A QUASI EXPERIMENTAL STUDY TO ASSESS THE APPLICATION OF VAK (VISUAL, AUDITORY AND KINESTHETIC) MODEL LEARNING PROGRAMME ON KNOWLEDGE AND ATTITUDE REGARDING HOME BASED NEWBORN CARE AMONG ANTENATAL PRIMIGRAVIDA MOTHERS IN OBSTETRICS AND GYNAECOLOGY OUTPATIENT DEPARTMENT AT PANDURANG RAMARAO DONGAONKAR DISTRICT HOSPITAL DURG, CHHATTISGARH.

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ABSTRACT

A neonate, is a newborn child under the age of 28 days. The mortality rate is high and the child is at highest risk of getting infections, during the first 28 days of life. Therefore it is important that adequate feeding and care are provided during this period, which helps to improve the child's chances of survival and to proceed with a healthy life. Proper care during this time can lay the foundation for a lifetime of good health. If the mothers practice proper home based newborn care, neonatal mortality and morbidity can be reduced. The main aim of this study is to evaluate the effectiveness of VAK (Visual, Auditory and Kinesthetic) Model Learning programme on knowledge and attitude regarding home based newborn care among antenatal primigravida mothers. Variables: Independent variable – VAK (Visual, Auditory and Kinesthetic)model learning programme. Dependent variables-knowledge score and attitude score. The pilot study was conducted in Chandulal Chandrakar Memorial Government Medical College And Hospital Durg (C.G.)and the study sample was 10.The reliability of the tool was computed by karl pearson formula and the research design used was Quasi Experimental Research Design with Non Randomised Control Group Design and the target population was antenatal mothers and the accessible population was antenatal primigravida mothers in second and third trimester, the sampling technique used was purposive sampling technique with self structured questionnaires as a tool. On the basis of pre test and post test analysis of pilot study, it was revealed that, the reliability coefficient of the structured knowledge and attitude questionnaire was 0.816 and 0.85 respectively , which indicates that the tool is reliable. Overall impact of VAK model learning programme revealed that the t test value of experimental group knowledge and attitude was 5.28 and 21.21 respectively, which was greater table value at df (4) at $p<0.05$. Hence the VAK model learning programme is significantly effective in improving the knowledge and attitude regarding home based new born care among antenatal primigravida mothers.

Key Words: ECG, Monitoring, interpretation, Benefits, Challenges.

INTRODUCTION

"An ounce of prevention is worth a pound of cure."

—Benjamin Franklin.

BACKGROUND OF THE STUDY

Children are the most valuable assets and the future of our society. The future health of children depends on the nurturing practices undertaken by their families. The initial days of life represent a dramatic shift from a reliant foetal existence within the womb to a fully autonomous existence outside the womb. The process of birth and adaption to the new circumstances relies on several adaptations made by the newborn baby,

Primigravida mothers: Woman who conceives for the first time and admitted in selected Hospitals.

VAK Model Learning : In the study, VAK encompasses the three most common learning styles: Visual, Auditory, and Kinesthetic Visual: learn by seeing. Auditory: learn by hearing. Kinesthetic: learn by demonstration regarding the concepts of home based newborn care.

Knowledge: It refers to the response of primigravida mothers regarding home based newborn care by structured multiple-choice questionnaire in terms of knowledge scores.

Attitude : Attitude refers to the individual person's inner most conviction about home based newborn care measured by composite scale.

Home Based Newborn care: HBNC is a community level activity where an Accredited Social Health Activist (ASHA)s visit the homes of mothers and their newborns at defined intervals.

Vak (Visual, Auditory And Kinesthetic) Model Learning Programme: VAK (Visual, Auditory and Kinesthetic) Model Learning programme was designed by Walter Burke Barbe,and later developed in 1920 by Neil Fleming along with a group of psychologists which describes the most common ways of learning and their combinations are visual, auditory, and kinesthetic.The VAK (Visual, Auditory and Kinesthetic) Model Learning programme divides people into three categories of learners:

1. Visual learners-absorb information by sight.

2. Auditory learners-absorb information by sound.

3. Kinaesthetic (tactile) learners-absorb information primarily through movement in a physical way (demonstration and hands-on training).

