(M=48.3,SD=8.01)The difference was found statistically significant at 95% level of significance. Remaining all the variables are not significant. Hence the Null hypothesis Ho_1 was accepted.

The mean and standard deviation of frequency of uterine contraction in experimental group was high before therapy (M=3.15, SD=0.30) in comparison with after therapy (M=2.22, SD=0.24). Duration of uterine contraction was low in before therapy (M=53.69, SD=6.31) than after therapy (M=68.10, SD=7.86). The result was statically significant at 99.9% level of significance. Hence Null hypothesis Ho1 was rejected

In terms of cervical dilation and station descent in experimental group calculated mean value 1.00 ,-2.00 and standard deviation M=0.00,0.00 before therapy and mean value 2.45,-0.09 and standard deviation 0.17,0.59, after therapy respectively. The calculated t value 46.08 in cervical dilation and 17.78 in station decent were highly significant at P<0.001level

This shows that ambulation during first stage of labour increases the duration of uterine contraction ,cervical dilation ,station decent and decreases the frequency of uterine contraction.

Table -3 Comparison of mean and standard deviation of level of labour pain before and after therapy in control and experimental group of low risk parturient mothers.

(N=60)

Group	Before therapy		After therapy		t' value
	Mean	S.D	Mean	S.D	
ControlGroup	6.64	0.82	7.80	0.56	-7.398
Experimental Group	6.15	0.75	5.05	0.72	12.39***

*****: Significant at p<0.001**

Table -3 inferred that mean and standard deviation of pain score of experimental group low risk parturient mothers were low in after therapy (M=5.05, SD=0.72) in comparison with before therapy level of pain score (M6.15, SD=0.75). In control group aftertherapy pain score was high (M=7.99, SD=0.534) in comparison with the level of pain score before therapy (M=6.64, SD=0.9994). The difference was found statistically significant at 99% level of significance and can be attributed to the effectiveness of Ambulation during first stage of labour. Thus the null hypothesis H_{o2} was rejected.

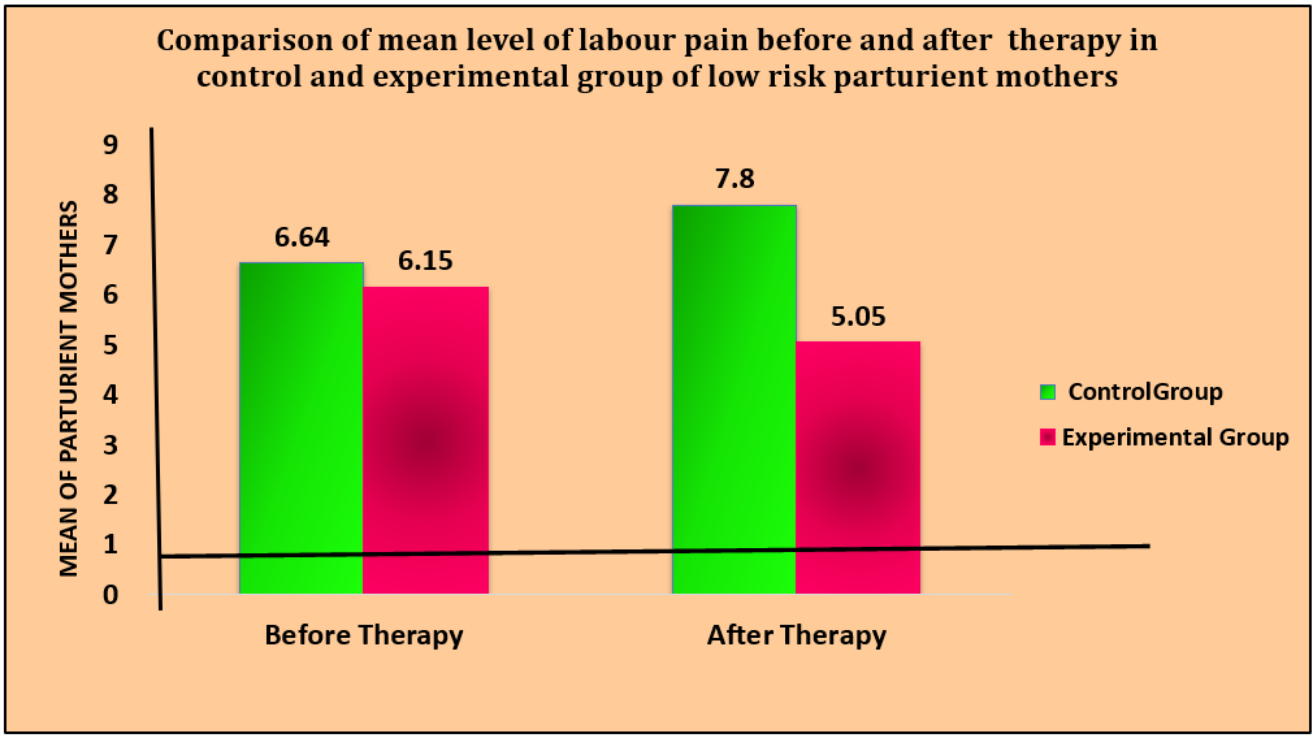

Fig-17: Comparison of mean level of labour pain before and after therapy in control and experimental group of low risk parturient mother

Table 4 Association between the selected demographic variables and fetal heart rate after therapy in control and experimental group of low risk parturient mothers.

