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Effectiveness of STP on benefits of prenatal exercises among prenatal mothers of Bagalkot

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Abstract

Background of the study: Prenatal care plays a crucial role in reducing maternal morbidity and mortality. Key components of effective prenatal care include proper nutrition, adequate rest and sleep, personal hygiene, and physical activity. Regular prenatal exercise is particularly emphasized, as it helps relieve common discomforts experienced during pregnancy. Overall, physical exercise supports general physical health and is beneficial for both antenatal mother and developing fetus. Pregnancy is a joyful event for a woman at the same time she experiences both physical and emotional challenges like weight gain, posture changes and body image.

In today's health-conscious society, there's a growing interest among expectant mothers in maintaining physical fitness throughout pregnancy. This trend is driven by a desire to manage bodily changes, stay active, and prepare physically for vaginal delivery. Prenatal care, which includes nutrition, rest, hygiene, and exercise, is essential for reducing maternal morbidity and mortality. Among these, regular prenatal exercise plays a key role in easing pregnancy-related discomforts and promoting overall physical health. The emerging field of exercise physiology is now exploring how physical activity affects both the pregnant individual and the fetus.

Prenatal exercises are safe and effective when practiced regularly and increased gradually. Research has shown that women who engage in yoga, breathing exercises, and meditation daily for 30 minutes to an hour experience several benefits, such as improved birth weight, reduced risk of preterm labour, and a lower incidence of intrauterine growth restriction (IUGR). Additionally, women who consistently perform prenatal pelvic floor muscle training tend to have an easier birthing process compared to those who do not.

Aim: The study aimed to assess the effectiveness of structured teaching programme on knowledge regarding benefits of prenatal exercise among prenatal mothers.

Objectives of the study

1. To assess the knowledge regarding benefits of prenatal exercise before and after implementation of structured teaching programme among prenatal mothers.
2. To assess the effectiveness of Structured Teaching Programme on knowledge regarding benefits of prenatal exercise among prenatal mothers.
3. To determine the association between pre-test knowledge regarding benefits of prenatal exercise among prenatal mothers with their selected socio-demographic variables.

Methodology: Pre experiment one group pretest posted without control group design was used for the present study, with the objective to assess the effectiveness of structured teaching program on knowledge regarding benefits of prenatal exercise among prenatal mothers in Bagalkot Karnataka.

Prenatal mothers were the sample in the present study; researcher has selected 160 prenatal mothers by following convenient sampling technique. Researcher has collected the data by structured interview method using structured knowledge questionnaire.

Results: The overall finding reveals that the post-test mean knowledge score was 20.65 with SD ± 2.597 which was compared to the pre-test mean knowledge score 10.18 with SD ± 4.248 this showed that the post-test knowledge score was significantly higher than pre-test knowledge scores. Hence the STP was found to be effective in enhancing the knowledge of the prenatal mothers regarding benefits of prenatal exercise. As the calculated "t" value 12.904* was much higher than table "t" value (9.904) hence the hypothesis H₁ stating there will be significant difference in the pre-test knowledge and post-test knowledge scores is accepted at 0.05 level of significance. $p < 0.05$.

Conclusion: The present study concluded that knowledge regarding benefits of prenatal exercise among prenatal mothers was poor and the STP has proved to be effective in improving the knowledge.

Keywords: Assess, effectiveness, knowledge, structured teaching program, benefits of prenatal exercise, prenatal mothers socio-demographic variables

Introduction

Moderate exercises during pregnancy stimulate circulation helps to keep joints flexible create a good muscle tone

promote a sense of well-being and strengthen specific muscles in preparation for pregnancy and labour. Planned exercise program may have long term benefits such as a

weight control and decreased in the incidence of ovarian cancer and other benefits may include lowered cholesterol level, reduced risk of heart disease, increased self-confidence and esteem and wellbeing and possible reduction of caesarean Birth ^[4].

During pregnancy, women should perform 30 minutes of exercise regularly, if not possible all the days at least she has to engage herself in physical exercise or yoga and meditation thrice a week for 45 min to 1 Hr for each session, which would benefit both mother and developing fetus.

