



EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SELECTED ASPECTS OF DAWNS RULE OF TEN AMONG PRIMIGRAVIDA MOTHERS IN SELECTED HOSPITALS: A STUDY PROTOCOL

Obstetrics & Gynecology

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ABSTRACT

Background: According to world health statistics report the ANC coverage in India in 2013-2018, pregnant mothers' visits to antenatal OPD was at least once by 79%, four times by 51%. The emerging of novel concepts is now changing in the organization and management of MCH care. Dawns rule of ten being a self-learning, easy technique and self-care involvement will help to bring revolutionary changes in maternal and child care practices. **Objectives:** To evaluate the effectiveness of video assisted teaching programme on knowledge regarding selected aspects of Dawns rule of ten among primigravida mothers in selected hospitals. **Materials and Method:** A Pre-experimental one group pre-test post-test design will be used. By non-probability convenience sampling technique, 60 primigravida mothers will be selected from hospitals of Nagpur, Maharashtra, India. The tool will consist self-structured knowledge questionnaire based on selected aspects of Dawns rule of ten. After pre-test and administration of video teaching programme regarding selected aspects of Dawns rule of ten, post-test will be conducted on 7th day. Validity and reliability of questionnaire will be assessed with appropriate procedure and statistical method. The collected data will be analysed by using descriptive and inferential statistics. **Expected outcomes:** After administration of video assisted teaching programme, near about 45% improvement in knowledge score of primigravida mothers regarding selected aspects of Dawns rule of ten will be observed. **Limitation:** 1st and 2nd trimester primigravida mothers will be included in this study and in selected hospitals of Nagpur only. **Conclusion:** Video assisted teaching programme may be effective in improving primigravida mothers' knowledge regarding Dawns rule of ten for maternal and child care. Well designed educational module is necessary for antenatal mothers for positive birth outcome.

KEYWORDS

Video Assisted Teaching Programme, Primigravida Mothers, Dawns Rule Of Ten

INTRODUCTION:

Dawn was the founder of National Association of Reproductive Child Health of India. He had designed simple but revolutionary methods in Mother and Child Care, through which Mother and Child deaths during pregnancy was drastically reduced.² The Rule of ten for reproductive health includes promotion of family Planning, Sterilization Programmes, Breast feeding by WHO norms and infant immunization, Antenatal visits, Birth preparedness, Early identification of high-risk cases and Promotion of Zero Maternal Death practices.³ The prenatal period is a time of physical and psychological preparation for birth and parenthood. Prenatal care is the care in the continuum that starts before pregnancy and ends at delivery and the postpartum period. The objective is to ensure a normal pregnancy with delivery of a healthy baby from a healthy mother.¹

India accounts for maternal mortality 113 per 100,000 live births and neonatal mortality 26 per 1000 live births and infant mortality rate is 39 per 1000 live birth 2016-2018 as per govt of India 2019 registrar general of India.⁴ Recent report of NFHS 5 (2019-2021) mother who had antenatal check-ups in first trimester 70 % and following at least 4 antenatal check-ups was 58.1%. Iron folic acid tab consumption during pregnancy 100 days was 44.1% and 180 days was 26%, contraception by any method 66.7 % any modern method 56.5 %, Breast feeding initiation within 1 hr of birth 41.8% and exclusive breastfeed 63.7 %, weaning diet 11.8%.⁵

A cross sectional study was conducted by Kothavale A, Meher T, 2021 on the Level of completion along continuum of care for maternal, newborn and child health services and factors associated with it among women in India from the data of NFHS -4(2014-2015). The study analysis was done on 107,016 women aged 15-49 those who had given a live birth past 5 years preceding the survey and included the children who had completed 1 year. Study concluded that the major barrier for achieving continuum of care for maternal and child health is to reduce the level of ANC services utilization in the first stage of the continuum and hence it is suggested that it should be addressed for increasing continuum of care completion rate in the country.⁶