(N=60)

Demographic variables	Control group (n=30)			Experimental group(n=30)		
	Mean	SD	't' Value	Mean	SD	't' Value
Age in years						
≤20	-	-	-1.076	-	-	0.290
21 to 25	138.84	2.76		139.64	1.30	
26 to 30	139.74	1.83		139.44	2.03	
>30	-	-		-	-	
Education						
No formal education	138.20	3.75	0.572	132.10	1.00	0.912
Primary school	139.27	2.25		139.98	1.08	
High & Higher secondary	139.82	1.82		139.11	2.09	
Graduate	138.12	3.31		139.63	0.78	
Post graduate and above	140.05	2.19		139.20	1.08	

Type of work						
Sedentary worker	140.27	1.06	1.040	138.98	2.85	1.799
Moderate worker	138.85	2.78		139.66	1.22	
Heavy worker	138.80	2.31		140.50	1.34	
Type of family						
Nuclear	139.27	2.69	-0.284	139.66	1.22	-0.701
Joint	138.98	2.17		139.50	1.18	
Area of residence						
Urban	139.35	2.69	0.157	-	-	0.249
Rural	138.80	2.31		132.10	1.00	
Semi urban	138.12	3.31		139.50	1.18	

Table 5 Association between the selected demographic variables and maternal pulse rate in control and experimental group of low risk parturient mothers.

(N=60)

Demographic variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	SD	't' Value	Mean	SD	't' Value
Age in years						
≤20	-	-	1.359	-	-	0.545
21 to 25	81.16	1.02		80.73	0.68	
26 to 30	80.67	0.96		80.55	0.93	
>30	-	-		-	-	
Education						
No formal education	80.63	1.70	0.718	80.82	0.89	1.096
Primary school	81.25	0.81		80.56	0.63	
High & higher Sec.	80.57	0.86		80.82	0.89	
Graduate	81.22	1.16		80.23	0.68	
Post graduate and above	80.80	1.69		81.60	0.68	
Type of work						
Sedentary worker	80.47	0.76	1.984	80.84	1.20	0.497
Moderate worker	81.24	1.01		80.66	0.67	
Heavy worker	80.60	1.20		80.00	0.45	
Type of family						
Nuclear	81.00	1.13	0.267	139.68	1.25	-0.701
Joint	80.90	0.91		139.22	2.39	
Area of residence						
Urban	81.02	1.12	0.121	-	-	0.249
Rural	80.83	0.93		139.57	1.65	
Semi urban	81.00	1.00		139.62	0.63	

Table 6 Association between the selected demographic variables and uterine contractionduration in control and experimental group of low risk parturient mothers.

(N=60)

Demographic variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	SD	't' Value	Mean	SD	't' Value
Age in years						
≤20	-	-	-0.436	-	-	0.089
21 to 25	34.38	4.54		44.08	15.77	
26 to 30	35.15	4.99		43.55	15.46	
>30	-	-		-	-	
Education						
No formal education	31.33	2.31	1.581	-	-	0.461
Primary school	35.27	4.97		44.03	13.19	
High & Higher sec.	32.89	3.10		41.40	14.70	
Graduate	37.56	2.82		53.43	30.76	

Post graduate and above	37.85	11.81		43.50	24.13	
Type of work						
Sedentary worker	32.37	2.68	1.677	39.02	4.24	0.323
Moderate worker	35.58	5.04		45.05	17.0	
Heavy worker	34.12	5.20		40.80	10.10	
Type of family						
Nuclear	35.05	5.74	0.381	43.71	14.34	-0.105
Joint	34.39	3.48		44.56	19.80	
Area of residence						
Urban	34.77	5.13	1.130	-	-	-0.524
Rural	33.68	2.98		43.02	14.00	
Semi urban	38.23	7.12		49.65	24.67	

Table 7 Association between the selected demographic variable and contraction frequency in control and experimental group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Age in years						
≤20	-	-	1.094	-	-	1.461
21 to 25	13.13	2.20		15.99	10.39	
26 to 30	12.13	2.69		11.87	5.08	
>30	-	-		-	-	
Education						
No formal education	13.10	2.42	0.983	13.97	8.86	0.140
Primary school	12.36	2.69		15.48	10.00	
High & Higher. Sec	13.37	2.63		13.97	8.86	
Graduate	11.23	1.56		14.77	9.79	
Post graduate	14.55	0.07		9.90	10.08	
Type of work						
Sedentary worker	12.50	3.14	0.132	10.84	0.78	0.666
Moderate worker	12.88	2.19		15.59	9.96	
Heavy worker	12.26	2.59		10.30	0.56	
Type of family						
Nuclear	13.18	2.34	1.097	15.22	9.87	0.835
Joint	12.21	2.52		12.66	6.01	
Area of residence						
Urban	13.25	1.69	1.459	-	-	0.300
Rural	11.71	3.16		14.80	9.33	
Semi urban	13.37	2.49		13.42	8.44	

