



A PRE EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON SKILLS REGARDING ANTENATAL EXERCISES AMONG ANTENATAL WOMEN

Daljeet Kaur¹ and Madhusoodan²

¹Sri Sukhmani College of Nursing, Dera Bassi, Distt. Mohali, Punjab

²Shivnath Singh College of Nursing, Gwalior MP

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ABSTRACT

Introduction: Pregnancy is a very special time in women's life and pregnant women are concerned for their health and fitness and also about doing what is best for the health of the baby.¹ During the childbearing year, from conception through postpartum recovery, a woman's body undergoes extensive changes which frequently necessitate many adaptations. Physical and hormonal changes occur gradually throughout the 9 months of pregnancy, and these are reversed in a matter of weeks during postpartum recovery. Skeletal tissue, muscle and connective tissue, blood volume, cardiac output, body weight, and posture are affected.² A woman good health is essential for the good health of her baby. Women who eat well and exercise regularly along with regular prenatal care are less likely to have complications during pregnancy. They are also more likely to give birth successfully to a healthy baby.³

Exercise has become a fundamental aspect of women's lives and an important constituent of antenatal care. Pregnancy exercise relieves the discomfort experienced by pregnant women and to help them prepare the body for an easier delivery and recovery process. The behaviour of antenatal exercises revealed a significant difference in duration of labour, nature of delivery, behaviour manifestations, and level of pain in mother and presence of asphyxia and birth injuries in new born. Furthermore, exercise in pregnancy is correlated with a decrease in many common problems of pregnancy and the stress of exercises produces certain adaptation such as healthier placenta and increased ability to deal with short decrease in oxygen. Several studies have recommended that women should initiate or continue exercise in most pregnancies as it is safe for mother and not harmful to the fetus.⁴

Material and Methods: Quantitative research approach Pre Experimental One group pre-test post-test design to evaluate the Effectiveness of Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women. The study was conducted on 40 antenatal women. Data was collected from January 2019 to April 2019. A structured Observational Checklist was used to evaluate the Effectiveness of Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women.

Result: The data revealed that, in pre-test all the antenatal women had poor skills regarding antenatal exercises. While in post-test, 50% of the antenatal women had good skills, 42.5% of the antenatal women had average skills and only 7.5% had poor skills regarding antenatal exercises. The mean post-test skills scores (34.10) was higher than the mean pre-test skills scores (0.35). The calculated t value was 29.67 which were more than the table value, indicating effectiveness of video assisted teaching program on skills regarding antenatal exercises. There was significant association between the post-test skills scores of antenatal women regarding antenatal exercises with demographic variable i. e. educational status and number of delivery. No significant association was found between post-test skills scores of antenatal women regarding antenatal exercises and their selected demographic variables i.e age, type of family, occupational status, family monthly income, and gestational period and ever practiced antenatal exercises before.

Conclusion: After the detailed analysis of this study it shows that Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women was effective in enhancing the knowledge of antenatal women.

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INTRODUCTION

Exercise is now universally advocated as a means to maintain and enhance good physical and mental health. In fact there is general agreement that regular exercise by healthy individuals has psychological and physical benefits that include improved physical fitness and enhanced quality of life. Women today are more autonomous and feel empowered to be in control of their health, mind and body and for many women exercise has become an integral part of normal life. Over recent decades, the increasing trend for exercise is reflected in number of

pregnant women who are also adopting a more active life style.¹

Exercise during pregnancy has benefits not just for expectant mothers but for their growing fetus. Sutter health says that antenatal exercise can relieve back pain, get women ready for labour by improving muscle strength and flexibility and improve energy levels. Most women benefit greatly from exercising throughout their pregnancies and these exercises are called antenatal exercises for example transverse exercises,

*Corresponding author: Daljeet Kaur

Sri Sukhmani College of Nursing, Dera Bassi, Distt. Mohali, Punjab

pelvic tilting or rocking, pelvic floor exercises, foot and leg exercises, breathing exercises, walking and aerobics etc.¹

Recent research indicates that participating in resistance training during pregnancy can be beneficial for mother and baby. With a proper diet, resistance training throughout gestation can lead to decreased maternal weight gain, improved strength and flexibility, improved self-image, and decreased symptoms of pregnancy. In recent studies shown, participation in light resistance and toning exercise had no effect on type of labour and delivery, but participation in strength training with aerobic activity during pregnancy decreased caesarean sections required during delivery.⁵

Additionally, maternal strength training either caused no adverse effects or in some cases contributed to better overall maternal health. Research has shown that oxygen availability is preserved during maternal weight lifting. Studies have indicated that there are no differences in birth measures (e.g., birth weight, length, Apgar scores) between babies born to mothers who practiced maternal strength training and those who did not, respectively. However, there was a dose response trend toward improved Apgar scores in babies whose mothers participated in greater amounts of strength training, coupled with aerobic exercise.⁵

