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ANNALS OF ADVANCED NURSING

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Annals of Advanced Nursing (AAN) aims to promote excellence in nursing research and healthcare with vision to advance knowledge for practice, education, research and administration in healthcare. The journal intends to disseminate high quality research reviews, clinical and contemporary healthcare issues based articles for the advancement of evidence based healthcare.

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Greetings to all of you!

Life is a progression from darkness to light and knowledge is the beacon of light which illuminates our path to self-realization. In the paramedical profession, the nursing profession is in the central place. It is the nursing professional who will devote 100 per cent of their time to the hospital and community by being near the bedside of the patient and taking care of any worst conditions and difficult situations of the patient for the treatment. Nursing professionals give their full life towards patient care.

I wish great success and a visionary future to the Editorial Board of Atthi Nursing College for carrying forward excellent service by sharing the latest techniques, skills and knowledge of the nursing profession to society.

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MBBS., MD (GM)., DM (NEPHRO)., PHD., FRCP
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ANNALS OF ADVANCED NURSING

EFFECTIVENESS OF VIDEO ASSISTED TEACHING REGARDING SPINAL ANESTHESIA ON THE LEVELS OF ANXIETY AND PHYSIOLOGICAL STRESS AMONG PATIENTS UNDERGOING SURGERIES AT A SELECTED HOSPITAL, VELLORE

Dharani. B *, Praba. V, Lydia. G, Jaya Priya. G

ABSTRACT

Introduction: Awareness of spinal anesthesia during the procedure are well known stressor for the surgical patients. Apart from the sedative agents, video assisted teaching regarding spinal anesthesia can be used as a supportive therapy to reduce the levels of anxiety and physiological stress among patients undergoing surgeries under spinal anesthesia. Objectives: (1) To assess the pretest levels of anxiety and physiological stress among patients undergoing surgery in control and experimental group. (2) To determine the effectiveness of video assisted teaching regarding spinal anesthesia on levels of anxiety and physiological stress among patients undergoing surgery in experimental group. (3) To find an association between post-test levels of anxiety and physiological stress among patients undergoing surgery and their selected demographic variables in control and experimental group. Methods: A quantitative, quasi-experimental two group pre-test and post-test design was used among 60 patients using a purposive sampling technique. For data collection, personal data sheet to measure the demographic characteristics of the patients and physiological parameters and Standardized non modified Beck's anxiety inventory were used to measure the anxiety. An appropriate video assisted teaching programme was developed that was administered as an intervention. The intervention was done after four weeks and the effectiveness of the video assisted teaching program was assessed by using the post-test anxiety score and physiological stress. Results: In the experimental group, the pre test anxiety mean score and SD was 37.30 ± 6.82 and after the video assisted teaching the post test mean score and SD was decreased to 30.37 ± 5.26. The mean difference of experimental group was -6.94 and the calculated unpaired ' t' test value of experimental group was 4.40 which is higher than the table value 3.23 was highly significant at $p<0.001$ level.Whereas in controlgroup the pre test anxietymean score and SD was 39.70 ± 6.04 and the post test mean score and SD was 36.70 ± 3.56. The mean difference of control group was -3.0 and the calculated unpaired ' t' test value of Control group was 2.34 which is nearly equal to table value 1.67 which was statistically significant at $p<0.05$. The effectiveness of video assisted teaching on the levels of physiological stressors such as heart rate, respiratory rate, systolic pressure, diastolic pressure, saturation and pain corresponds to a one-wayAnalysis of Variance(ANOVA), evaluating the source of variation between an experimental group and control group. For the between-groups variation, the sum of square (SS) is 1115000 for the experimental group and 1115300.75 for the control group, with 5 degree of freedom in each. The mean sum of square is 223000 for the experimental group and 223060.15 for the control group. The calculated F values are 48.35 for the experimental group and 19.91 for the control group, and the F- critical values are also 2.21 for both. This suggests that there might be significant difference between the group means.

Keywords

Effectiveness, Video assisted teaching, spinal anaesthesia, anxiety, physiological stress, patients, surgeries, hospital

Introduction

Spinal anesthesia is one of the mostly performed regional anesthesia for the following surgeries which are done below the level of umbilicus such as operations in the lower gastro intestinal tract, gynecological operations, urological operations, perineum and genitalia operations and all operation on the leg. The patients contraindicated for spinal anesthesia include clotting disorders, hypovolaemia, patient refusal for the administration, either due to lack of knowledge or preference for general anesthesia, unco-operative patients, such as children, mentally challenged individuals, patients with psychiatric disorder, and patients are suffered by sepsis, septicaemia and neurological disease. (Benjamin., 2010).

The study places a spotlight on the therapeutic potential of video assisted teaching regarding spinal anesthesia, in reducing the need for pharmacological usage and pain perception among patients undergoing spinal anesthesia.This study places a spotlight on the therapeutic potential of video assisted teaching regarding spinal anesthesia, in reducing the need for pharmacological usage and pain perception among patients undergoing spinal anesthesia. In this study, Video Assisted Teaching regarding spinal anesthesia includes (definition, review of anatomy and physiology, advantages and disadvantages of spinal anesthesia, site, per-preparation, position, use of anesthetic drugs and side effect, complication of spinal anesthesia and its management) was used contributing to complementary therapies for managing patient care. Awareness of spinal anesthesia during the procedure are well known stressor for the surgical patients. (Tracy., 2013)

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Objectives

- To assess the pretest levels of anxiety and physiological stress among patients undergoing surgery in control and experimental group.
- To determine the effectiveness of video assisted teaching regarding spinal anesthesia on levels of anxiety and physiological stress among patients undergoing surgery in experimental group.
- To find an association between post-test levels of anxiety and physiological stress among patients undergoing surgery and their selected demographic variables in control and experimental group.

Methodology

The research technique adopted for the study was an evaluative approach using quasi-experimental design. The study plan was based on Roy's Adaptation model. Patients under spinal anesthesia are an open living system, they receive input or stimuli from both the environment and self. In this study the independent variable is video assisted teaching regarding spinal anesthesia and the dependent variable is anxiety and physiological parameters like heart rate, respiratory rate, blood pressure and pain regarding spinal anesthesia. The study was conducted in Sri Narayani Hospital and Research Center, Vellore. The sample of the study was taken from the patients undergoing spinal anesthesia in all OT's consisting of 60 patients (30 patients in experimental group and 30 patients in control group) using non probability purposive sampling technique. The inclusion criteria were patients in the age group 21-80 years who were willing to participate in the study, who can read, write and communicate in Tamil/English and who were available during data collection. The exclusion criteria were patients who had previous history of spinal anesthesia, visual or hearing impairment, mentally challenged, patients under sedation and unstable hemodynamic status.

Description of the tool

Data collection was performed using the anxiety and physiological stress using the standardized tool. The tools used for data collection were:

- Demographic proforma: It was developed by the investigator to understand the sample characteristics. The items included were age, gender, education, nature of work, family income, previous history of co-morbidities and name of the surgery.
- Beck's Anxiety Inventory: A total of 21 items with 4-point rating scale was used to measure the anxiety of patients and were arbitrarily classified into low, moderate and severe anxiety.

Validity and reliability

The content and language validity of the tool was ensured by 6 experts. Test and re-test method was employed to obtain the reliability of the tool on the levels of anxiety and physiological parameters regarding spinal anesthesia.Test-retest reliability for the BAI = 0.75 (Beck, Epstein, Brown, & Steer, 1988).

Data collection procedure and analysis

·The study proposal was submitted to the ethical committee of the institution and it was reviewed by the committee members and experts from different field and finally permission granted. A pilot study was conducted at Sri Sakthi Amma Hospital, Vellore for a period of 7 days and the sample size was 6 patients (3 in the experimental group and 3 in the control group). Informed consent was taken from the participants and they were explained that the data obtained will be used only for research purpose. After obtaining the consent, the purpose of the study was explained to the participants, tools on demographic proforma, Beck's Anxiety Inventory were administered. Video Assisted Teaching (VAT) on spinal anesthesia was given to the experimental group. Post-test was conducted to both the experimental group and control group on the 9th post operative day by using same tools.

Data analysis was done using Statistical Package for Social Sciences (SPSS) version based on the objective and assumption of the study. The sample mean was found to be normally distributed, so the sample size was not calculated and considered to be sufficient for the study. Socio-demographic data were analyzed using frequencies and percentage distribution. The difference between the mean pre-test and post-test score was analyzed by using a paired 't' test to interpret the statistical significance ($p \leq 0.05$).