Table 8 Association between the selected demographic variable and cervical dilatation in control and experimental group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Age in years						
≤20	-	-	-1.545	-	-	2.267
21 to 25	1.59	0.37		2.41	0.18	
26 to 30	1.81	0.41		2.53	0.10	
>30	-	-		-	-	
Education						
No formal education	1.43	0.11	1.030	2.43	0.21	0.605
Primary school	1.63	0.44		2.41	0.19	
High & Higher Sec	1.70	0.33		2.48	0.15	

Graduate	1.77	0.47		2.43	0.21	
Post graduate & above	2.12	0.53		2.60	0.39	
Type of work						
Sedentary worker	1.41	0.18	2.970	2.54	0.13	1.391
Moderate worker	1.78	0.45		2.42	0.17	
Heavy worker	1.81	0.24		2.60	0.14	
Type of family						
Nuclear	1.71	0.42	0.293	2.44	0.17	-0.639
Joint	1.67	0.39		2.48	0.17	
Area of residence						
Urban	1.80	0.41	1.879	-	-	-1.071
Rural	1.51	0.26		2.44	0.18	
Semi urban	1.75	0.66		2.50	0.08	

Table-9 Association between the selected demographic variable and station of fetal head in control and experimental group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Age in years						
≤20	-	-	-0.500	-	-	0.088
21 to 25	-1.41	0.94		-0.81	0.60	
26 to 30	-1.23	1.01		-0.83	0.34	
>30	-	-		-	-	
Education						
No formal education	-1.33	1.15	0.113	-1.2	0.17	1.256
Primary school	-1.45	0.93		-0.89	0.34	
High & Higher Sec	-1.33	1.00		-0.62	0.69	
Graduate	-1.20	1.09		-1.2	0.17	
Post graduate	-1.00	1.41		-1.0	0.10	
Type of work						
Sedentary worker	-2.00	0.00	3.643	-0.76	0.22	0.088
Moderate worker	-1.00	1.03		-0.82	0.57	
Heavy worker	-1.50	1.00		-1.0	1.23	
Type of family						
Nuclear	-1.33	0.97	0.000	-0.79	0.57	0.726
Joint	-1.33	0.97		-0.91	0.32	
Area of residence						
Urban	-1.25	1.00	0.139	-	-	2.785
Rural	-1.45	0.93		0.77	0.10	
Semi urban	-1.33	1.15		-1.15	0.09	

Table 10 Association between the Selected Obstetrical Variables and Fetal Heart Rate in Control and Experimental Group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Gestational age in weeks						
37to38	138.40	-	1.482	-	-	0.249
39 to 40	138.54	2.24		139.61	1.63	
41 to 42	140.02	2.49		139.45	1.33	
Height in cms						
<145 cm	138.68	2.77	-0.748	139.58	1.55	0.129
>145 cm	139.46	2.26		-	-	

Weight gain during pregnancy						
10 kg	-	-	0.813	-	-	-0.413
12 kg	139.65	2.80		139.22	2.59	
>12 kg	138.90	2.08		139.67	1.23	
Number of antenatal visit						
No visit	138.72	2.09	0.549	-	-	-0.938
1 to 3 times	138.94	2.75		139.25	2.06	
>3 times	139.88	1.95		139.83	1.00	
Complications during antenatal period						
Anemia	138.62	3.26	-1.102	-	-	0.002
PIH	-	-		-	-	
GDM	-	-		-	-	
No complications	139.69	1.41		139.58	1.55	
Duration of first stage of Labour						
≤ 6 hours	138.72	2.80	1.326	139.22	2.50	0.543
7-8 hours	139.64	2.75		139.65	2.80	
9-10 hours	130.88	1.41		139.88	1.95	

Table 11 Association between the selected obstetrical variables and maternal pulse rate in control and experimental group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Gestational age in weeks						
37to 38	81.60	-	0.686	-	-	0.697
39 to 40	81.11	0.90		80.72	0.78	
41 to 42	80.73	1.14		80.48	0.72	
Height in cms						
<145 cm	80.72	1.08	-0.776	80.67	0.76	0.00
>145 cm	81.05	0.99		-	-	
Weight gain during pregnancy						
10 kg	-	-	0.370	-	-	-0.320
12 kg	81.03	1.11		80.55	1.09	
>12 kg	80.89	0.96		80.70	0.68	
Number of antenatal Visit						
No visit	80.42	1.06	1.273	-	-	1.588
1 to 3 times	81.21	1.06		80.92	0.83	
>3 times	80.75	0.86		80.48	0.66	
Complications during antenatal period						
Anemia	81.30	1.24	1.60	-	-	0.00
PIH	-	-		-	-	
GDM	-	-		-	-	
No complications	80.68	0.72		80.67	0.76	
Duration of first stage of Labour						
< 6 hours	82.03	1.11	1.379	80.92	1.09	0.750
7-8 hours	80.40	0.96		80.70	0.83	
9-10 hours	81.21	0.86		88.02	0.76	

