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A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME REGARDING KNOWLEDGE OF STEM CELLS AND CORD BLOOD BANKING AMONG PREGNANT WOMEN IN SELECTED HOSPITALOF BHILAI, CHHATTISGARH.

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ABSTRACT
This study was conducted with the objective to formulate video assisted teaching programme regarding stem cells and cord blood banking, to assess the pre-test and post-test knowledge score regarding stem cell and cord blood banking among pregnant women , to assess the effectiveness of video assisted teaching programme and to find out the association between pre-test knowledge score with selected socio- demographic variables . The study design was an pre-experimental, one group pre-test post-test research design,60 pregnant women who fulfil the inclusive criteria were selected based on non-probability purposive sampling, after getting informed consent from the study participant, the video assisted teaching programm was administered at Lal Bahadur Shastri Hospital Supela Bhilai (C.G). The study findings revelled that pre- test score of the majority of pregnant women had average knowledge score were61.66%and 36.66%had good knowledge score , post-test majority 90% sample were excellent, 10% sample were good knowledge. Pre-test mean score were 19.35 and SD is 3.64 the post-test were 34.75 and SD is 2.87. The t-value 2.02 which is highly significant at >0.05 which proves the effectiveness of the video assisted teaching programme.

KEY WORDS: Stem cells, cord blood banking, pregnant women, effectiveness, video assisted teaching

Introduction
Beksac et al. 2004Negrin 2005 Stem cells are master cells that can form virtually any tissue in the human body. Stem cell research is one of the most important and, at the same time, the most controversial topics of science and technology today.
Stem cells have an amazing ability to create different kinds of tissues when they divide and develop. This power to produce different kinds of specialized cells makes them so unique and potent for medical therapy.organs.Major sources of stem cells are bone marrow, peripheral blood, cord blood or placenta, and embryo.
The first successful cord cell transplant from umbilical cord blood was accomplished in 1988. Cord blood is collected from the infant's umbilical cord after delivery. This method poses no risk to the mother or infant. Most often the cells are discarded with the umbilical cord as biohazard waste.
World Health Organization gives an "estimated crude prevalence" (the total number of existent cases

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each year, old and new) of 160 per 100,000, and an estimated incidence (the number of new cases each year) of 16-19 per 100,000. The incidence of PD varies across the globe.

RENY P VARGHESE A study was done regarding the pregnant women's awareness of cord blood stem cells and their attitude regarding banking options in France, Germany, Italy, Spain, and the UK. Questionnaires were distributed in six maternities. A total of 79% of pregnant women had little awareness of cord blood banking (n=1620).A total of 58% of women had heard of the therapeutic benefits of cord blood, of which 21% received information from midwives and obstetricians. A total of 89% of respondents would opt to store CBUs. Among them, 76% would choose to donate CBUs to a public bank to benefit any patient in need of a cord blood transplant. 12% would choose a mixed bank, and 12%, a private bank. A total of 92% would donate their child's CBU to research when it is not suitable for transplantation. The study reveals a strong preference for public banking in all five countries, based on converging values such as solidarity.

Department of Genetic Medicine, Sir Ganga Ram Hospital, New Delhi, 110060. Burden of genetic disorders in India, like other developing countries, is facing an accelerating demographic switch to non-communicable diseases. In the cities congenital malformations and genetic disorders are important causes of morbidity and mortality.

Metabolic studies of cases of mental retardation in AIIMS, Delhi and KEM Hospital, Mumbai, demonstrated that common disorders were those of mucopoly-saccharides, lysosomes, Wilson disease, glycogen storage disease and galactosemia. It is estimated that beta- thalassemia has a frequency at birth of 1:2700, which means that about 9,000 cases of thalassemia major are born every year. Almost 5200 infants with sickle cell disease are born every year. Disorders, which deserve to be screened in the new-born period, are hypothyroidism and G-6-PD deficiency, while screening for aminoacid and other metabolic disorders could presently be restricted to symptomatic infants.

NwannadiIkenna Alexander, et al conducted a study on umbilical cord blood donation and banking: awareness among pregnant women, in makurdi, nigeriIt was a cross sectional study carried out in a tertiary hospital in Nigeria. The population of study comprised pregnant women attending the antenatal clinic of the hospital. The sample size as calculated with the Yaro-Yamen's formula was 302.The level of awareness of UCB donation and banking by pregnant women in Makurdi is low. Every pregnant woman should be educated about the benefits of Umbilical cord blood donation and banking as this is central to the success of UCB donation and banking in the country.

Oulton 2000 Stem cell research is one of the most important and, at the same time, the most controversial topics of science and technology today. Nurses need to understand stem cell research so they can enter the debate on this issue. Nurses need to equip themselves with accurate information, using the International Council of Nursing Code of Ethics for Nurses and their own ethical decision-making processes.

Cord blood can be used if the child or his family is diagnosed with cancers such as Leukemia, Lymphoma and other disorders .the blood-making system, severe Immune-system disorders, Genetic defects affecting the blood-making system etc. Researchers are further studying the use of cord blood for the treatment of different types of diseases like Arthritis, Spinal cord damage, Stroke, diabetes, Alzheimer's disease, Purkinje cell degeneration, Duchenne's muscular dystrophy, Heart disease, vision and hearing loss, Parkinson's disease, Burns, Osteoarthritis, and Rheumatoid arthritis.

The studies have shown that, though most women want to do the best for their children, they lack information on the benefit of umbilical cord blood collection and banking. So encouragement during antenatal period is very important.