Results

Table 1:

Frequency and Percentage Distribution of the Selected Population

(N=60)

Demographic variables	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Age				
21-40	8	26.7	10	33.3
41-60	17	56.7	12	40.0
61-80	5	16.7	8	26.7
Gender				
Male	20	66.7	18	60
Female	10	33.3	12	40
Education				
Untutored	0	0.0	3	10.0
Primary education	18	60.0	7	23.3
Secondary education	4	13.3	12	40.0
Graduate	8	26.7	8	26.7
Occupation				
Medical Professional	0	0.0	0	0.0
Skilled worker	9	30.0	7	23.4
Self employee	3	10.0	9	30.0
Government employee	0	0.0	4	13.3
Home maker	9	30.0	6	20.0
Others	9	30.0	4	13.3

Monthly income				
1001 to 5000	0	0.0	0	0.0
5001 to 10000	0	0.0	1	3.3
10001 to 15000	12	40.0	11	36.7
More than 15000	18	60.0	18	60.0
History of co-morbidity				
Yes	17	56.7	14	46.7
No	13	43.3	16	53.3
Name of the surgery				
Hernioplasty	4	13.3	10	33.3
Hemorrhoidectomy	2	6.7	3	10.0
Appendectomy	4	13.3	4	13.3
Fistulectomy	5	16.7	5	16.7
Wound debridement	4	13.3	5	16.7
Amputation	7	23.4	2	6.7
Total knee replacement	3	10.0	0	0.0
DJ Stenting	1	3.3	1	3.3

Data in Table-1 reveals that the distribution of experimental and control group samples according to their age group depicts that in experimental group the majority of them were in age group of 41 to 60 years 56.67%. In control group 40% of them were in the age group of 41 to 60 years.

Distribution of experimental and control group samples according to their gender depicts that in experimental group 66.67% of them were male and 33.33% of them were female. In control group 60% of them were male and 40% of them were female.

Distribution of experimental and control group samples according to their educational qualification depicts that in experimental group 60% of them were completed primary education. In control group 10% of them were untutored, 40% of them were completed secondary education.

Distribution of experimental and control group samples are according to their occupation, depicts that in experimental group 30% of them were skilled workers, home makers and other works. In control group 23.34% of them were skilled workers, 30% of them were self employees.

Distribution of experimental and control group samples are according to their monthly income of the family, depicts that in experimental group 40% of them earning 10001 to 15000 and 60% of them were earning more than 15000. In control group 3.33% of them earning 5001 to 10000, and 60% of them were earning more than 15000.

Distribution of experimental and control group samples are according to their comorbidity, depicts that in experimental group 56.67% of them were having the history of comorbidity such as diabetes mellitus, hypertension, bronchial asthma, cardiac diseases, and 43.33% of them had no history of comorbidity. In control group 46.67% of them were having the history of comorbidity and 53.33% of them had no history of comorbidity.

Distribution of experimental and control group samples are according to their name of the surgery, depicts that in experimental group 13.33%of them were underwent for the hernioplasty surgery, 6.67% of them were underwent for the hemorroidectomy surgery, 13.33% of them were underwent for the appendicectomy surgery, 16.67% of them underwent fistulectomy surgery, 13.33% of them were underwent for wound debridement surgery, 23.34% of them were underwent for amputation surgery, 10% of them were underwent for total knee replacement surgery, and 3.33% of them were underwent for the DJ stenting surgery. In control group 33.33% of them underwent for hernioplasty surgery, 10% of them were underwent for the hemoroidectomy surgery, 13.33% of them were underwent for theappendicectomy surgery, 16.67% of them were underwent for the wound debridement surgery, 6.67% of them were underwent for the amputation surgery, and 3.33% of them were underwent for the DJ stenting surgery.

Distribution of anxiety level among the patients undergoing surgeries under spinal anesthesia

In the experimental group, none of the sample had mild anxiety in pre test and it was increased to 76.67% of mild anxiety in post test, 20% of sample had moderate anxiety in pretest and 80% had severe anxiety it was reduced to 23.33% of moderate anxiety in post test and none of the sample had severe anxiety in post test.

In the control group, none of the sample had mild anxiety in pretest, it was increased to 23.33% of mild anxiety in post test, 36.67% of sample had moderate anxiety in pretest, it was increased to 46.67% of moderated anxiety in post test, 63.33% of sample had severe anxiety in pretest and it was reduced to 30% of severe anxiety in post test.

However, after conducting VAT, 76.67% had mild anxiety, 23.33% had moderate anxiety and none reported severe anxiety regarding spinal anesthesia.

Table 2:

Mean, Mean difference, Standard deviation difference and t-value of Mean Pre-test and Mean Post-test anxiety scores

Anxiety	Pretest		Posttest		Mean difference	SD difference	't' value	p-value
	Mean	SD	Mean	SD				
Experimental group	37.30	6.82	30.37	5.26	6.93	1.08	4.40**	0.001
Control group	39.70	6.04	36.70	3.56	3.0	2.08	2.34*	0.05

The association between the pre-test anxiety score and selected socio-demographic variables

The relationship was determined using the Pearson chi-square test. The outcome revealed there was no significant association found between the pre-test anxiety scores with the socio-demographic variables of experimental and control group.

Discussion

In the present study, the data revealed that the anxiety regarding spinal anesthesia is mildly prevailing in the patients. In experimental group, none of the sample had mild anxiety in pre test and it was increased to 76.67% of mild anxiety in post

test, 20% of sample had moderate anxiety in pretest and 80% had severe anxiety it was reduced to 23.33% of moderate anxiety in post test and none of the sample had severe anxiety in post test. In control group, none of the sample had mild anxiety in pretest, it was increased to 23.33% of mild anxiety in post test, 36.67% of sample had moderate anxiety in pretest, it was increased to 46.67% of moderated anxiety in post test, 63.33% of sample had severe anxiety in pretest and it was reduced to 30% of severe anxiety in post test.

In experimental group that the pre test anxiety mean score and SD was 37.30 ± 6.82 and after the video assisted teaching the post test mean score and SD was decreased to 30.37 ± 5.26. The mean difference of experimental group was -6.94 and the calculated unpaired8 t9 test value of experimental group was 4.40 which is higher than the table value 3.23 was highly significant at p<0.001 level. Whereas in control group the pre test anxiety mean score and SD was 39.70 ± 6.04 and the post test mean score and SD was 36.70 ± 3.56. The mean difference of control group was -3.0 and the calculated unpaired8 t9 test value of Control groupwas 2.34 whichis nearly equal to table value 1.67 which was statistically significant at p< 0.05. It is interpreted that there was significant reducein the levels of anxietyregarding spinal anesthesiaamong patients undergoing surgeries after the video assisted teaching.

The statistical outcome of chi-square analysis of experimental and control group, there is no satistically significant association with the post test levels of anxiety and demographic variables of age in year, gender, educational qualification, occupation, monthly income of the family, history of comorbidity, and name of the surgery are found to be lesser than the table value at p<0.05 levels of significance.

Conclusion

Video Assisted Teaching regarding spinal anesthesia is one of the non- pharmacological, accessible and cost-effective intervention to reduce levels of anxiety and physiological stress among patients undergoing surgeries under spinal anesthesia. The findings of the study reveals that there was an significantly reduced level of anxiety from severe to moderate, moderate to mild and maintained physiological parameters after the effective video assisted teaching.

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EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION THERAPY ON PHYSIOLOGICAL PARAMETERS AMONG ANTENATAL MOTHERS WITH PREGNANCY INDUCED HYPERTENSION ADMITTED IN ANTENATAL WARD IN A SELECTED HOSPITAL, COIMBATORE

Preethi. P *, Sumathi, Silambuselvi

ABSTRACT

Introduction: Pregnancy Induced Hypertension is a progressive disorder affecting multiple system , which is distinguished by the sudden appearance of high blood pressure and other end-organ dysfunction Progressive muscle relaxation therapy is a useful technique to minimize the stress and blood pressure and improves the sleep cycle among the pregnant women with pregnancy induced hypertension. Objectives: (1) To describe the demographic variables of antenatal mothers with pregnancy induced hypertension. (2) To test the effectiveness of Progressive Muscle Relaxation Technique (PMRT) among antenatal mothers with pregnancy induced hypertension. (3) To find the association between pre-test physiological parameters of antenatal mothers and demographic variables of antenatal mothers with pregnancy induced hypertension from a selected hospital at Coimbatore. Methods: A quantitative, true experimental design was used among 60 ante natal mothers using a simple random sampling technique. The study was conducted in Sangeetha Super Specialty hospital and Shree Shivaa Hospital (P) Ltd at Coimbatore. Sixty antenatal mothers (30 experimental and 30 control group) were included in the study who fulfilled the sampling criteria. Written and oral consent was obtained from the subjects. Calibrated Sphygmomanometer and Insomnia Symptom Questionnaire were used to assess blood pressure and sleep quality among antenatal mothers with pregnancy induced hypertension. For data collection, personal data sheet to measure the demographic characteristics of the ante natal mothers and physiological parameters were used to measure the blood pressure and sleep quality. An appropriate progressive muscle relaxation technique was developed that was administered as an intervention. The intervention was done after four weeks and the effectiveness of the progressive muscle relaxation was assessed by using the post-test blood pressure score and sleep quality score. Results: The pre-test was conducted on the first day after obtaining consent from the participants. Based on the sample selection criteria, the second day onwards the Progressive Muscle Relaxation Therapy (PMRT) was given with alternate period of relaxation for 10 seconds and tensing the muscle for 5 seconds among antenatal mothers with pregnancy induced hypertension as measured by the scores on calibrated Sphygmomanometer and Insomnia Symptom Questionnaire (ISQ). Interventional program was provided through individual sessions lasting 15 to 30 min. The interventional program was continued for 14 days. The fourteenth day post test was conducted by using the same tool. The data was collected for a duration of two weeks. The mean physiological parameters in the experimental group differed at pretest and posttest was statistically significant ($t = 12.181$, $p < 0.05$). the mean physiological parameters in the control group differed at pretest and posttest was statistically significant ($t = 9.145$, $p > 0.05$).