Table 12 Association between the selected obstetric variables and uterine contraction duration in control and experimental group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Gestational age in weeks						
37to 38	37.00	-	0.156	-	-	-0.248
39 to 40	34.88	4.08		43.47	14.45	
41 to 42	34.38	5.49		45.65	20.26	
Height in cms						
<145 cm	34.53	4.61	-0.141	43.91	15.40	-0.00
>145 cm	34.79	4.81		-	-	
Weight gain during pregnancy						
10 kg	-	-	-1.599	-	-	0.436
12 kg	33.29	3.08		47.02	20.62	
>12 kg	35.80	5.43		43.13	14.27	
Number of antenatal Visit						
No visit	38.17	6.25	1.316			-1.988
1 to 3 times	34.34	4.46		38.45	4.41	
>3 times	33.93	4.23		48.08	19.31	
Complications during antenatal period						
Anemia	35.60	5.28	0.874	-	-	-0.00
PIH	-	-		-	-	
GDM	-	-		-	-	
No complications	34.04	4.19		43.91	15.40	
Duration of first stage of Labour						
< 6 hours	34.04	0.25	1.231	38.45	6.25	1.216
7-8 hours	36.43	4.46		38.17	4.46	
9-10 hours	34.34	4.23		33.93	4.43	

Table 13 Association between the Selected Obstetrical Variables and UterineContraction Frequency in Control and Experimental Group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Gestational age in weeks						
37	10.30	-	1.253	-	-	0.787
38 to 39	12.25	2.56		15.15	9.64	
40 to 42	13.35	2.25		12.50	6.69	
Height in cms						
<145 cm	13.18	2.15	0.755	14.62	9.09	-
>145 cm	12.49	2.57		-	-	
Weight gain during						
Pregnancy 10 kg	-	-	2.994	-	-	-0.449
12 kg	13.97	1.41		13.47	6.16	
>12 kg	11.72	2.64		14.91	9.77	
Number of antenatal Visit						
No visit	13.24	2.39	0.110	-	-	0.111
1 to 3 times	12.64	2.47		14.84	10.09	
>3 times	12.56	2.63		14.45	8.56	

Complications during antenatal period						
Anemia	12.77	1.94	0.155	-	-	0.000
PIH	-	-		-	-	
GDM	-	-		-	-	
No complications	12.64	2.82		14.62	9.09	
Duration of first stage of labour						
< 6 hours	13.18	2.15	0.153	14.84	6.16	0.142
7-8 hours	11.72	2.64		14.82	9.77	
9-10 hours	15.15	9.64		13.82	2.63	

Table 14 Association between the Selected Obstetrical Variables and Cervical Dilatation in Control and Experimental Group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't' Value
Gestational age in weeks						
37to 38	1.50	-	0.128	-	-	2.096
39 to 40	1.68	0.41		2.43	0.18	
41 to 42	1.71	0.41		2.53	0.08	
Height in cms						
<145 cm	1.63	0.37	-0.512	2.45	0.17	0.00
>145 cm	1.71	0.42		-	-	
Weight gain during pregnancy						
10 kg	-	-	-0.421	-	-	1.706
12 kg	1.65	0.35		2.53	0.12	
>12 kg	1.71	0.44		2.43	0.17	
Number of antenatal visit						
No visit	2.07	0.43	3.073	-	-	-0.530
1 to 3 times	1.56	0.38		2.43	0.18	
>3 times	1.73	0.33		2.46	0.16	
Complications during antenatal period						
Anemia	1.73	0.42	0.499	-	-	0.00
PIH	-	-		-	-	
GDM	-	-		-	-	
No complications	1.65	0.39		2.45	0.17	
Duration of first stage of labour						
< 6 hours	1.88	0.28	0.195	1.84	0.28	0.195
7-8 hours	1.86	0.26		1.82	0.29	
9-10 hours	1.84	0.28		1.86	0.26	

Table 15 Association between the Selected Obstetrical Variables and Level of Station Decent in Control and Experimental Group of low risk parturient mothers.

(N=60)

Demographic Variables	Control Group(n=30)			Experimental Group (n=30)		
	Mean	S.D	't' Value	Mean	S.D	't'Value
Gestational age in weeks						
37to38	-2.00	-	0.245	-	-	1.379
39 to 40	-1.33	0.97		-0.77	0.54	
41to 42	-1.28	0.99		-1.03	0.39	
Height in cms						
<145 cm	-1.33	1.00	0.000	-0.82	0.52	0.000
>145 cm	-1.33	0.97		-	-	
Weight gain during pregnancy						
10 kg	-	-	-1.949	-	-	0.750
12 kg	-1.69	0.75		-0.73	0.21	

>12 kg	-1.06	1.03		-0.84	0.57	
Number of antenatal visit						
No visit	-0.50	1.00	1.885	-	-	1.522
1 to 3 times	-1.50	0.89		-0.65	0.66	
>3 times	-1.40	0.97		-0.95	0.35	
Complications during antenatal period						
Anemia	-1.23	1.01	0.500	-	-	0.000
PIH	-	-		-	-	
GDM	-	-		-	-	
No complications	-1.41	0.94		-0.82	0.52	
Duration of first stage of labour						
< 6 hours	-1.33	0.97	0.245	1.33	0.63	1.432
7-8 hours	-1.28	0.99		0.64	0.34	
9-10 hours	-1.23	1.01		0.72	0.24	

It was observed from Table 4 there was no significant association between the selected demographic variables such as age, educational status, type of work ,type of family ,area of residence ,and the fetal heart rate and. Hence Null hypothesis H03 was accepted.