Dr C.S. Dawn 2000 has been developed this Calendar teaching method at Calcutta medical college hospital rules of ten for pregnant women mass RCH programme shows that ANC visits completed by mother as per recommendation, weight gain is seen, maternal mortality was nil,

perinatal death was nil, 9 % preterm, 85% immunization, 70 % contraception, 5% mild anaemic, 100% involvement of mother in own care.⁷ Ms.V.Besi Sundari Arulmani Ammal 2012 conducted a study to evaluate the effectiveness of video teaching on knowledge and attitude regarding selected aspects of Dawn's rule of ten among primigravida mothers in Christian fellowship hospital at Oddanchatram. The study shows significant improvement in knowledge and found positive correlation with attitude regarding dawns rule of ten among primigravida mothers⁸. The gaps across all the levels of continuum of care indicate a need for increased focus on the continuum of care approach in India. Dawns rule of ten is easy method to cover all aspects of full-fledged MNCH care and it is a simple revolutionary instruction with self-care strategies.

OBJECTIVES:

1. To assess the knowledge regarding selected aspects of Dawns rule of ten among primigravida mothers in selected hospitals.
2. To evaluate the effectiveness of video assisted teaching programme on knowledge regarding selected aspects of Dawns rule of ten among primigravida mothers in selected hospitals.
3. To correlate the study findings with selected demographic variables.

MATERIAL AND METHODS:

Study design: Pre-experimental one group pre-test post-test design

Study Setting: The study will be conducted in selected Hospitals of Nagpur district, Maharashtra, India.

Participants: Primigravida mothers who are in their 1st and 2nd trimester of pregnancy in selected Hospitals.

Estimation of Sample size:

N

$$= \frac{(Z_{\alpha/2} + Z_{\beta})^2 (P_1(1 - P_1) + (P_2(1 - P_2)))}{(P_2 - P_1)^2}$$

$$Z_{\alpha/2} = \text{at } 99 \% (CI) = 2.576$$

Depicts the desired level of statistical significance

- $Z_{\beta} = 2.326$: Represents the desired power = 2.576 for 99 %
- $N =$ Minimum participants required for each group

- Proportion of Knowledge P1 (Before):- =43.37 % =0.4337 (As per reference article)⁸
- Proportion of Improved Knowledge P2 (After):- 88.33 % =0.8833 (As per reference article)⁸
- Considering 44.96 % Clinically relevant margin of difference as per reference article⁸
- Minimum sample size required
- $N = (2.576 + 2.326)^2 * ((0.4337) (1 - 0.4337) + 0.8833 (1 - 0.8833)) / (0.4496)^2$
- Minimum sample size required Sample Size (N) = 42. Considering (50 % Drop out) = 42+21 = 63
- Total Sample size: N = 42+21 = 63

Sampling Technique: Non-probability convenience sampling.

Inclusion Criteria:

- Primigravida mothers who are in their first and second trimester.
- Primigravida mothers who can understand read and write Hindi, English and Marathi
- Primigravida mothers who are willing to participate.

Exclusion Criteria:

- Mothers who are critically ill.
- Those who have previous information regarding Dawns rule of ten from any sources.

Hypothesis:

- **H₀:** There is no significant difference between pre-test and post-test score of video assisted teaching programme on knowledge regarding selected aspects of Dawns rule of ten among primigravida mothers
- **H₁:** There is significant difference between pre-test and post-test score of video assisted teaching on knowledge regarding selected aspects of Dawns rule of ten among primigravida mothers.

Data Collection Tools:

Section A: It consist of demographic variables. Age, Marital status, Education, Residence, Occupation, Type of family.

Section B: It consist of knowledge based self-structured questionnaire on dawns rule of ten regarding maternal and child care.