Keywords

Effectiveness, Progressive Muscle Relaxation Therapy, Physiological parameters, Ante natal mothers, Pregnancy Induced Hypertension, Ante natal ward, Hospital

Introduction

Pregnancy-induced hypertension (PIH) is a form of high blood pressure in pregnancy. It occurs in about 7 to 10 percent of all pregnancies. Managing pregnancy-induced hypertension (PIH) throughout pregnancy is critical for the mother's and baby's health and well-being. PIH, also known as gestational hypertension, is defined by high blood pressure after the 20th week of pregnancy in women who did not previously have hypertension. Maternal hypertensive disorders occurred in about 25.7 million women in 2023.

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About 10% of pregnancies globally are complicated by hypertensive diseases. If untreated, severe PIH may cause dangerous seizures and even death in the mother and fetus. Because ofthese risks, it may be necessary for the baby to be delivered early, before 37 weeks gestation.

Most cases of pregnancy-induced hypertension are relatively mild and ultimately do not create unresolvable issues within pregnancy. Many of these women can still plan for a natural vaginal birth after 37 weeks. However, pregnancy-induced hypertension can worsen during pregnancy and place both mother and baby in danger.

Early identification of women at risk for pregnancy-induced hypertension may help prevent some complications of the disease. Education about the warning symptoms is also important because early recognition may help women receive treatment and prevent worsening of the disease.Early detection and management are the key to minimizing the risks associated with pregnancy-induced hypertension. That is one of the reasons why Progressive Muscle Relaxation Technique among antenatal mothers is so important.

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Objectives

- To describe the demographic variables of antenatal mothers with pregnancy induced hypertension.
- To test the effectiveness of Progressive Muscle Relaxation Technique (PMRT) among antenatal mothers with pregnancy induced hypertension.
- To find the association between pre-test physiological parameters of antenatal mothers and demographic variables of antenatal mothers with pregnancy induced hypertension from a selected hospital at Coimbatore.

Methodology

The research technique adopted for the study was an evaluative approach using true experimental design. The study plan was based on Imogene King's goal attainment theory. In this study the independent variable is Progressive Muscle Relaxation Technique regarding pregnancy induced hypertension and the dependent variable is physiological parameters like blood pressure and sleep quality. The study was conducted in Sangeetha Super Specialty hospital and Shree Shivaa Hospital (P) Ltd at Coimbatore. Sixty antenatal mothers (30 experimental and 30 control group) were included in the study who fulfilled the sampling criteria. Written and oral consent was obtained from the subjects. Calibrated Sphygmomanometer and Insomnia Symptom Questionnaire were used to assess blood pressure and sleep quality among antenatal mothers with pregnancy induced hypertension.

Description of the tool

- Data collection was done using personal data sheet to measure the demographic characteristics of the ante natal mothers and physiological parameters were used to measure the blood pressure and sleep quality. An appropriate progressive muscle relaxation technique was developed that was administered as an intervention.

Validity and reliability

The content and language validity of the tool was ensured by 7 experts. Test and re-test method was employed to obtain the reliability of the tool on the levels of physiological parameters regarding pregnancy induced hypertension. Test-retest reliability for the physiological parameters = 0.75 (Beck, Epstein, Brown, & Steer, 1988).

Data collection procedure and analysis

The study proposal was submitted to the ethical committee of the institution and it was reviewed by the committee members and experts from different field and finally permission granted.

A pilot study was conducted at Shree Shivaa Hospital (P) Ltd at Coimbatore for a period of 7 days and the sample size was 6 patients. Informed consent was taken from the participants and they were explained that the data obtained will be used only for research purpose. After obtaining the consent, the purpose of the study was explained to the participants, tools on demographic proforma, blood pressure and sleep quality index were administered. Progressive Muscle Relaxation Therapy on pregnancy induced hypertension. Post-test was conducted on the 9th post operative day by using same tools.

Data analysis was done using Statistical Package for Social Sciences (SPSS) version based on the objective and assumption of the study. The sample mean was found to be normally distributed, so the sample size was not calculated and considered to be sufficient for the study. Socio-demographic data were analyzed using frequencies and percentage distribution. The difference between the mean pre-test and post-test score was analyzed by using a paired 't' test to interpret the statistical significance ($p \leq 0.05$).

Results

Table 1:

Frequency and Percentage Distribution of the Selected Population

(N=60)

Demographic variables	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Age				
Less than 20 years	12	40.0	10	33.3
21-30 years	6	20.0	8	26.7
31-40 years	8	26.7	9	30.0
More than 40 years	4	13.3	3	10.0
Education				
Illiterate	3	10.0	4	13.3
12th Std	5	16.7	8	26.7
Diploma/degree	6	53.3	13	43.3
Others	61	20.0	5	16.7
Occupation				
Housewives	11	36.7	14	46.7
Private job	5	16.7	4	13.3
Government job	2	53.3	3	10.0
No work	12	20.0	9	30.0
Monthly income				
Less than Rs. 10,000	12	40.0	14	36.7
Rs. 10,000 to 20,000	9	30.0	7	23.3
Rs. 20,001 to 30,000	7	23.3	4	13.3
More than Rs. 30,000	2	6.7	5	16.7
Dietary pattern				
Vegetarian	4	13.3	2	6.7
Non-vegetarian	26	86.7	28	93.3
Leisure time activities				
No physical activity	13	43.3	9	30.0
Less than 30 minutes	8	26.7	12	40.0
30 minutes to 1 hour	5	16.7	4	13.3
More than 1 hour	4	13.3	5	16.7

Nature of residence				
Rural	13	43.3	14	46.7
Urban	17	56.7	16	53.3
Family History of Hypertension				
Yes	9	30.0	7	23.3
No	21	70.0	23	76.7
Gravida				
Primi gravida	17	56.7	21	70.0
Multi gravida	13	43.3	9	30.0
Number of abortions				
None	15	50.0	14	46.7
Once	8	26.7	6	20.0
Twice	3	10.0	7	23.3
More than twice	4	13.3	3	10.0

Data in Table-1 reveals that the distribution of experimental and control group samples according to their age group depicts that in experimental group the majority of them were in age group of less than 20 years is 40.0%. In control group 33.3% of them were in the age group of less than 20 years.

Distribution of experimental and control group samples according to their education depicts that 53.3% of them were diploma/degree holders in the experimental and control group respectively.

Distribution of experimental and control group samples according to their occupation depicts that in experimental group 40.0% of them belong to others. In the control group 46.7% of them belong to housewives.

Distribution of experimental and control group samples are according to their monthly income, depicts that in the experimental group 40.0% of them earns less than Rs. 10,000. In the control group 36.7% of them earns less than Rs. 10,000.

Distribution of experimental and control group samples are according to their dietary pattern 86.7% were non vegetarians in the experimental group and 93.3% were non vegetarians in the control group.

Distribution of experimental and control group samples are according to their leisure time activities 43.3% did no physical activity in the experimental group and 40% did physical activity for less than 30 minutes in a day.

Distribution of experimental and control group samples are according to their nature of residence 56.7% were from urban area in the experimental group and 53.3% were from urban area in the control group.

Distribution of experimental and control group samples are according to their family history of hypertension 70% had no family history in the experimental group and 76.7% had no family history in the control group.

Distribution of experimental and control group samples are according to their gravida 56.7% belong to primi gravida in the experimental group and 70% belong to primi gravida in the control group.