Evidence-based guidelines indicate that regular prenatal exercise is an important component of a healthy pregnancy. In addition to maintaining physical fitness, exercise may be beneficial in preventing or treating maternal-foetal diseases. Women who are the most physically active have the lowest prevalence of gestational diabetes (GDM) and prevent reproductive complications associated with maternal obesity. Obesity increases the risk of infertility and miscarriage, and weight loss programs that incorporate diet and exercise are a cost-effective fertility treatment that may also reduce the probability of obesity-related complications during pregnancy. Regular exercise following conception may also prevent excessive gestational weight gain and reduce post-partum weight retention.⁶

Objectives of study

1. To assess the skills regarding antenatal exercises among antenatal women. 2. To evaluate the effectiveness of Video Assisted Teaching Program on skills regarding antenatal exercises among antenatal women. 3. To find the association between post-test skills scores of antenatal women regarding antenatal exercises and their selected demographic variables.

MATERIAL AND METHODS

A pre experimental pre-test post-test research design is used to evaluate the effectiveness Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women was effective in enhancing the knowledge of antenatal women. The study was conducted on 40 samples. Samples were selected by convenient sampling technique. Data was collected from January 2019 to April 2019. A structured Observational Checklist was used to evaluate the effectiveness Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women.

In Phase I of the study, pre experimental single group pre-test post-test approach was adopted to assess the effectiveness Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women.

In Phase II of the study an evaluative approach was used to measure the effectiveness Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women. The research design used was pre experimental single group pre-test post-test design to measure the effectiveness Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women. A structured Observational Checklist was used to collect data.

Part I – Baseline Performa Demographic variables which comprised of age, type of family, educational status, occupational status, monthly family income, gestational period, number of delivery and ever practice antenatal exercises before.

Part II – Consisted of Observational Checklist which included 54 items to assess the skills of the antenatal women regarding antenatal exercises; 5 items related to Deep breathing Exercise, 4 items each related to Foot and Ankle exercises and Transverse abdominal exercises, 6 items related to Pelvic tilt or rocking Exercise, 4 items related to Leg Lifts Exercises, 5 items each related to Dromedary Droop Exercise, Tailor Sit/Tailor stretches and Back Stretches Exercises, 4 items related to Bust exercise, 9 items related to Squatting position and 3 items related to kegal Exercise.

Part III – Development of Structured Video Assisted Teaching Programme

The content validity of questionnaire was established by experts. The experts were selected on the basis of their expertise, experience and interest in the problem being studied. Content validity of the tool was determined by expert's opinion and suggestion on relevance of items. Tool was given to 11 experts from the field of Obstetric and Gynaecological nursing. Certain additions, deletions and refinements of items are done after the suggestions of the experts.

The reliability of the questionnaire was established by the tool was administered to 6 antenatal women who fulfill the sampling criteria. The reliability coefficient of the tool structured observational check list was obtained by using inter-rater method using Karl Pearson's correlation coefficient formula. Reliability of the tool was found to be 1, which indicated that the tool was highly reliable.

A final study was carried out on 40 samples. Data was collected from January 2019 to April 2019. The sample for the study comprised of the antenatal women, who met the designated criteria were selected through simple random convenient sampling technique. Objectives of study was discussed and obtained consent for participation in study.

Structured observational check list was used to evaluate the effectiveness Video Assisted Teaching Programme on Skills regarding Antenatal Exercises among Antenatal Women. Based on the objective and the hypothesis the data was analysed by using various statistical tests i.e. percentage, mean, and standard deviation, ANOVA and t test.

Statistical methods

The significance was calculated by using mean, Standard deviation, t test statistics for comparison and the ANOVA and t test statistics is used to find the independence of difference.

Significance was accepted at 0.01 and 0.05 level of probability.

RESULTS

Section – I Description of Percentage distribution of sample characteristics

Findings of section I in table 1 shows that 37.5% subjects belonged to 23-27 years and 28- 32 years. More than half, 52.5% of antenatal women belonged to joint family and were having senior secondary education (55%). Majority, 95% of antenatal women were homemaker, 97.5% of antenatal women were having total monthly income in between Rs.5,000-10,000, 70% of antenatal women were in second trimester, 42.5% were having one child. None of the antenatal women, 100% had never practiced antenatal exercises before.