Tool Description and Knowledge Assessment: Total 35 knowledge questionnaires will be tailored based on Dawns rule of ten which consist 5 Antenatal rules, 2 intranatal rules, 3 postnatal rules of maternal and child care. Content validity of the knowledge questionnaires will be conducted with panel of expert which consisted of obstetrician and gynaecologist, experts of OBGY nursing field, medical statistician. The panel will select the best item for clarity of question, accuracy of the knowledge and interpretability. This panel also identifying in judging the content validity in terms of relevance, coverage and representativeness of the items initially selected for inclusion in the questionnaires. The original draft of the questionnaire will be developed in English and translated to Marathi and Hindi language for easy administration to primigravida mothers. It underwent two forward and backward translation as per the standard translation guidelines. Construct validity of the tool will be assessed by exploratory factor analysis (EFA). In order to establish reliability of tool, the technique called split half method will be used. The pre-test and post-test will be conducted to assess the level of knowledge among primigravida mothers using self-structured multiple-choice questions. The level of knowledge gain will categorise poor if the score is < 33%, Average if it is 33.01% to 66% and Good if it is >66%. The scoring system for the self-structured knowledge-based questionnaires will be 1 for correct response and 0 for incorrect response.

Description Of Video On Dawns Rule Of Ten: Investigators will develop video regarding Dawns rule of ten by using various advanced animated application. Investigators voice and various attractive colours, animations will be used to prepare video. The length of video will be approximately of 5-10 minutes and will be in English, Marathi and Hindi language. Content of video will be validated by 10 experts of the concerned field. The content of video will be based on 10 rules stated by Dr C.S. Dawn for maternal and child care which includes 5 antenatal rules, 2 intranatal and 3 postnatal rules. Antenatal rules comprise of antenatal visits, Weight gain, rest and sleep, maternal immunization, intranatal rules includes birth preparedness, Warm environment for babies. Post-Natal rules includes methods of contraception, Breast feeding weaning and infant immunization.

Procedure:

The study shall be conducted only after approval of the IEC. Permission to conduct the study shall be taken from head of the institutions. Written informed consent shall be taken from the participants. Primigravida mothers who fulfil inclusion criteria will be selected by non-probability convenience technique. Pre-test using self-structured knowledge questionnaire will be conducted and then video assisted teaching programme will be administered as an intervention. Post test will be conducted on 7th day. Total period of study including pilot study will be about one month.

Data Analysis:

All the results will be tested and performed using R-studio software 4.3 version. The analysis will be form based on objectives and hypothesis. Overall results for the outcome variables will be listed in tables and graphs for both descriptive & inferential statistics. Descriptive statistics will give the frequency & % information over demographic variables whereas measuring data will be presented with mean std deviation, median, range (minimum & maximum). The full data analysis will be performed only with samples not lacking any missing data or value. Paired t - test will be used to find the significance difference between two groups (before & after), as data for the questions initially processed for the normality test using Kolmogorov & Smirnov test. Association results will be analysed using chi square analysis for the factors (demographic) tested for significance responsible for discrepancy in distribution of knowledge among demographic category.

EXPECTED RESULT:

Expected improvement in knowledge of Primigravida mothers regarding selected aspects of Dawns rule of ten will be near about 45% after administration of video assisted teaching programme. There will be positive or negative correlation between knowledge regarding video assisted teaching programme and selected demographic variables.

DISCUSSION:

Present study findings will be supported by the results of the study conducted by Diksha P. Jinde, Hemlata Salve et al 2021 aimed at to evaluate the effectiveness of self-instructional module on knowledge regarding antenatal care services among primigravida mothers attending antenatal clinic in Nagpur, Maharashtra, found that self-instructional module on knowledge of primigravida mothers' regarding antenatal care services was effective. Authors stated that the post-test mean knowledge score was 21.81 with SD of 3.27 as compared to pre-test mean knowledge score was 10.80 with SD of 3.46.⁹

CONCLUSION:

As the Data collection process is completed, the conclusion will be put forth by Data analysis. Video assisted teaching programme may be effective in improving the knowledge of primigravida mothers regarding Dawns rule of ten in terms of MCH Care. Maternal Education is the key component for practising the zero maternal mortality by developing new educational element.

Ethical Consideration:

Approval from ethical committee was obtained (IEC-GMC Nagpur no: 1663/05-08-2022). Informed written consent will be obtained from study subject. Confidentiality and anonymity of subject will be maintained. Participants will be protected from all type of harms. Freedom to withdraw from the study at point of time will be assured. The study findings will be disseminated to participants and published in indexed journal.

Competing Interest:

The authors declare no conflicts of interest.

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