A definitive global prevalence rate on Physical inactivity during pregnancy and its ill-effects is unavailable, but recent studies show a clear correlation between physical inactivity during pregnancy and increased risk of complications like gestational hypertension, low birth weight, premature birth, and C-sections. For example, non-active women in one study had a 9.2% rate of gestational hypertension versus 6.7% for active women, and a 6% rate of low birth weight versus 3.6% for active women. Sedentary behaviour is also linked to obesity, which itself significantly raises the risk for gestational diabetes, preeclampsia, and stillbirth.

To motivate healthy pregnant women to exercise, health care providers should provide education regarding an appropriate type and amount of exercise that should be under taken during pregnancy, and the benefits to the pregnant woman, the fetus, and the newborn infant. The purpose of this review is to summarize the benefits of exercise during pregnancy to the mother, infant, and child.⁵

Methodology

Research approach: An experimental research approach was used in the present study

Research Design: A Pre-Experimental one group pre-test post-test without control group design was used in the present study.

Table 1: Pre-experimental one group pre-test post-test without control group design

Group	Pre-test	Intervention	Post-test
I	O ₁	X	O ₂

Variables

Dependent Variable

Knowledge of prenatal mothers regarding benefits of prenatal exercise

Independent Variable

The structured teaching programme on knowledge regarding benefits of prenatal exercise among prenatal mothers.

Socio-demographic Variables

Age, occupation, religion, educational qualification, place of residence, Number of gravida, type of family and family monthly income.

Setting of study

The study was conducted in high-tech scan centre Bagalkot and shraddha scan centre Bagalkot.

Population

Target population

The target population of the present study is the prenatal mothers in Bagalkot.

Accessible population

The accessible population of the present study is the prenatal mothers attending high-tech scan centre Bagalkot and Shraddha scan centre Bagalkot.

Sampling technique

In the present study researcher has used the non-probability convenient sampling technique to select the scan centres and prenatal mothers in Bagalkot

Sample

Sample of present study is the prenatal mothers attending high-tech scan centre Bagalkot and shraddha scan centre Bagalkot.

Sample size

The sample size for present study comprises 150 prenatal mothers.

Sample selection criteria

Inclusion Criteria

The present study includes the prenatal mothers who are

- Available at the time of data collection
- Willing to participate in the present study
- Able to understand Kannada

Exclusion criteria

The present study excludes the prenatal mothers who are

- Sick at the time of data collection
- Not able to cooperate throughout the period of study
- Un co-operative
- Physically handicap that would interfere with the process of data collection
- Suffering with severe mentally illness.

Development & Description of Tool

- Based on review of literature and experts' opinion the data collection instrument was prepared to conduct the present study
- The instrument is categorized into 2 Sections.
- Section A Consists of items related to Demographic characteristics of sample
- Section B consists of items to assess the knowledge of prenatal mothers regarding benefits of prenatal exercise

Ethical consideration

A formal permission was obtained by institutional ethical committee and from the owners of scan centres. Later Informed consent was obtained from antenatal mothers.

Results

Results of the present study is categorised into 4 sections as follows

Section 1: Frequency and percentage distribution of prenatal mothers according to their socio-demographic Characteristics.

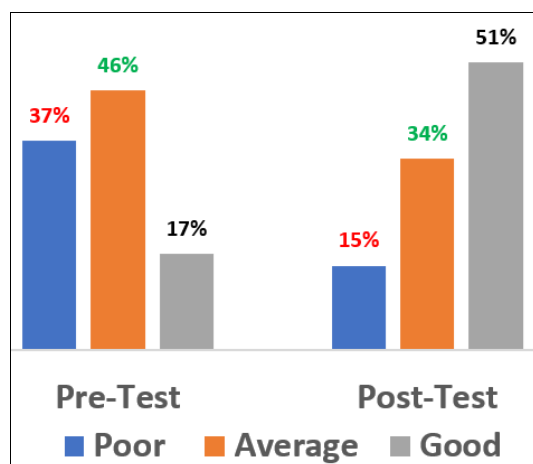
Sl. No.	Demographic Variables	Category	Frequency	Percentage
1	Age in years	Below 18 years	68	46%
		19-25 years	50	33%
		26-35 years	18	12%
		More than 35 years	14	9%
2	Occupation	Govt job	40	27%
		Private job	56	37%
		House wife	35	23%
		Other work	19	13%
3	Religion	Hindu	78	52%
		Muslim	39	26%
		Christian	27	18%
		Others	6	4%
4	Educational qualification	Illiterates	38	25%
		SSLC	52	35%
		PUC	35	23%
		Other degree	25	17%
5	Place of residence	Urban	89	60%
		Rural	61	40%
6	Number of gravida	Primy gravida	48	32%
		Second gravida	52	35%
		Third gravida	31	21%
		Fourth gravida	19	12%
7	Type of family	Nuclear family	82	55%
		Joint family	68	45%
8	Family income	Rs. 10000/- to 15000/-	21	14%
		Rs. 16000/- to 20000/-	48	32%
		Rs. 21000/- to 25000/-	52	35%
		More than Rs. 25000/-	29	19%