RESEARCH METHODOLOGY:

Research methodology consist of the systemic procedure adopted by the researcher which starts from the initial identification of research approach and continue till completing pilot study and collection of relevant data. This is one of the most important part of research, if it is planned scientifically than outcome of research will meet the determined objectives of research with zero or minimal bias

Research Approach: Quantitative Evaluative Research Approach

Research Design: Quasi Experimental Research Design

Non Randomised Control Group Design

Independent variable: VAK (Visual, Auditory and Kinesthetic) model learning programme.

Dependent variables: Knowledge and attitude.

Population: Antenatal mothers

Target population: Antenatal primigravida mothers

Accessible population: Antenatal primigravida mothers in second and third trimester

Setting: Obstetrics And Gynaecology Outpatient Department at Pandurang Ramarao Dongaonkar District Hospital Durg, Chhattisgarh.

Sample size: 60 samples

Sampling technique: Purposive sampling technique

Inclusion criteria: Antenatal mothers who

-are in the second or third trimester.

-are primigravida mothers.

-are willing to participate in the study.

-are available at the time of data collection.

Exclusion criteria: Antenatal mothers who

-are having high risk pregnancy.

-are medical personnel.

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-are not willing to participate in the study.

-are not available at the time of data collection.

Data collection method : Self structured questionnaires

Data analysis

Descriptive statistics: Mean, Standard deviation

Inferential statistics : Paired t test, Chi Square test, Karl Pearson test

SAMPLE SIZE ESTIMATION:

- Sample size estimation is done by using a similar study population, according to Sarika dewangan (2021)study, A pre experimental study to assess the effectiveness of planned teaching program regarding essential new born care on knowledge of postnatal mothers in selected hospital of Durg, chhattisgarh, sample size taken was 40, so by taking opinion from statistician, I have taken 60 samples.

- **Pilot study:** 10 samples

  Setting: Chandulal Chandrakar Memorial Government Medical College And Hospital Durg (C.G.)

DATA ANALYSIS AND INTERPRETATION OF PILOT STUDY:

- Karl Pearson's correlation coefficient formula was used to find the 'r' value of knowledge and attitude questionnaire to find out the reliability.

- The split half method was used to establish the reliability of the tool and the reliability of structured questionnaire.

- This was done by splitting the items in to odd and even items. Using these values Karl Pearson's correlation co-efficient was computed .

R VALUE OF KNOWLEDGE QUESTIONNAIRE:

Sample No	Score
1	10
2	11
3	9
4	3
5	14
6	12
7	13
8	14
9	11
10	14

x	X-X/	(X-X/)²	Y	(Y-Y/)	(Y-Y/)²	(X-X/)(Y-Y/)
10	0.6	0.36	12	-0.8	0.64	0.16
11	1.6	2.56	13	0.2	0.04	0.36
9	-0.4	0.16	14	1.2	1.44	-0.24
3	-6.4	40.96	11	-1.8	3.24	11.16
14	4.6	21.16	14	1.2	1.44	5.76
47		64.8	64		6.8	
9.4		65.2	12.8			17.2
	Y/	12.8	√Σ(X-X/)²	8.075	√Σ(Y-Y/)²	2.608

$$r = \frac{\sum (X-\overline{X})(Y-\overline{Y})}{\sqrt{\sum (X-\overline{X})^2}\sqrt{(Y-\overline{Y})^2}}$$

√Σ(X-X/)² √Σ(Y-Y/)² = 21.056

Where, $\overline{X}$ = mean of X variable
$\overline{Y}$ = mean of Y variable

0.816

Therefore r=0.816

Hence it is accepted and reliable

R VALUE OF ATTITUDE QUESTIONNAIRE:

Sample No	Score
1	15
2	11
3	12
4	14
5	14
6	12
7	10
8	11
9	13
10	12

X	X-X/	(X-X/)²	Y	(Y-Y/)	(Y-Y/)²	(X-X/)(Y-Y/)	
15	1.8	3.24	12	0.4	0.16	0.72	
11	-2.2	4.84	10	-1.6	2.56	3.52	
12	-1.2	1.44	11	-0.6	0.36	0.72	
14	0.8	0.64	13	1.4	1.96	1.12	
14	0.8	0.64	12	0.4	0.16	0.32	
66		10.8	58		5.2	6.4	
13.2			11.6			6.4	
	Y/	11.6	√Σ(X-X/)²	3.2863	√Σ(Y-Y/)²	2.2803509	
	√Σ(X-X/)² √Σ(Y-Y/)² =			7.494			
						6.4	0.8540168
						7.494	

$$r = \frac{\sum (X-\overline{X})(Y-\overline{Y})}{\sqrt{\sum (X-\overline{X})^2}\sqrt{(Y-\overline{Y})^2}}$$