It was noted from Table 5 that there was no significant association between the selected demographic variables such as Age, Educational status, Type of work, Type of family and the Area of residence and Maternal pulse rate. Hence null hypothesis H03 was accepted.

Table 6 denotes that there was no significant association between the selected demographic variables such as Age, Educational status, Type of work, Type of family, Area residence and Contraction duration. Hence null hypothesis H03 was accepted.

It was noted from Table 7 that there was no significant association between the selected demographic variables such as Age, Educational status, Type of work, Type of family, Area residence and Contraction frequency. Hence null hypothesis H03 was accepted.

Table 8 depicts that there was no significant association between the selected demographic variables such as Age, Educational status, Type of work, Type of family and the Area residence and cervical dilatation. Hence null hypothesis H03 was accepted.

It can be inferred from Table 9 that there was no significant association between the selected demographic variables such as Age, Educational status, Type of work, Type of family and the Area of residence and Station of fetal head. Hence null hypothesis H03 was accepted.

Table 10 denotes that there was no significant association between the selected Obstetrical variables such as Gestational age in weeks, duration of first stage of labour, Weight gain during pregnancy, Complications during antenatal period and fetal heart rate. Hence null hypothesis H03 was accepted.

Table 11 depicts that there was no significant association between the selected Obstetrical variables such as Gestational age in weeks, duration of first stage of labour, Weight gain during pregnancy, Complications during antenatal period and maternal pulse rate. Hence null hypothesis H03 was accepted.

Table 12 denotes that there was no significant association between the selected Obstetrical variables such as Gestational age in weeks, duration of first stage of labour, Weight gain during pregnancy, Complications during antenatal period and Uterine Contraction Duration. Hence null hypothesis H03 was accepted.

Table 13 depicts that there was no significant association between the selected Obstetrical variables such as Gestational age in weeks, duration of first stage of labour, Weight gain during pregnancy, Complications during antenatal period and Uterine Contraction Duration. Hence null hypothesis H03 was accepted

Table 14 inferred that there was no significant association between the selected Obstetrical variables such as Gestational age in weeks, duration of first stage of labour, Weight gain during pregnancy, Complications during antenatal period and Cervical dilation. Hence null hypothesis H03 was accepted.

Table 15 depicts that there was no significant association between the selected Obstetrical variables such as Gestational age in weeks, duration of first stage of labour, Weight gain during pregnancy, Number of antenatal visit, Complications during antenatal period and Level of station descent. Hence null hypothesis H03 was accepted.

This study was carried upon sixty low risk parturient mothers who were with labour pain in the labour ward, Hind Hospital. Their pain score and

fetomaternal parameters during the first stage of labour was assessed every one hour before and after ambulation. The discussion is presented under the following heading:

- Demographic variables and obstetric variables in control and experimental group of low risk pregnent women
- Mean and Standard Deviation of Fetomaternal Parameters before and after therapy in control and experimental group of low risk pregnent women
- Assessment of level of satisfaction on ambulation in experimental group of low risk pregnent women
- Association between the selected demographic variables and Feto maternal parameters after therapy in control and experimental group of low risk pregnent women
- Association between selected obstetric variables and, Feto maternal parameters after therapy in control and experimental group of low risk pregnent women

Demographic variables of the low risk parturient mothers

Majority of the parturient mothers in the control and experimental group were in age group of 21-25 years, it could be interpreted that the public had adequate awareness about the opportune time for pregnancy. This view was highlighted by Mathews and Hamilton, (2012) in their study that the average age of mothers at the time of birth increased from 24.6 in 1970 to 27.2 in 2010.Beckman et al., (2014) also had found that women order than 35yrs have an increased incidence of sub fertility and inability to conceive. since majority of the mothers were home maker (80%, 60%) they can take adequate rest during pregnancy and can be free from psychological stress, which is an important factor in promoting maternal as well as fetal well being.

Significant percentage of mothers were educated up to primary school level (46.67%, 36.67%) which can be recognized as a facilitating factor to understand the structured interview. According to the census held in 2001 by national literacy mission, the percentage of female literacy mission, the percentage of female literacy has increased from 8.86% in 1951 to 54.16% in 2001. This view was emphasized by as study finding of Ortigo so and karchemer (1996) that the educational level of the patient is a determining factor to the attitude and knowledge of the people towards their own health.

Majority of the mothers (86.67%) are residing in rural areas where it is difficult for them to utilize the service in maternity centers, but then public had adequate awareness to seek services rendered by the center more effectively. Most of the mothers (76.67%) were in joint families. Joint families are like micro organism of the entire world. The researcher assumed that form the joint family the parturient will get lot of support which may promote the well-being of the mothers as well as the family members will teach about the changes which occur during labour as the coping measures which is to be adopted during labour.