Distribution of experimental and control group samples according to the number of abortions 50% had no abortions in the experimental group and 46.7% had no abortions in the control group.

Distribution of Physiologic parameters (blood pressure and sleep quality) among the ante natal mothers with pregnancy induced hypertension

In the experimental group, the mean physiological parameters (blood pressure) in the experimental group differed at pretest (5.381) and posttest (3.987) and the mean physiologic parameters (sleep quality) in the experimental group differed at pretest ((7.957) and posttest (4.521) was statistically significant ($t = 12.181$, $p < 0.05$)

In the control group, the mean physiological parameters (blood pressure) in the experimental group differed at pretest (5.823) and posttest (5.943) and the mean physiologic parameters (sleep quality) in the experimental group differed at pretest ((6.622) and posttest (5.799) was statistically significant ($t = 9.145$, $p > 0.05$)

Table 2:

Mean, Mean difference, Standard deviation difference and t-value of Mean Pre-test and Mean Post-test blood pressure and sleep quality scores

Blood Pressure	Pretest		Posttest		Mean difference	SD difference	't' value	p-value
	Mean	SD	Mean	SD				
Experimental group	5.381	1.532	3.987	1.022	1.394	0.510	12.181*	0.05
Control group	5.823	1.702	5.943	1.679	0.120	0.023	9.145	0.05
Sleep quality	**Pretest**		**Posttest**		**Mean difference**	**SD difference**	**'t' value**	**p-value**
	Mean	SD	Mean	SD				
Experimental group	7.957	1.760	4.521	1.312	3.436	0.448	12.181*	0.05
Control group	6.622	1.653	5.799	1.418	0.823	0.235	9.145	0.05

The association between the pre-test anxiety score and selected socio-demographic variables

The relationship was determined using the Pearson chi-square test. The outcome revealed there was significant association found between the pre-test blood pressure scores with the socio-demographic variables of experimental (leisure time activities and gravida) and control (dietary pattern) group. Also, it revealed that was significant association found between the pre-test sleep quality scores with the socio-demographic variables of experimental (family history of hypertension and gravida) and control (family history of hypertension) group.

Discussion

In the present study, The mean physiological parameters in the experimental group differed at pretest and posttest was statistically significant ($t = 12.181$, $p < 0.05$). Hence, it can be interpreted that all these mean differences were found by true

difference and not by chance. The mean physiological parameters in the control group differed at pretest and posttest was statistically significant ($t = 9.145$, $p > 0.05$). Hence, it can be interpreted that all these mean differences were found by chance and not by true difference.

The statistical outcome of chi-square analysis of experimental and control group, there is no satistically significant association with the post test levels of anxiety and demographic variables of age in year, gender, educational qualification, occupation, monthly income of the family, history of comorbidity, and name of the surgery are found to be lesser than the table value at $p<0.05$ levels of significance.

Conclusion

Pregnancy Induced Hypertension is a progressive disorder affecting multiple system, which is distinguished by the sudden appearance of high blood pressure and other end-organ dysfunction Progressive muscle relaxation therapy is a useful technique to minimize the stress and blood pressure and improves the sleep cycle among the pregnant women with pregnancy induced hypertension. This findings of the study reveals that Progressive Muscle Relaxation Technique was effective in improving the mean physiological parameters among antenatal mothers with pregnancy induced hypertension. The mean of physiological parameters differed at pretest and posttest was statistically significant in the experimental group where it is not significant in the control group.

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ANNALS OF ADVANCED NURSING

EFFECTIVENESS OF LAMAZE BREATHING TECHNIQUES ON THE LABOUR PAIN PERCEPTION AMONG PARTURIENT MOTHERS IN SELECTED HOSPITALS AT VELLORE

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ABSTRACT

Introduction: The pain associated with labour has both visceral and somatic origins. Uterine contractions during first stage of labour bring about cervical dilatation and effacement. During each contraction, arteries that supply the myometrium are compressed, causing uterine ischemia. During the first stage of labour, pain impulses are transmitted via the T11 andT12 spinal nerve segments and accessory lower thoracic and upper lumbarsympathetic nerve. These nerve originate in the uterus. Visceral pain describes the predominant discomfort experienced duringthe first stage of labour. It is related to changes in the cervix, distention of the lower uterine segment and uterine ischemia. Somatic pain, a faster, well localized intense, sharp, burning, pricking pain, occurs during the second stage of labour. Somatic pain is associated with stretching and distention of the perineal body to allow for birth. Objectives: (1) To assess the posttest level of labour pain perception among parturient mothers in the experimental group who had Lamaze breathing technique. (2) To assess the posttest level of labour pain perception among parturient mothers in the control group. (3) To find out the effectiveness of Lamaze breathing technique on the labour pain perception among parturient mothers in the experimental group. (4) To find out the association betweenlevel of labour pain perception and their selected demographic variable in the experimental and control group. Methods: A quantitative, quasi-experimental design was used among 60 ante natal mothers using a simple random sampling technique. The study was conducted in Sandhiya hospital and Sivakumar Hospital at Vellore. Sixty parturient mothers (30 experimental and 30 control group) were included in the study who fulfilled the sampling criteria. Written and oral consent was obtained from the subjects. Numerical pain intensity scale were used to assess the level of pain among parturient mothers. For data collection, personal data sheet was used to measure the demographic characteristics of the parturient mothers and pain scale were used to measure the level of pain. An appropriate Lamaze breathing technique was developed that was administered as an intervention. The intervention was done after four weeks and the effectiveness of the Lamaze breathing technique was assessed by using the post-test pain intensity score. Results: The pre-test was conducted on the first day after obtaining consent from the participants. Based on the sample selection criteria, the second day onwards the Lamaze breathing technique was given among parturient mothers as measured by the scores on pain intensity scale. Interventional program was provided through individual sessions lasting 15 to 30 min. The interventional program was continued for 14 days. The fourteenth day post test was conducted by using the same tool. The data was collected for a duration of two weeks. The mean pain intensity in the experimental group differed at pretest and posttest was statistically significant ($t = 6.42$, $p < 0.05$).

Keywords

Effectiveness, Lamaze breathing technique, Labour pain, Parturient mothers, Hospital

Introduction

The pain associated with labour has both visceral and somatic origins. Uterine contractions during first stage of labour bring about cervical dilatation and effacement. During each contraction, arteries that supply the myometrium are compressed, causing uterine ischemia. During the first stage of labour, pain impulses are transmitted via the T11 andT12 spinal nerve segments and accessory lower thoracic and upper lumbarsympathetic nerve. These nerve originate in the uterus.

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Pain that women experience during labour is affected by many factors like physical factors and psychological factors. Physical factors include duration and intensity of labour, position of fetus, pelvic size and shape, maternal fatigue and induction of labour. Psychological factors include anxiety, previous experience of childbirth and support system.

During labour, the sympathetic nervous system responds to pain with increased levels of catecholamine (epinephrine and norepinephrine-biologically active substances that produce a marked effect on the nervous and cardiovascular system, metabolic rate, temperature and smooth muscle).There is a rise in blood pressure and heart rate. Increased maternal oxygen consumption results in an altered respiratory pattern that may produce hyperventilation and respiratory alkalosis. In order to avoid labour pain most women in labour request pain relief.

One of the non-pharmacological intervention is “Lamaze child birth technique”. Lamaze method includes breathing, movement, and massage.

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Objectives

- To assess the posttest level of labour pain perception among parturient mothers in the experimental group who had Lamaze breathing technique.
- To assess the posttest level of labour pain perception among parturient mothers in the control group.
- To find out the effectiveness of Lamaze breathing technique on the labour pain perception among parturient mothers in the experimental group.
- To find out the association betweenlevel of labour pain perception and their selected demographic variable in the experimental and control group

Methodology

The research technique adopted for the study was an evaluative approach using quasi-experimental design. The study plan was based on Sister Callista Roy's adaptation theory. In this study the independent variable is Lamaze Breathing Technique regarding pain among parturient mothers and the dependent variable is pain. The study was conducted in Sandhiya hospital and Sivakumar hospital at Vellore. Sixty parturient mothers (30 experimental and 30 control group) were included in the study who fulfilled the sampling criteria. Written and oral consent was obtained from the subjects. Pain intensity scale were used to assess pain among parturient mothers.

Description of the tool

- Data collection was done using personal data sheet to measure the demographic characteristics of the parturient mothers and pain intensity scale were used to measure the pain among parturient mothers. An appropriate Lamaze breathing technique was developed that was administered as an intervention.

Validity and reliability

The content and language validity of the tool was ensured by 7 experts. Test and re-test method was employed to obtain the reliability of the tool on the levels of pain regarding parturient mothers. Test-retest reliability for the pain intensity = 0.87 (Beck, Epstein, Brown, & Steer, 1988).