N=40

Characteristics	n	%
Age (in years)		
18-22	10	25
23-27	15	37.5
28-32	15	37.5
Type of Family		
Nuclear	17	42.5
Join	21	52.5
Extended	2	5
Educational status		
Illiterate	3	7.5
Primary	3	7.5
Middle	0	0
Secondary	8	20
Senior secondary	22	55
Graduation & above	4	10
Occupational status		
Homemaker	38	95
Job	2	5
Family monthly income (Rs)		
5000-10000	39	97.5
10001-15000	1	2.5
Gestational period		
First trimester	9	22.5
Second trimester	28	70
Third trimester	3	7.5
Number of delivery		
Zero	3	7.5
One	17	42.5
Two	14	35
Three	6	15
Practiced Antenatal Exercises before		
Yes	0	0
No	40	100

Section II: Findings of Skills Regarding Antenatal Exercises among Antenatal Women.

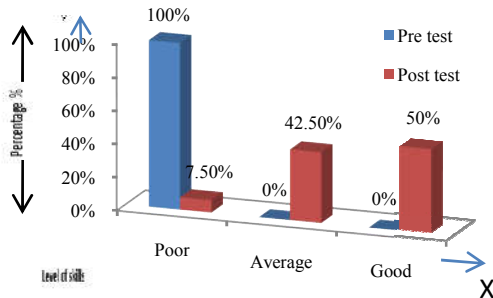


Figure 1 shows that during pre-test all the respondents, 100% had poor skills and none of the respondents had average and good skills regarding antenatal exercises.

While in post-test, half of the respondents, 50% had good skills, 42.5% of the respondents had average skills and only

few, 7.5% respondents had poor skills regarding antenatal exercises.

Hence, it was concluded that skills of antenatal women increased after the administration of video assisted teaching programme on antenatal exercises.

Section III: Comparison of pre-test and post-test skills scores of antenatal women regarding antenatal exercises

Data in Table 2 shows that the mean post-test skills scores (34.10) was higher than the mean pre-test skills scores (0.35). The difference was statistically significant with t =29.67 and p = 0.001 (df 39), indicating effectiveness of video assisted teaching programme on skills regarding antenatal exercises.

Hence, the research hypothesis (H1) was accepted and null hypothesis (H0) was rejected.

=40

Group	Mean skills scores		Mean Difference	SE	t Test	df	p Value
	Pre test	Post test					
Antenatal Women	0.35	34.1	33.75	1.137	29.67*	39	0.001

*Significant at p ≤ 0.05

Section IV: Findings related to Association of post-test skills scores regarding antenatal exercises among antenatal women and their selected demographic variables

Table 3 depicts that the obtained F value of the demographic variables educational status (F = 15.285) and number of delivery (F =5.287) at p≤0.05level were higher than the table value indicating significant association between the post-test skills scores of antenatal exercises and the above demographic variables.

However, the F value of demographic variables age, type of family, occupational status, family monthly income, gestational period and ever practiced antenatal exercises before were lower than the table value which showed no significant association between association of post-test skills score regarding antenatal exercises among antenatal women and the above demographic variables.

Characteristics	n	Mean	± SD	df	F/t Value	p Value
Age (in years)						
18-22	10	36.85	4.68	2.00	2.228 ^{NS(F)}	0.12
23-27	15	35.17	4.61	37.00		
28-32	15	31.20	9.92	1.00		
Type of Family						
Nuclear	17	33.29	7.16	2.00	0.400 ^{NS(F)}	0.67
Join	21	34.38	7.66	37.00		
Extended	2	38.00	0.00	1.00		
Educational status						
Illiterate	3	16.67	3.79	4.00	15.285 ^(F)	0.00
Primary	3	26.00	10.82	35.00		
Middle	0	0.00	0.00	0.00		
Secondary	8	35.50	3.16	0.00		
Senior secondary	22	36.41	4.36	0.00		
Graduation & above	4	37.75	1.71			
Occupational status						
Homemaker	38	33.84	7.32	38.00	0.983 ^{NS(O)}	0.33
Job	2	39.00	1.41			
Family monthly income (Rs)						
5000-10000	39	34.00	7.29	38.00	0.542 ^{NS(O)}	0.59
10001-15000	1					
Gestational period						
First trimester	9	36.28	4.80	2.00	1.172 ^{NS(F)}	0.32
Second trimester	28	33.95	7.18	37.00		
Third trimester	3	29.00	13.00			
Number of delivery						
Zero	3	35.00	5.29	3.00	5.287 ^(F)	0.00
One	17	38.26	3.06	36.00		
Two	14	31.61	6.88			

Three	6	27.67	10.78	
	Practiced Antenatal Exercises before			
Yes	0	0.00	0.00	0.00
No	40	34.10	7.23	NA

* Significant at p value ≤ 0.05 level
NS = Non significant

DISCUSSION

The study is intended to evaluate the effectiveness of Video Assisted Teaching Programme on skills regarding antenatal exercises among antenatal women. The study was pre experimental in nature. The samples consisted of 40 antenatal women. First objective of the study was to assess the base-line existing knowledge regarding assess the pre-test skills regarding antenatal exercises among antenatal women. The study results revealed that during pre-test all the respondents, 100% had poor skills and none of the respondents had average and good skills regarding antenatal exercises. These findings was supported with the findings of the study conducted a study to assess skills of antenatal exercises during pregnancy among pregnant women in Mangalore, Karnataka, India. The study results showed that 73% of subjects had poor skills about antenatal exercises, majority of them were not aware or not sure about the different type of antenatal exercises available and 28% of them had average skills and none of them had good skills regarding antenatal exercises³².