Most of the mothers (86.67%, 53.33%), had received information regarding ambulatory nursing care through family members It showed that ,though the mothers received information regarding ambulation, they had never practice during their labour process.

Obstetric Variables of low risk parturients mothers:

Most of the parturient mothers (80%) were in the gestational age between 38- 39 weeks. The findings on gestational age can be interpreted that labour process in appropriate gestational age will promote positive labour outcome without any fetomaternal complications. Almost all of them (56.67%, 33.33%) have attended more than three antennal visits. It was remarkable to find that all the mothers had attended more than 3 antenatal visits which can be interrupted that mothers as well as the family members are well known and much aware about the importance of regular antenatal checkup for the maternal and fetal well-being. This view was consistent with the target of the millennium development goal (MDG) which is to achieve by 2015, the universal access to reproductive health which makes antenatal care coverage at least one visit and at least four visit for the improved service delivery.

Duration of first stage of labour was <6 hours in the experimental group whereas none of they had in the control group. This findings make sure that the intervention of ambulation was very effective in shortening the labour. This study was supported by Ricci (2017) who reported that walking help to speed labour by adding benefits of gravity and changes to the shape of the pelvis.

Both control and experimental group parturient mothers neither used any pain management during first stage of labour nor experienced any maternal or fetal complications during labour. All of them had normal vaginal delivery in both the group. As the intervention, ambulation in the experimental group does not create any untoward reactions during labour. These findings assure that the midwives can practice this intervention to reduce the labour pain perception and make the child birth experience as a memorable event.

None of them in both control and experimental group had not developed any fetal and maternal complications during labour. This study was supported by Bloom who found that ambulation did not impair the process are result in harm to the mother or fetus.

Mean and standard deviation level of pain before and after therapy in control and experimental group of low risk pregnent women.

The mean and standard deviation of pain scores of the control group parturient mothers were high after therapy (M=6.64, SD=0.994) compared to the level of pain score before the therapy (M=6.15, SD=0.75).Since low risk pregnant women have longer labors perceive more pain and are more likely to use pharmacologic support. The nurse needs to understand each woman experiences. The pain is reduced during labour by ambulatory nursing care and hence it can be incorporated in nursing practice. As this non-pharmacological pain relief measures during child birth is safe, simple, non- invasive and cost-effective, it can practiced by the midwife in the first stage of labour midwives play vital role in making the parturient to have reduced pain perception co-operation for the child birth, every mother will remember the midwives who helped to have pain relief during child birth.

Mean and standard deviation of fetomaternal parameters of the low risk pregnant women

In the control group the mean and standard deviation of fetomaternal parameters such as frequency of uterine contraction (M =3.15, SD=0.30) were low before the therapy compared with the scored after the therapy. The mean and standard deviation of duration of uterine contraction were high before the therapy (M=53.69, SD=6.31) compared to after the therapy at $p<0.01$. The frequency of uterine contraction before the therapy were high (M=3.15, SD=0.30) compared to after the therapy (M=2.22, SD=0.24) at $p<0.01$.As labour progress the uterine contraction increases which may cause discomfort to the mothers. Enkin et al., (2000) reported that when they allowed to walk it will enhance uterine action, relieves distractions from labour comfort and provides opportunities for close interaction with the care provider as they help her to walk. And also supported by Emily that in walking contractions are less comfortable and more efficient.

The mean score of cervical dilatation of the control group mothers was low (M=2.03, SD=0.35) compared to experimental group (M=2.45, SD=0.17). The mean score of fetal station were more advanced in experimental group (M=0.09, SD=0.59) than in control group mothers (M=0.82, SD=0.52).

Association between demographic variables and fetomaternal parameters

In experimental group there was no significant association between age, education, type of work, area of residence irrespective of the demographic variables all the fetomaternal parameters were not changed before and after therapy. Hence no statistics could be calculated for association between demographic variable and fetomaternal parameters after the therapy in control and experimental group.

In control and experimental group there was no significant association between the demographic variables and fetomaternal parameters after the therapy. This denotes that fetomaternal parameters were not influenced by demographic variables and hence the ambulatory nursing needs to be enhanced by the midwives by practicing complementary and alternative therapies during child birth.

Association between obstetric variables and fetomaternal parameters

In the control and experimental group there was no significant association between the obstetric variables and the fetomaternal parameters before and after the therapy. Hence the study exhibits that there was no relationship between the obstetric variable and fetomaternal parameters. In the control and experimental group there was no significant association between the obstetric variable and fetomaternal parameters before and after therapy.

Summary

This chapter has dealt about the discussion on the various aspects of study findings. This chapter comprises of demographic and obstetric variables of parturient mothers level of labour pain, before and after therapy in control and experimental group, fetomaternal parameters of parturient mothers in control and experimental group, association between the selected demographic variables and level of labour pain before and after therapy in control and experimental group, association between selected obstetric variables and level of labour pain, are discussed with supporting study findings

Conclusion:

The analysis of the results showed that in the experimental group the level of labour pain was reduced after the therapy, duration of uterine contraction was increased and frequency was decreased. It enhances more cervical dilatation and advances station decent. This implied that the ambulation has an effect on reduction of pain during labour.