Data collection procedure and analysis

The study proposal was submitted to the ethical committee of the institution and it was reviewed by the committee members and experts from different field and finally permission granted.

A pilot study was conducted at Sandhiya hospital, Vellore for a period of 7 days and the sample size was 6 parturient mothers (3 from the experimental group and 3 from the control group).

Informed consent was taken from the participants and they were explained that the data obtained will be used only for research purpose. After obtaining the consent, the purpose of the study was explained to the participants, tools on demographic proforma, and pain intensity scale were administered. Lamaze breathing Technique on parturient mothers. Post-test was conducted on the 9th day by using same tools.

Data analysis was done using Statistical Package for Social Sciences (SPSS) version based on the objective and assumption of the study. The sample mean was found to be normally distributed, so the sample size was not calculated and considered to be sufficient for the study. Socio-demographic data were analyzed using frequencies and percentage distribution. The difference between the mean pre-test and post-test score was analyzed by using a paired 't' test to interpret the statistical significance ($p \leq 0.05$).

Results

Table 1:

Frequency and Percentage Distribution of the Selected Population

(N=60)

Demographic variables	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Age				
18 to 23 years	15	50.0	17	56.7
24-29 years	13	43.3	8	26.7
30-35 years	2	6.7	5	16.6
Education				
No formal education	1	3.3	0	0.0
Primary education	4	13.3	8	26.7
Secondary education	12	40.0	4	13.3
Higher secondary education	6	20.0	5	16.7
Diploma/Graduate	7	23.4	13	43.3
Work status				
Homemaker	14	46.7	13	43.3
Working	16	53.3	17	56.7
Type of work				
Secondary	8	26.7	6	20.0
Moderate	21	70.0	22	73.3
Heavy	1	3.3	2	6.7
Religion				
Hindu	15	50.0	20	66.7
Christian	7	23.3	6	20.0
Muslim	8	26.7	4	13.3
Type of family				
Joint	14	46.7	10	33.3
Nuclear	16	53.3	20	66.7
Area of residence				
Urban	20	66.7	18	60.0
Rural	10	33.3	12	40.0
Type of marriage				
Non consanguineous	22	73.3	25	83.3
Consanguineous	8	26.7	5	16.7
Family income per month				
Rs. 3000/-	0	0.0	0	0.0
Rs. 3001 to 5000	4	13.3	6	20.0
Rs. 5001 to 8000	9	30.0	9	30.0
More than Rs. 8000	17	56.7	15	50.0

Clinical variables	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Gestational Age				
38 weeks	4	13.3	5	16.7
39 weeks	6	20.0	6	20.0
40 weeks	20	66.7	19	63.3
Gravida				
One	17	56.7	20	66.7
Two	11	36.7	7	23.3
Three	2	6.6	3	10.0
More than 3	0	0.0	0	0.0
Para				
0	18	60.0	22	73.3
1	10	33.3	5	16.7
2	2	6.7	3	10.0
More than 2	0	0.0	0	0.0
Onset of labour				
Spontaneous	25	83.3	20	66.7
Induced	5	16.7	10	33.3

Data in Table-1 reveals that the distribution of experimental and control group samples according to their age group depicts that in experimental group the majority of them were in age group of 18-23 years is 50.0%. In control group 56.7% of them were in the age group of 18-23 years.

Distribution of experimental and control group samples according to their education depicts that 40.0% of them completed secondary education in the experimental and 43.3% of them completed diploma/graduate in the control group respectively.

Distribution of experimental and control group samples according to their work status depicts that in experimental group 53.3% of them and 56.7% in the control group 46.7% belong to working category.

Distribution of experimental and control group samples according to type of work depicts that in the experimental group 70.0% and 73.3% in the control group belong to moderate workers.

Distribution of experimental and control group samples are according to their religion depicts that in the experimental group 50.0% and 66.7% in the control group belong to hindu religion.

Distribution of experimental and control group samples are according to type of family depicts that 53.3% in the experimental group and 66.7% in the control group belong to nuclear family.

Distribution of experimental and control group samples are according to area of residence depicts that 66.7% in the experimental group and 60.0% in the control group belong to urban residence.

Distribution of experimental and control group samples are according to type of marriage depicts that 73.3% in the experimental group and 83.3% in the control group belong to con-consanguineous category of marriage.

Distribution of experimental and control group samples are according to monthly family income depicts that 56.7% in the experimental group and 50.0% in the control group earns more than Rs. 8000 per month as salary.

Distribution of experimental and control group samples according to the gestational age 66.7% in the experimental group and 63.3% in the control group belong to 40 weeks of gestation.

Distribution of experimental and control group samples according to the gravida 56.7% in the experimental group and 66.7% in the control group belong to gravida one.

Distribution of experimental and control group samples according to the para 60.0% in the experimental group and 73.3% in the control group belong to zero para.

Distribution of experimental and control group samples according to the onset of labour 83.3% in the experimental group and 66.7% in the control group belong to spontaneous category of labour onset.

Distribution of pain perception among parturient mothers at 4cm, 6 cm and 8 cm cervical dilatation

At 4 cm cervical dilatation in the experimental group all parturient mothers (100%) had mild pain perception whereas in the control group 15 (50%) parturient mothers had moderate pain perception and 15 parturient mothers had mild pain. None of them had reported severe pain perception both in the experimental group and control group.

At 6 cm cervical dilatation in the experimental group 8 mothers (26.66%) had mild pain perception, 19 mothers (63.33%) had moderate pain and 3 mothers (10%) had severe pain perception and whereas in the control group 7 (23.33%) parturient mothers had moderate pain perception and 23 (76.66%) parturient mothers had severe pain perception.

At 8 cm cervical dilatation in the experimental group 5 mothers (16.67%) had mild pain perception, 21 mothers (70%) had moderate pain and 4 mothers (13.33%) had severe pain perception and whereas in the control group 10 (33.33%) parturient mothers had moderate pain perception and 20 (66.66%) parturient mothers had severe pain perception.

Table 2:

Mean, Mean difference, Standard deviation difference and t-value of Mean Pre-test and Mean Post-test pain intensity scores

S. No.	Cervical dilatation	Group	Posttest		't' value	p-value
			MD	SD		
1	4 cm	Experimental group	2.03	1.01	6.66*	**0.05**
		Control group				
2	6 cm	Experimental group	0.84	1.03	6.42*	0.05
		Control group				
3	8 cm	Experimental group	1.00	0.50	5.95*	0.05
		Control group				

The association between the pre-test anxiety score and selected socio-demographic variables

The relationship was determined using the Pearson chi-square test. The outcome revealed there was no significant association found between the pre-test pain scores with the socio-demographic variables of experimental and control group.

Discussion

In the present study, the score comparison of posttest level of pain perception in experimental group and control group revealed that the Lamaze breathing technique was effective in reducing the parturient mothers pain perception at 4cm [t (6.66), p (0.05)], 6cm [t (6.42), p (0.05)] and 8cm [t (5.95), p (0.05)] cervical dilatation.

Conclusion

As the labour progress increased, the pain intensity also increased. The study proved that Lamaze breathing techniques was effective to reduce the pain perception among the parturient mothers. Parturient mothers were highly, satisfied with Lamaze breathing techniques.

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Conflict of interest: None declared

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ANNALS OF ADVANCED NURSING

EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ON PREVENTION OF SELECTED COMPLICATIONS AMONG CLIENTS UNDERGONE CORONARY ARTERY BYPASS GRAFTING

Ishwarya. A *, Charmini Jebapriya, Littreshia Balin. J, Arunkumar. S

ABSTRACT

Introduction: Coronary heart disease is the most common indication among cardiovascular diseases (CVD) and a major cause of mortality and morbidity. According to global burden of disease study estimates, nearly 24.8% of all deaths in India are attributable to CVD. Objectives of the current research study were to establish a correlation between varied risk factors and coronary artery disease (CAD), to determine angiographic characteristics individually in patients with multiple risk factors and to evaluate number of vessels involved in CAD. Coronary artery disease (CAD) is observed to be occurring in Indians that are usually <40 years of age and follows a malignant course.In India, mortality attributable to CVD was increased by 103% in men and by 90% in women. The complications of CABG include deep vein thrombosis, wound infection, graft failure, renal failure, postoperative atrial fibrillation, and death. Objectives: (1) To assess the pre-test and post-test level of knowledge regarding prevention of selected complications among clients undergone Coronary Artery Bypass Graft surgery. (2) To evaluate the effectiveness of video assisted teaching programme on knowledge regarding prevention of selected complications among clients undergone Coronary Artery Bypass Graft surgery. (3) To find out the association between pre-test level of knowledge among clients undergone Coronary Artery Bypass Graft with their selected demographic variables. Methods: A quantitative, pre-experimental one group pre-test and post-test design was used among 40 CABG patients using a purposive sampling technique. For data collection, personal data sheet to measure the demographic characteristics of the CABG patients and knowledge questionnaire to measure the complications of CABG. An appropriate video assisted teaching programme was developed that was administered as an intervention. The researcher introduced herself to samples and demographic data was collected from each samples from Karpagam hospital at Coimbatore. Confidentially was maintained for each sample while collection data. The duration of study was 4 weeks. We have divided into 4 groups each group 10 members totally 40. Pre – test was conducted by using self – administration questionnaire for knowledge 1st day and intervention given by using video assisted teaching programme and along with explaining regarding prevention of selected complications class conducted 45 minutes. After 5 days the level of knowledge was assessed by using same tools. Results: The study reveals that, the mean pre-test score was 14.7 with standard deviation 4.8 and the mean post test score was 23.2 with standard deviation 2.8 and the mean difference was 8.5. The obtained "T" value was 17.2 significant at $p < 0.05$ level and table value 2.11. It was inferred that video assistedteaching was effectivein improving the client's knowledge regarding prevention of selected complication among clients undergone CABG surgery.