Section II: Assessment of knowledge regarding prenatal exercise among prenatal mothers

Sl. No.	Level of knowledge	Frequency	Percentage
1	Poor	55	37%
2	Average	69	46%
3	Good	26	17%
	Total	150	100

Section III: Effectiveness of STP on knowledge regarding benefits of prenatal exercise among prenatal mothers

Sl. No.	Level of Knowledge	Pre Test		Post Test	
		F	%	F	%
1	Poor	55	37	22	15
2	Average	69	46	51	34
3	Good	26	17	77	51
	Total	150	100	150	100

**Fig 1:** Effectiveness of STP on knowledge regarding benefits of prenatal exercise among prenatal mothers**Table 2:** Significant difference between the pre-test and post-test knowledge scores of prenatal mothers

Test	Table "t" value	Mean	Std. error	Mean Diff	Sd Diff	Paired "t" value
Pre-Test(X ₁)	9.904	10.18	0.812	18.68	5.06	12.904*
Post-Test(X ₂)		20.65				

The above graph shows that, the mean pre-test knowledge score was 10.18 while in the post-test score was 20.65 with the mean difference 18.68 and standard deviation difference 5.06. and the calculated "t" value 12.904* was much higher than table "t" value (9.904), this showed that post-test knowledge score of prenatal mothers was much higher than pre-test knowledge score regarding prenatal exercises. Thus, the structured teaching programme was very helpful in improving the knowledge scores of antenatal mothers.

Section IV: Association between Knowledge of prenatal mothers regarding prenatal exercise with their selected socio-demographic variables

Sl. No.	Socio demographic variables	DF	Chi-square value	Table value	Level of Significance	Inference
1	Age*	1	4.4992	3.84	0.05	S
2	Occupation	1	0.0056	3.84	0.05	NS
3	Religion	1	2.6528	3.84	0.05	NS
4	Educational qualification*	1	6.2412	3.84	0.05	S
5	Place of residence	1	3.2085	3.84	0.05	NS
6	Number of Gravida*	1	5.4964	3.84	0.05	S
7	Type of family	1	0.6532	3.84	0.05	NS
8	Family income	1	0.2412	3.84	0.05	NS

There was a significant association between Knowledge of

prenatal mothers regarding benefits of prenatal exercise and their socio-demographic variables like age, Educational Qualification, and Number of gravida.

Conclusion

By above facts and ideas researcher has concluded that there is a need to educate the prenatal mothers regarding benefits of prenatal exercise. It also concluded that the STP is effective tool in enhancing the knowledge of prenatal mothers.

Recommendations

Based on the findings, the following recommendations are proposed for future research.

- A similar study can be replicated on large scale for the purpose of generalization.
- A similar study can be conducted in National level to bring new programs to uplift the knowledge of prenatal mothers.
- A comparative study can be conducted on knowledge regarding benefits of prenatal exercise among Urban and Rural first trimester of pregnancy.

Acknowledgement: None.

Conflict of Interest: There is no conflict of interest.

Source of Funding: Self.

Ethical Consideration

- Ethical clearance is obtained from institutional ethical committee, Bagalkot college of Nursing Bagalkot.
- Written consent was obtained from participants.
- Privacy, confidentiality and anonymity of the data was maintained.

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