Implications Nursing practice

Nurses have a major role in assessing and providing necessary dimensional therapy to decrease the level of pain if low risk pregnant women during labour. Many non pharmacological measures are available to reduce the level of labour pain but being simple and non invasive ambulatory nursing care can be easily adopted into practice.

Nurses need to accept the responsibility of helping mothers to gain knowledge on importance of ambulation during first stage of labour and guide them to practice the same. They should also provide conducive environment for ambulation in the labour room. Maternity nurses can play a major role in implementing this care in day today nursing practice by explaining the optimal usage of it. The same intervention can be formulated as a teaching module that can be included as one of the teaching material in mother craft classes.

Nursing Education

As ambulation and its advantages during labour were should be included in the curriculum student should teach mothers, the need for ambulation during first stage of labour during their practices and becoming knowledgeable about its clinical importance during labour. Promotion of ambulatory nursing care must be routine component in education. This should can serve as educative tool for staff nurses working in maternity units by continuous maternity nursing education. For educated mothers, this study can be used as an example of learning material.

Nursing administration

Nursing leaders are challenged to meet the health needs of low risk mothers who are in labour by effective organization and management. It is essential to promote ambulatory nursing care and to develop audit based on ambulatory procedure in collaboration with other health care providers to ensure practice of ambulation care and it need for the mothers in first stage of labour. The media can be used to portray the advantage of practices of first stage labour ambulatory nursing care.

Nursing research:

There is a need for extensive and intensive research in this area. Research is needed to examine the role of nurse in educating and encouraging the mothers to practice first stage labour ambulatory nursing care and its impact on labour steps should be taken to develop and implement the research utilization by preparing nurses to read, critique and use research in their practice. They can be encouraged to identify and receives research base, transforming protocol in clinical it to see whether it is producing predicted results.

Recommendations:

- This study can be conducted on a larger sample to generalize results.
- A comparative study can be conducted between primi and multigravidae parturients mothers
- Maternal health education centre can include this evidence based study to educate them in their antenatal period as part of child birth classes.
- A comparative study can be conducted between various alternative complementary methods to reduce pain perception during labour.

REFERENCES

[1] Effects of ambulation during the active phase of first stage of labor on the type of delivery. Sjimu. 2008; 15(4): 48- 56.

[2] A Virkud. Modern obstetrics. Second edition. Mumbai: APC publishers; 2012: 404.

[3] Ben Regaya L, Fatnassi R, Khlifi A, Fékih M, Kebaili S, Soltan K,et al. Role of deambulation during labour: A prospective randomized study]. Journal de Gynécologie Obstétrique et Biologie de la Reproduction. 2010; 39(8): 656-662.

[4] Deepthy P, Linu S. G, Sushmitha K. effectiveness of ambulation during first stage of labour, on the outcome of labour among primigravida women in delected hospital. International journal of nursing education. 2015; 7(1): 1-6.

[5] Kumud, Avinash K.R, Seema C. Effect of upright positions on the duration of first stage of labour among nulliparous mothers. Nursing and Midwifery Research Journal. 2013; 9(1): 10-20.

[6] Savitha V, Sabitha N, Shynee P. Effect of ambulation during first stage of labour on labour pain and outcome of labour among the Primigravida mothers in a selected hospital, Manglore. Journal of south asian federation of obstetrics and gynaecology. 2013; 5(1):1-

[7] Pillitteri A. maternal & Child Health Nursing. 5th ed. Philadelphia: Lippincott Williams & Wilkins Co. 2007, 465.

[8] Enkin M, Keirse MJ, Neilson J, Crowther C, Duley L, Hodnett E et al. A guide to effective care in pregnancy and childbirth. New York: Oxford University Press, 2000.

[9] Simkin P, Bolding A. Update on non pharmacologic approaches to relieve labor pain and prevent suffering. Journal of Midwifery and Women's Health. 2004; 49(6):489-504.

[10] Gau ML, Chang CY, Tian SH, Lin KC. Effects of birth ball exercise on pain and self-efficacy during childbirth: A randomized controlled trial in Taiwan. Midwifery. 2011, 1. (2010Nov8). http://www.ncbi.nlm.nih.gov/pubmed/21459499.

[11] Albin Mathew, Sabitha Nayak, vandana K. A comparative study on effect of ambulation and birthing ball on maternal and newborn outcome among primigravida mothers in selected hospitals in mangalore. NUJHS. 2012; 2(2). ISSN 2249-7110.

[12] Klaus, M, Kennell, J, Robertson, S, Sosa, R. Effects of social support during parturitionOT6 on maternal and infant morbidity. BMJ 1986; 293:585–587

[13] Lubra A. Labour pain, Experiences, and intensity. Int J Nursing Pract 2005; 14: 33-35

[14] Susan OA. Maternity newborn and women's health nursing (1st edition) Lippincott Williams and Wilkins publishers 2008(March 20) p-230-232. European Journal of Molecular & Clinical Medicine ISSN 2515-8260 Volume 7, Issue 8, 2020 1436

[15] Zayed A, and Al-Diasty S. Increased rates of Cesarean delivery at Mansoura University Hospital; an infuriating concern concluded from a prospective observational study. Egypt. J. Fertil. Steril. Jan. 2019; 23(1): 7-15

[16] Mathew A, Nayak S, and Vandana K. A comparative study on effect of ambulation and birthing ball on maternal and newborn outcome among primigravida mothers in selected hospitals in Mangalore. NUJHS. June 2012; 2 (2): 2-5.