The second objective of the study was to evaluate the effectiveness of Video Assisted Teaching Program on skills regarding antenatal exercises among antenatal women. The study results showed that the mean post-test skills scores (34.10) was higher than the mean pre-test skills scores (0.35). The calculated t value was 29.67 which was more than the table value, indicating effectiveness of video assisted teaching program on skills regarding antenatal exercises. These findings are supported by a study to evaluate the effectiveness of video assisted teaching (VAT) regarding skills of antenatal exercises during pregnancy in Taiwan. The study findings revealed that the overall post-test mean percentage of skills was higher (83.53%) in experimental group ($t=3.24$ at $p<0.002$) that indicated VAT was significantly effective in increasing the skills regarding antenatal exercise among pregnant women³³.

The third objective of the study was to find the association between post-test skills scores of antenatal women regarding antenatal exercises and their selected demographic variables. The study findings showed that post-test skills scores of antenatal women was significantly associated with educational qualification and number of deliveries. Study conducted to assess the skills on antenatal exercise among women attending antenatal care at the University Teaching Hospital (UTH) in Lusaka, Zambia showed that cultural background, educational status and number of pregnancies had a significant association to the women's exercise skills (p -value 0.02, p - 0.00 and p - 0.001)³⁴.

CONCLUSIONS

The present study was conducted with the purpose to assess the effectiveness of Video Assisted Teaching Programme on skills regarding antenatal exercises among antenatal women.. Conceptual framework was developed based on based on General system theory given by Ludwig Von Bertalanffy's (1968)

In pre-test all the antenatal women had poor skills regarding antenatal exercises. While in post-test, 50% of the antenatal

women had good skills, 42.5% of the antenatal women had average skills and only 7.5% had poor skills regarding antenatal exercises.

The mean post-test skills scores (34.10) was higher than the mean pre-test skills scores (0.35). The calculated t value was 29.67 which was more than the table value, indicating effectiveness of video assisted teaching program on skills regarding antenatal exercises.

There was significant association between the post-test skills scores of antenatal women regarding antenatal exercises with demographic variable i. e. educational status and number of delivery. No significant association was found between post-test skills scores of antenatal women regarding antenatal exercises and their selected demographic variables i.e age, type of family, occupational status, family monthly income, and gestational period and ever practiced antenatal exercises before.

Implication & Recommendation

The findings of the study have implications related to nursing administration, nursing practice, nursing education and nursing research which provides the better way towards the improvement in best care through awareness about antenatal exercises that can be promoted by nurse researcher.

- The study adds up to the body of knowledge of nursing. The findings of the study revealed that antenatal women had poor skills regarding antenatal exercises. The findings of the present study act as catalyst to carry out more extensive research on a larger population. Through publication of the research findings, awareness about antenatal exercises can be promoted by nurse researcher.
- Nurse can intervene to ensure that antenatal exercises based programme are available to all antenatal women. All nurses should disseminate the proper information regarding antenatal exercises to increase public awareness which help to promote healthy practice. Nurses can encourage the women to participate in resistance training during pregnancy.
- Nurse administrator should focus on providing knowledge regarding antenatal exercises to antenatal women by considering special concerns. Nurse administrator can plan in-service education program and workshops on antenatal exercises. A nursing administrator has a significant role in encouraging and motivating the health workers, ASHA workers and anganwadi workers to improve their knowledge and skills related to antenatal exercises. It is important for nursing administrators should take the initiative in organizing health education program for antenatal exercises. Appropriate teaching-learning materials regarding antenatal exercise make them available for antenatal women in health settings and community settings.
- Education is key for development of excellent nursing practice. Nurse educators should have adequate knowledge regarding antenatal exercises to educate the students as well as women. The curriculum of nursing students should focus to develop practice and skill of antenatal exercises. Workshops, symposium, guest lectures, conferences, seminars and discussion programs

should be organized for the students stressing the importance of exercises during pregnancy.

Keeping in view the findings of the study, the following recommendations are made:

- A descriptive study can be conducted on knowledge of antenatal women regarding antenatal exercises.
- A similar study can be conducted in different settings
- A comparative study can be done to compare the skills regarding antenatal exercises among the rural and urban working women.
- A similar study can be conducted among antenatal women by using different teaching strategies.

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