Keywords

Effectiveness, Video Assisted Teaching Programme, Knowledge, Prevention of CABG complications

Introduction

Coronary heart disease is the most common indication among cardiovascular diseases (CVD) and a major cause of mortality and morbidity. According to global burden of disease study estimates, nearly 24.8% of all deaths in India are attributable to CVD. Objectives of the current research study were to establish a correlation between varied risk factors and coronary artery disease (CAD), to determine angiographic characteristics individually in patients with multiple risk factors and to evaluate number of vessels involved in CAD.

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Coronary artery disease(CAD) is observed to be occurring in Indians that are usually <40 years of age and follows a malignant course. In India, mortality attributable to CVD was increased by 103% in men and by 90% in women. The complications of CABG include deep vein thrombosis, wound infection, graft failure, renal failure, postoperative atrial fibrillation, and death.

CABG may be associated with several complications. Manipulation of ascending aorta is one of the most important factors associated with embolism. Partial clamping of ascending aorta for anastomosing saphenous vein on aorta leads to create 28% of embolisms during operation. Acute renal failure occurs on more than 40% of patients and leads to dialysis in 1% of patients.

In 2023 an estimate the complications of Coronary Artery Bypass Surgery incidence density were 1.76 per 1000 post-operative days in Cardiac department, in which the highest was 3.87 per 1000 post-operative days in Cardiac Intensive care unit and the lowest was 0.18 per 1000 post-operative days in cardiac ward.

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Objectives

- To assess the pre-test and post-test level of knowledge regarding prevention of selected complications among clients undergone Coronary Artery Bypass Graft surgery.
- To evaluate the effectiveness of video assisted teaching programme on knowledge regarding prevention of selected complications among clients undergone Coronary Artery Bypass Graft surgery.
- To find out the association between pre-test level of knowledge among clients undergone Coronary Artery Bypass Graft with their selected demographic variables.

Methodology

The research technique adopted for the study was an evaluative approach using pre-experimental design. The study plan was based on Modified J.W. Kenny Open System model. Open system theory is useful in breaking the whole process into sequential tasks to ensure goal realization. A quantitative, pre-experimental one group pre-test and post-test design was used among 40 CABG patients using a purposive sampling technique. For data collection, personal data sheet to measure the demographic characteristics of the CABG patients and knowledge questionnaire to measure the complications of CABG. An appropriate video assisted teaching programme was developed that was administered as an intervention. The researcher introduced herself to samples and demographic data was collected from each samples from Karpagam hospital at Coimbatore. Confidentially was maintained for each sample while collection data. The duration of study was 4 weeks. . Pre-test was conducted by using self - administration questionnaire for knowledge 1st day and intervention given by using video assisted teaching programme and along with explaining regarding prevention of selected complications class conducted 45 minutes. After 5 days the level of knowledge was assessed by using same tools.

Description of the tool

The tools used for data collection were:

- Demographic proforma: It was developed by the investigator to understand the sample characteristics. The items included were age in years, sex, religion, marital status, body build, education qualification, occupation, personal habits, dietary pattern, history of previous disease condition, reason for CABG surgery.
- Knowledge Questionnaire: A total of 30 items with 4-options MCQ's was used to measure the knowledge of patients and were arbitrarily classified into inadequate, moderate and adequate.

Validity and reliability

The content and language validity of the tool was ensured by 5 experts. Test and re-test method was employed to obtain the reliability of the tool on the levels of knowledge regarding prevention of selected complications among clients undergone Coronary Artery Bypass Graft surgery. Test-retest reliability for the knowledge questionnaire = 0.80 (Beck, Epstein, Brown, & Steer, 1988).

Data collection procedure and analysis

The study proposal was submitted to the ethical committee of the institution and it was reviewed by the committee members and experts from different field and finally permission granted. A pilot study was conducted at JP Hospital, Coimbatore for a period of 7 days and the sample size was 4 CABG patients. Informed consent was taken from the participants and they were explained that the data obtained will be used only for research purpose. After obtaining the consent, the purpose of the study was explained to the participants, tools on demographic proforma, Knowledge Questionnaire were administered. Video Assisted Teaching (VAT) on prevention of selected complications among clients undergone Coronary Artery Bypass Graft surgery. Pre-test was conducted by using self - administration questionnaire for knowledge 1st day and intervention given by using video assisted teaching programme and along with explaining regarding prevention of selected complications class conducted 45 minutes. After 5 days the level of knowledge was assessed by using same tools.

Data analysis was done using Statistical Package for Social Sciences (SPSS) version based on the objective and assumption of the study. The sample mean was found to be normally distributed, so the sample size was not calculated and considered to be sufficient for the study. Socio-demographic data were analyzed using frequencies and percentage distribution. The difference between the mean pre-test and post-test score was analyzed by using a paired 't' test to interpret the statistical significance ($p \leq 0.05$).

Results

Table 1:

Frequency and Percentage Distribution of the Selected Population

(N=40)

Demographic variables	Experimental group	
	Frequency	Percentage
Age		
29-41	0	0.0
42-51	4	10.0
52-61	22	55.0
Above 61	14	35.0
Gender		
Male	23	57.5
Female	17	42.5
Religion		
Hindu	18	45.0
Christian	16	40.0
Muslim	6	15.0
Others	0	0.0

Demographic variables	Experimental group	
	Frequency	Percentage
Marital status		
Married	38	95.0
Unmarried	0	0.0
Divorce	2	5.0
Widow	0	0.0
Body built		
Thin	1	2.5
Moderate	9	22.5
Overweight	23	57.5
Obese	7	17.5
Education		
Illiterate	0	0.0
Primary	16	40.0
Secondary	15	37.5
Higher secondary	6	15.0
Graduate	3	7.5
Occupation		
Unemployed	4	10.0
Private employee	36	90.0
Government employee	0	0.0
Retired person	0	0.0
Family income		
Less than Rs. 5000	3	7.5
Rs. 5000 to 10000	3	7.5
Rs. 10001 to 20000	20	50.0
More than Rs. 20000	14	35.0
Type of family		
Nuclear family	29	72.5
Joint family	11	27.5
Personal habits		
Tobacco chewing	8	20.0
Smoking	11	27.5
Alcoholism	14	35.0
None	7	17.5
Dietary Pattern		
Vegetarian	18	45.0
Non vegetarian	22	55.0
Hereditary disease of family members		
Heart failure	9	22.5
Arrhythmia	11	27.5
Congenital heart disease	5	12.5
Atherosclerosis	15	37.5
History of any co-morbid disease		
Hypertension	19	47.5
Diabetes mellitus	18	45.0
Any other disease	0	0.0
None	5	7.5
Previous history of hospitalization		
Yes	21	52.5
No	19	47.5
Number of days hospitalized		
One day	7	17.5
Three days	8	20.0
Five days	18	45.0
One week	7	17.5
Reason for CABG surgery		
Coronary artery disease	17	42.5
Myocardial infarction	9	22.5
Cyanotic and acyanotic heart disease	11	27.5
Angina pectoris	3	7.5
Duration of illness		
One year	0	0.0
Two years	2	5.0
Three years	31	77.5
More than three years	7	17.5
Symptoms experienced		
Chest pain, fatigue, breathing difficulty	16	40.0
Nausea, Vomiting, Breathing difficulty	0	0.0
Chest pain, sweating, shortness of breath	24	60.0
Headache, dizziness, nausea	0	0.0
Level of Pain		
Mild	0	0.0
Moderate	18	45.0
Severe	22	55.0
Very severe	0	0.0

Data in Table-1 reveals that the distribution of CABG patients are as follows: majority (55.0%) were in the age group of 52-61, males (57.5%), Hindu (45.0%), married (95.0%), overweight (57.5%), primary schoolers (40.0%), private employees (90.0%), earns between Rs. 10,001 to 20,000 (50.0%), nuclear family (72.5%), alcoholics (35.0%), non vegetarian (55.0%), had hereditary disease of atherosclerosis (37.5%), had a history of hypertension as co-morbid disease (47.5%), had previous history of hospitalization (52.5%), hospitalized for 5 days (45.0%), hails the reason for CABG surgery as coronary heart disease (42.5%), had the illness for more than 3 years (77.5%), had complaints of chest pain, sweating & shortness of breath (60.0%) and had severe pain (55.0%).