[17] Nishikumari M, and Chinchpure S. Assess the effectiveness of ambulation during first stage of labor on outcome of labor among the primigravida mothers in selected hospital. Journal of Community & Social Health Nursing. 2019; 1 (1): 7- 18. http://doi.org/10.5281/zenodo.2586484

[18] Martin H, and Martin N. (2013). The relationship of ambulation to operative delivery. Journal of Nurse-Midwifery, 42 (1), 4-8. Retrieved from http://download.journals.elsevierhealth.com/pdfs/journals//PIIS009121800.pdf

[19] Lawrence A, Lewis L, Hofmeyr G, Dowswell Th, and Styles C. Maternal positions and mobility during first stage labour. Sao Paulo Med J. 2013; 129 (5):361-2. doi: 10.1002/14651858.cd003934.pub3

[20] Shojaei, B., Loripoor, M., Sheikhfathollahi, M., & Aminzadeh, F. (2021). The effect of walking during late pregnancy on the outcomes of labor and delivery: A randomized clinical trial. Journal of education and health promotion, 10, 277. https://doi.org/10.4103/jehp.jehp_1437_20

[21] Dhekra T, Soumaya K, Ahmed H, Ahmed Z, Haifa B (2020) The Advantage of Maternal Mobility during Labor: A Prospective Study about 120 Cases in Mahdia. J Gynaecol Womens Healthcare 2: 205

[22] Beula Merlin Usha, S U (2019) A Comparative study to Assess the Effectiveness of Ambulation Versus Semi Fowlers Position on Maternal Outcome among Primi Para Mothers at Selected Hospital at Kanyakumari District. Masters thesis, Global College of Nursing, Marthandam.

[23] Richa P et al (2019).a study to assess the effectiveness of ambulation during the first stage of labor on intensity of labour pain and duration of first stage of labour among the primigravida mothers at selected hospitals of Kheda-Anand district, Gujarat. International Journal of Emerging Technologies and Innovative Research. June 2019, Volume 6, Issue 6.Available from http://www.jetir.org/papers/JETIR1906W28.pdf.

[24] Chinchpure & Nishikumari, Assess The Effectiveness of Ambulation During First Stage of Labour on Outcome of Labour Among the Primigravida Mothers in Selected Hospital., Journal of Community & Social Health Nursing Volume 1 DOI: http://doi.org/10.5281/zenodo.258648

[25] Ibrahim, Heba Abdel-Fatah, Said, Hanan Ibrahim Ibrahim and Elgzar, Wafaa Taha Ibrahim. "Effect of upright and ambulant positions versus lying down during the active first stage of labor on birth outcomes among nulliparous women: randomized controlled clinical trial" Frontiers of Nursing, vol.7, no.3, 2020, pp.239-248. https://doi.org/10.2478/fon-2020-0035

[26] Marzouk, Tyseer & Eid, Mohamed. (2020). Influence of Ambulation during the First Stage of Labor on Labor Progress of Primi Parturients. Egyptian Journal of Health Care. 11. 260-274. 10.21608/ejhc.2020.110407.

[27] Khresheh RM, (2019).Clinical trials; https://clinicaltrials.gov/ct2/show/NCT03447015

[28] Prathiba R & Vaidya, A,(2019). Effect of Ambulation during First Stage of Labor on Labor Pain and Outcome of Labor among the Primigravida Mothers in a Selected Hospital, Mangalore. Journal of SAFOG. 5. 1-3. 10.5005/jp-journals-10006-1207.

[29] Bala I, Babu M, Sharda R. Effectiveness of back massage versus ambulation during first stage of labour among primi gravida mothews.Doi:10.5958/0974.2017.00066.6

[30] Kiranjeet K, Bruemder K, and Nishi G, (2017). Effectiveness of ambulation during first stage of labour on level of labour pains and labour outcome among primigravida mothers: Quasi experimental study. Baba Farid University Nursing Journal. Year: 2017, Volume: 13, Issue: 2First page: (43) Last page: (48)Print ISSN: 2277-9418. Online ISSN: 2278-0548.

[31] Meena P. A study to assess the effect of ambulation in reduction of labour pain among pregnant women in the regional hospital. Int. J Appl Res 2017; 3(6):291-294.

[32] Reema JA and Rev. Sr. Aileen M.A study to assess the impact of early and late ambulation on maternal outcome of mothers with caesarean birth in a selected hospital in mangalore International Journal of Development Research Vol. 07, Issue, 10, pp.15780-15800, October, 2017 Available online at http://www.journalijdr.co

[33] Flynn, A. M., Kelly, J., Hollins, G., & Lynch, P. F. (2016). Ambulation In Labour. The British Medical Journal, 2(6137), 591–593. http://www.jstor.org/stable/25428822