Where, $\overline{X}$ = mean of X variable
$\overline{Y}$ = mean of Y variable

Therefore r=0.854

Hence it is accepted and reliable

EXPERIMENTAL GROUP T TEST VALUE OF KNOWLEDGE:

$$t = \frac{\bar{d}}{s_d \sqrt{n}}$$

Sample No	Pre test X	Post test Y	D=Y-X	(D-D/)	(D-D/)²
1	10	15	5	-3.4	11.56
2	11	17	6	-2.4	5.76
3	9	18	9	0.6	0.36
4	3	18	15	6.6	43.56
5	14	21	7	-1.4	1.96

	42	63.2
D/	8.4	12.64
	SD	3.555278
√5	2.236068	
t	18.782971	Df=5-1
	3.5552778	Df=4
t	5.2831	

The t value of df (4) at 0.05 is **2.132** and the calculated value is **5.28**
Hence the intervention is significantly effective in improving the knowledge of post natal mothers

Hence the calculated value > tabulated value, so the intervention is significantly effective in increasing the knowledge of antenatal mothers.

Sample No	Pre test X	Post test Y	D=Y-X	(D-D/)	(D-D/)²
1	15	20	5	-1	1
2	11	18	7	1	1
3	12	18	6	0	0
4	14	20	6	0	0
5	14	20	6	0	0
			30		2
		D/	6		0.4
				SD	0.632456
			√5	2.236068	2 Df=5-1
			t	13.41641	
				0.632456	Df=4
			t	21.21	

The t value of df (4) at 0.05 is 2.32 and the calculated value is 21.21
Hence the intervention is significantly effective in increasing the attitude

CONCLUSION OF PILOT STUDY:

- The reliability of the tool was identified by split half method using Karl Pearson's method formula for knowledge and attitude on home based newborn care.

- The reliability coefficient of the structured knowledge and attitude questionnaire was 0.816 and 0.85 respectively , which indicates that tool is reliable.

- The t test value of experimental group knowledge and attitude was 5.28 and 21.21 respectively, which was greater table value at df (4) at p<0.05.

- Hence the VAK model learning is significantly effective in improving the knowledge and attitude regarding home based new born care among antenatal primigravida mothers.

REFERENCES

1. World Health Organization. (n.d.). *Who recommendations on Newborn Health: Guidelines approved by The Who Guidelines Review Committee*. World Health Organization. https://www.who.int/publications/i/item/WHO-MCA-17.07.

2. J., Aravindan & C., Indira & Kumar, Mithun. (2021). Knowledge on essential newborn care among antenatal mothers attending tertiary care hospital. International Journal Of Community Medicine And Public Health. 8. 1236. 10.18203/2394-6040.ijcmph20210806.

3. Dida, G. (2020, January 1). Knowledge and attitude of postnatal mothers on essential newborn care practices at Marsabit county referral hospital. http://erepository.uonbi.ac.ke/handle/11295/154065.

4. Ayete-Nyampong, J., & Udofia, E. A. (2020). Assessment of knowledge and quality of essential newborn care practices in La Dade Kotopon Municipality, Ghana. *PloS One*, *15*(8), e0237820. https://doi.org/10.1371/journal.pone.0237820.

5. Anish, M., Ambika, K., & Williams, S. (2018). A Descriptive Study to assess the Knowledge of Postnatal mothers regarding Newborn care in a selected hospital at Mysuru, Karnataka with a view to Develop Information Pamphlet. *Asian Journal of Nursing Education and Research*, *8*(3), 411. https://doi.org/10.5958/2349-2996.2018.00084.8.

6. Pulla, A., Asma, & Thomas, V. (2019). A study to assess the newborn care practices among mothers at a tertiary care hospital in Hyderabad, Telangana. *International Journal of Community Medicine and Public Health/International Journal of Community Medicine and Public Health*, *6*(3), 1216. https://doi.org/10.18203/2394-6040.ijcmph20190614.

7. Journal, I., & Science, H. (2018). Effectiveness o f „ Structured Teaching Programme " (STP) on The Knowledge Regarding Newborn Care Among Primipara Mothers . 7(5), 38–43. https://doi.org/10.9790/1959-0705093843.