Distribution of knowledge level regarding the prevention of selected complications among patients who underwent CABG surgery

During pretest, out of 40 subjects, 15 (37.5%) had moderate knowledge, 25 (62.5%) had inadequate knowledge, and none of them had adequate knowledge. Whereas in the post test, out of 40 subjects, 33 (82.5%) had adequate knowledge,7 (17.5%) had moderate knowledge, and none of them had inadequate knowledge.

Table 2:

Mean, Mean difference, Standard deviation and t-value of Mean Pre-test and Mean Post-test knowledge scores

Knowledge	Mean	Mean difference	SD	't' value	p-value
Pretest	14.7	8.5	4.8	17.2* (t=2.11)	0.05
Posttest	23.2		2.8		

The study reveals that, the mean pre-test score was 14.7 with standarddeviation 4.8 and the mean post test score was 23.2 with standard deviation 2.8 and the mean difference was 8.5. The obtained "t" value was 17.2 significant at $p < 0.05$ level and table value 2.11 It was inferred that video assisted teaching was effective in improving the client knowledge regarding prevention of selected complication among clients undergone CABG surgery.

The association between the pre-test knowledge score and selected socio-demographic variables

The relationship was determined using the Pearson chi-square test. The outcome revealed there was no significant association found between the pre-test anxiety scores with the socio-demographic variables of CABG patients.

Discussion

In the present study, the data revealed that the knowledge regarding prevention of selected complication among clients undergone CABG surgery. During pretest out of 40 clients 15 (37.5%) had moderate knowledge, 25 (62.5%) had

inadequate knowledge and none of them had adequateknowledge. Whereas in the post-testout of 40 clients 33 (82.5%) had adequate knowledge, 7 (17.5%) had moderate knowledgeand none of them had inadequate knowledge.

The study reveals that, the mean pre-test score was 14.7 with standarddeviation 4.8 and the mean post test score was 23.2 with standard deviation 2.8 and the mean difference was 8.5. The obtained "t" value was 17.2 significant at $p < 0.05$ level and table value 2.11 It was inferred that video assisted teaching was effective in improving the client knowledge regarding prevention of selected complication among clients undergone CABG surgery.

The relationship was determined using the Pearson chi-square test. The outcome revealed there was no significant association found between the pre-test anxiety scores with the socio-demographic variables of CABG patients.

Conclusion

The study inferred that video assisted teaching programme regarding prevention of selected complications among patients who underwent CABG surgery were effective in improving the knowledge among CABG patients.

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ANNALS OF ADVANCED NURSING

EFFECTIVENESS OF CHILD-TO-CHILD METHOD ON KNOWLEDGE REGARDING ORAL HYGIENE AMONG SCHOOL CHILDREN AT SELECTED SCHOOLS, KRISHNAGIRI DISTRICT

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ABSTRACT

Introduction: Every tooth in a man's head is more valuable than a diamond. Oral health is an integral component of general health. Oral hygiene refers to keeping the mouth, and particularly the teeth, clean and free of dental plaque. Considerable population of children in the developing nations is being affected by tooth decay andmost of the time; their proper treatment is given the last priority owing to limited access to oral health services. The high prevalence of dental caries has also caused increase in the absenteeism of school hours and loss of working hours and economy for parents. Objectives: (1) To assess the levels of knowledge on oral hygiene among school children at selected schools in experimental and control group. (2) To determine the effectiveness of child-to-child method among school children in experimental group. (3) To find out the association betweenpre-test level of oral hygiene among school children with their selected demographic variables in experimental and control group. Methods: A quantitative, true experimental pre-test post-test control group design was used among 60 school children using a simple random sampling technique. For data collection, personal data sheet to measure the demographic characteristics of the school children and knowledge questionnaire to measure the knowledge regarding oral hygiene. An appropriate child-to-child method was developed that was administered as an intervention. The researcher introduced herself to samples and demographic data was collected from each samples from Government higher secondary school, Kurubarapalli and Government public school, Naranikuppam, Krisnagiri district. Confidentially was maintained for each sample while collection data. The duration of study was 4 weeks. Formal permission was obtained from the school head master to conduct the study. Verbal consent of the school children (9-10 years) to participate in the study was obtained. First two days was used to select the sample for both experimental and control group. On the 3rd day in government public school (Naranikuppam), samples were gathered by the investigator in a groupand a self-administered questionnaire was distributed at a same time to the samplesto elicit the demographic data and to assess the pre-test levelof knowledge regardingoral hygiene. The students were instructed to fill in the questionnaire on their own, without copying from each other. After 45 minutes the questionnaire was collected from the samples. The child to child method were implemented using flash cards to the experimental group samples. Results: The study elicits the comparison of mean and standard deviation of pre and post test scores among experimental and control group. In experimental group the mean percentage betweenthe pre-test and post-test regarding oral hygiene was 46.69 and in control group the mean difference between the pre-test and post-test regarding oral hygiene was 3.85.

Keywords

Effectiveness, Child-to-child method, Knowledge, Oral hygiene, School children, School

Introduction

Every tooth in a man's head is more valuable than a diamond. Oral health is an integral component of general health. Oral hygiene refers to keeping the mouth, and particularly the teeth, clean and free of dental plaque. Considerable population of children in the developing nations is being affected by tooth decay and most of the time; their proper treatment is given the last priority owing to limited access to oral health services. The high prevalence of dental caries has also caused increase in the absenteeism of school hours and loss of working hours.

Age is an important factor for maintaining oral hygiene, as increasing the age children can realize the importance of care of teeth and they emphasize on oral hygiene maintenance.

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Dental caries is the major oral healthcondition in developing countries, affecting 60-90% of the school children and vast majority of adults. In India, the prevalence of dental caries is reported to be 50-60% as evidenced by the study conducted by Swathy Chandran on effectiveness of child to child approach on knowledge regarding practices of oral hygiene among school going children at selected schools of Bangalore.

Oral disease is a significant burden to all countries of the world. The WHO approach to improvement of oral health globally is formulated by the World Health Assembly 2007 Resolution "Oral health: action plan for promotion and integrated prevention".

Growing children need proper guidance for healthy growth, upkeep and hygiene of their teeth. Oral health promotion through schools is recommended by the World Health Organization (WHO) for improving knowledge, attitude, and behaviour related to oral health and for prevention and control of dental diseases among school children.

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Objectives

- To assess the levels of knowledge on oral hygiene among school children at selected schools in experimental and control group.
- To determine the effectiveness of child-to-child method among school children in experimental group.
- To find out the association between pre-test level of oral hygiene among school children with their selected demographic variables in experimental and control group.

Methodology

The research technique adopted for the study was an evaluative approach using true experimental design. The study plan was based on Modified J.W. Kenny Open System model. Open system theory is useful in breaking the whole process into sequential tasks to ensure goal realization. A quantitative, true experimental pre-test post-test control group design was used among 60 school children using a simple random sampling technique. For data collection, personal data sheet to measure the demographic characteristics of the school children and knowledge questionnaire to measure the knowledge regarding oral hygiene. An appropriate child-to-child method was developed that was administered as an intervention. The researcher introduced herself to samples and demographic data was collected from each samples from Government higher secondary school, Kurubarapalli and Government public school, Naranikuppam, Krisnagiri district. Confidentially was maintained for each sample while collection data. The duration of study was 4 weeks. Formal permission was obtained from the school head master to conduct the study. Verbal consent of the school children (9-10 years) to participate in the study was obtained. First two days was used to select the sample for both experimental and control group. On the 3rd day in government public school (Naranikuppam), samples were gathered by the investigator in a groupand a self-administered questionnaire was distributed at a same time to the samples to elicit the demographic data and to assess the pre-test levelof knowledge regardingoral hygiene. The students were instructed to fill in the questionnaire on their own, without copying from each other. After 45 minutes the questionnaire was collected from the samples. The child to child method were implemented using flash cards to the experimental group samples.

Description of the tool

The tools used for data collection were:

- Demographic proforma: It was developed by the investigator to understand the sample characteristics. The items included were age in years, sex, religion, educational status of father, educational status of mother, occupation of father, occupation of mother, monthly family income, number of siblings, area of residence and previous knowledge regarding oral hygiene, previous dentist visit history.
- Knowledge Questionnaire: A total of 13 items with 4-options MCQ's was used to measure the knowledge of patients and were arbitrarily classified into inadequate, moderate and adequate.

Validity and reliability

The content and language validity of the tool was ensured by 5 experts. Test and re-test method was employed to obtain the reliability of the tool on the levels of knowledge regarding oral hygiene among school children. Test-retest reliability for the knowledge questionnaire = 0.90 (Beck, Epstein, Brown, & Steer, 1988).

Data collection procedure and analysis

The study proposal was submitted to the ethical committee of the institution and it was reviewed by the committee members and experts from different field and finally permission granted. A pilot study was conducted at government primary school, Kurubarapalli for a period of 7 days and the sample size was 10 school children. After obtaining the consent, the purpose of the study was explained to the participants, tools on demographic proforma, Knowledge Questionnaire were administered. Child-to-child method on oral hygiene among school children was initiated. The students were instructed to fill in the questionnaire on their own, without copying from each other. After 45 minutes the questionnaire was collected from the samples. The child to child method were implemented using flash cards to the experimental group samples.

Data analysis was done using Statistical Package for Social Sciences (SPSS) version based on the objective and assumption of the study. The sample mean was found to be normally distributed, so the sample size was not calculated and considered to be sufficient for the study. Socio-demographic data were analyzed using frequencies and percentage distribution. The difference between the mean pre-test and post-test score was analyzed by using a paired 't' test to interpret the statistical significance ($p \leq 0.05$).

Results

Table 1:

Frequency and Percentage Distribution of the Selected Population

(N=60)

Demographic variables	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Age				
9 years	16	53.3	18	60.0
10 years	14	46.7	12	40.0
Sex				
Male	17	56.7	16	53.3
Female	13	43.3	14	46.7

Demographic variables	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Religion				
Hindu	18	60.0	27	90.0
Christian	8	26.7	2	6.7
Muslim	4	13.3	1	3.3
Education status of father				
Iliterate	0	0.0	0	0.0
Primary education	4	13.3	3	10.0
Secondary education	15	50.0	25	83.3
Graduate	11	36.7	2	6.7
Education status of mother				
Iliterate	3	10.0	0	0.0
Primary education	3	10.0	2	6.7
Secondary education	22	73.3	18	60.0
Graduate	2	6.7	10	33.3
Father's occupation				
Government	4	13.3	7	23.3
Private	9	30.0	11	36.7
Business	7	23.3	9	30.0
Farmer	10	33.4	3	10.0
Mother's occupation				
Government	2	6.7	0	0.0
Private	9	30.0	5	16.7
Business	0	0.0	16	53.3
Farmer	2	6.7	0	0.0
Homemaker	17	56.6	9	30.0
Monthly family income				
Below Rs. 10,000	10	33.3	10	33.3
Rs. 10,000 to 15,000	3	10.0	5	16.7
Rs. 15,001 to 20,000	2	6.7	2	6.7
Above Rs. 20,000	15	50.0	13	43.3
Number of siblings				
Nil	0	0.0	1	3.3
One	3	10.0	20	66.7
Two	13	43.3	7	23.3
More than 2	14	46.7	2	6.7
Area of residence				
Urban	2	6.7	3	10.0
Rural	28	93.3	27	90.0
Previous knowledge				
Yes	30	100.0	30	100.0
No	0	0.0	0	0.0
Dentist visit				
Yes	5	16.7	8	26.7
No	25	83.3	22	73.3

Data in Table-1 reveals that the distribution of experimental and control group samples according to their age group depicts that in experimental group the majority of them were in age group of 9 years is 53.3%. In control group 60.0% of them were in the age group of 9 years.

Distribution of experimental and control group samples according to their gender depicts that 56.7% of them were male in the experimental and 53.3% of them were females in the control group.

Distribution of experimental and control group samples according to their religion depicts that 60.0% of them were Hindu in the experimental and 90.0% of them were Hindu in the control group.

Distribution of experimental and control group samples according to education status of father depicts that 50.0% of them did secondary education in the experimental and 83.3% of them did secondary education in the control group.

Distribution of experimental and control group samples according to education status of mother depicts that 73.3% of them did secondary education in the experimental and 60.0% of them did secondary education in the control group.

Distribution of experimental and control group samples according to father's occupation depicts that 33.4% of them are farmers in the experimental and 36.7% of them are private job holders in the control group.

Distribution of experimental and control group samples according to mother's occupation depicts that 56.6% of them are homemakers in the experimental and 53.3% of them are businesswoman in the control group.

Distribution of experimental and control group samples according to monthly family income depicts that 50.0% of them earn more than Rs. 20,000 in the experimental and 43.3% of them in the control group respectively.

Distribution of experimental and control group samples according to number of siblings depicts that 46.7% of them had more than 2 in the experimental and 66.7% of them had only one in the control group.

Distribution of experimental and control group samples according to area of residence depicts that 93.3% of them reside at rural in the experimental and 90.0% of them reside in the control group.

Distribution of experimental and control group samples according to previous knowledge depicts that all 100.0% of them had knowledge in the experimental and control group respectively.

Distribution of experimental and control group samples according to previous knowledge depicts that 83.3% of them visited dentist in the experimental and 73.3% of them in the control group respectively.

Distribution of knowledge level regarding oral hygiene among school children

In the experimental group in the pre-test most of the 22(73%) children had inadequate knowledge, 8 (27%) of the children had moderately adequate knowledge and none of them had adequate knowledge regarding oral hygiene. In post-test most of the 18 (60%) children had adequate knowledge, 12 (40%) children had moderately adequate knowledge and none of the childrenhad inadequate knowledge regarding oral hygiene. Among control group,in pre-test most 17 (57%)of the children had inadequate knowledge, 13 (43%) childrenhad moderately adequateknowledge and none of them had adequate knowledge regarding oral hygiene. In post-test 12 (40%) of the children had inadequate knowledge, 18 (60%) children had moderately adequate knowledge and none of them had adequate knowledge regarding oral hygiene.

Table 2:

Mean, Mean difference and Standard deviation Pre-test and Mean Post-test knowledge scores

Group	Pretest			Posttest			Mean difference
	Mean	SD	Mean %	Mean	SD	Mean %	
Experimental Group	3.53	2.334	27.15	9.6	2.627	73.84	46.69
Control group	4.60	2.416	35.38	5.1	2.552	39.23	3.85

The study elicits the comparison of mean and standard deviation of pre and post test scores among experimental and control group. In pre-test, the mean score of level of knowledge regarding oral hygiene was 3.53±2.334 in experimental group and the mean percentage was 27.15% and in control group the pre-test mean score is 4.6±2.416 and mean percentage was 35.38%. In post-test, the mean score of level of knowledge regarding oral hygiene was 9.6±2.627 in the experimental group and the mean percentage was 73.84% and incontrol group the pre- test mean score is 5.1±2.552 and mean percentage was 39.23%. In experimental group the mean percentage betweenthe pre-test and post-test regarding oral hygiene was 46.69 and in control group the mean difference between the pre-test and post-test regarding oral hygiene was 3.85.

The association between the pre-test knowledge score and selected socio-demographic variables

The relationship was determined using the Pearson chi-square test. The outcome revealed there was significant association found between the pre-test anxiety scores with the socio-demographic variables age, sex, religion, educational status of father and mother, occupational status of father and mother, family monthly income, no of siblings, area of residence, previous knowledge and dentist visit in the experimental and control group.

Discussion

In the experimental group in the pre-test most of the 22 (73%) children had inadequate knowledge, 8 (27%) of the children had moderately adequate knowledge and none of them had adequate knowledge regarding oral hygiene. In post-test, most of the 18 (60%) children had adequate knowledge, 12 (40%) children had moderately adequate knowledge and none of the childrenhad inadequate knowledge regarding oral hygiene. Among control group,in pre-test most 17 (57%)of the children had inadequate knowledge, 13 (43%) childrenhad moderately adequateknowledge and none of them had adequate knowledge regarding oral hygiene. In post-test, 12 (40%) of the children had inadequate knowledge, 18 (60%) children had moderately adequate knowledge and none of them had adequate knowledge regarding oral hygiene.

Conclusion

The study inferred that among the experimental group, in pre-test majority of the samples had inadequate knowledge where as in post-test most of them had adequate knowledge regarding oral hygiene. Child-to-child method was effective in improving the level of knowledge regarding oral hygiene among school children.

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