Through my clinical experience researcher have found the advantages of stem cells and umbilical cord banking.Recently umbilical cord is being wasted after delivery, but through umbilical cord banking many diseases can be cured .and people need to aware about importance and advantages of stem cells

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and cord blood banking.
So the researcher used video assisted teaching programme to make aware pregnant women regarding stem cells and cord blood banking.Hence, the researcher felt the video assisted teaching programme may enhance the knowledge on stem cells and cord blood banking among pregnant women. The researcher feels that extensive teaching program should be conducted to improve the knowledge regarding cord blood banking to the mothers that would help them to face the future challenges.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of video assisted teaching programme regarding knowledge of stem cells and cord blood banking among pregnant women in selected hospital of Bhilai, Chhattisgarh.

OBJECTIVES OF THE STUDY

- To formulate video assisted teaching programm regarding stem cells and cord blood banking.
- To assess the pre-test and post-test knowledge score regarding stem cell and cord blood banking amongpregnant women in selected hospital at Bhilai.
- To assess the effectiveness of video assisted teaching programme regarding knowledge of stem cells andcord blood banking.
- To find out the association between pre-test knowledge score with selected socio- demographic Variables.

HYPOTHESIS

H_1:- There willbe significant effectiveness of video assisted teaching programme . regarding knowledge of stem cells and cord blood banking amongpregnant .

H_2:- There will be association between pre-test knowledge with selected socio- demographic variables.

CONCEPTUAL FRAMEWORK-

According to Polit and Hungler (1995) Conceptual framework refers to interrelated concepts that are assembled to gather in some rationale scheme by virtue of relevance common theme. They serve as spring board for generation of hypothesis to be tested.It provides guidance for development utilisation and evaluation of video-assisted teaching programme. The conceptual frame work consists of three phases.
INPUT-Refers to the target group i.e. Pregnant women and their demographic characteristics i.e.their age, parity, occupation , educational, religion, family monthly income , area of residence . There are characteristics of pregnant women in the study group to assess their back ground data on knowledge of stem cells and cord blood banking. The subject characteristics would be serving as a guide in the video-assisted teaching programme for Pregnant women knowledge of stem cells and cord blood banking.

PROCESS-

- ✓ Refers to the different operational aspects of development and implementation of video-assisted teaching programme given to Pregnant women it includes-
- ✓ Assessment of pregnant women knowledge of stem cells and cord blood banking.
- ✓ By multiple choice self-structuredknowledge questionnaire.
- ✓ Development of video-assisted teaching programme (VATP).
- ✓ Implementation of video-assisted teaching programme in the Pregnant women to determine the effectiveness of planned teaching programme pre-test post-test single group design.

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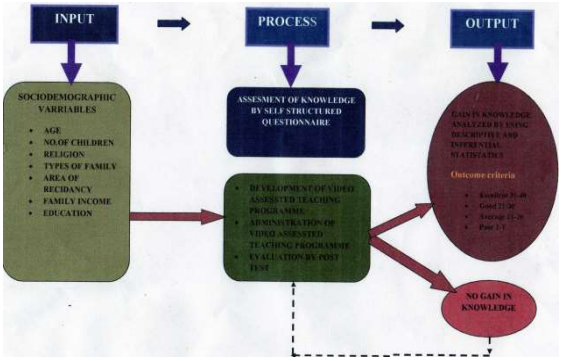

OUTPUT-

Refers to the evaluation of performance of Pregnant women exposed to a video-assisted teaching programme to find out whether there is any evidence of the desire change in knowledge of Pregnant women regarding stem cells and cord blood banking .

If Pregnant women acquire adequate knowledge, they will gain confidence and will be able to recognise the definition of stem cells,types,collection and storage procedures amounts for cord blood banking, advantages of cord blood banking ,and importance of stem cells I their life and for their family.If pregnant women have no gain knowledge than again we apply same teaching programme to pregnant women.

FEEDBACK-

Feedback emphasises the need to strengthen the input and process

Materials and methods:

Research Design

An pre-experimental, one group pre-testpost-test research design was used for the study.

Setting

The study was conducted at Lal Bahadur Shastri Hospital Supela, Bhilai (C.G.)

Population

Population of the study comprises of pregnant women between age of 18-35 year.

Sample

.Pregnant women who fulfil the inclusive criteria

Sample Size

60 pregnant women

Sampling Technique

A non-probability Purposive sampling technique was used to select the samples. Informed consent was obtained from the participants.

SAMPLING CRITERIA

inclusion criteria

The pregnant women of Lal Bahadur Shastri Hospital, Bhilai(C.G.).

- ✓ Pregnant women with age above 18 years
- ✓ Pregnant women who are willing to participate in the study.
- ✓ Pregnant women who are able to read and write Hindi

exclusion criteria

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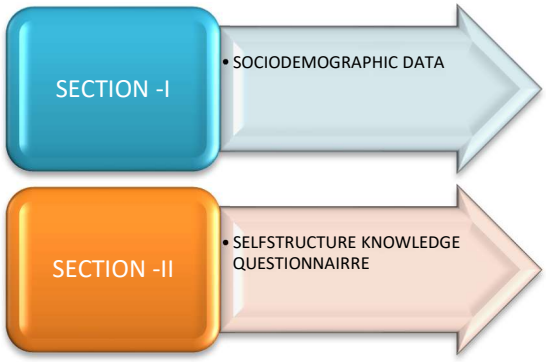
✓ Pregnant women who are in high risk (Diabitis, cardiac disease tuberculosis, thyroid disease, hypertension)
✓ Pregnant women who were sick on that day.
✓ Pregnant women those who are medicose.

Tools and techniques:



The tool consisted of
Section- I Which include
Part- A Scio-Demographic variables such as age, parity, religion, occupation, area of living, Type of family, family monthly income, education.
Section - II which includes
Part- B Knowledge questionnaire regarding stem cells ad cord blood banking . Each question caries one mark the total score was 40. It was categorized into Poor (0-10), Average (11-20) and Good (21-30), Excellent (30-40).
Procedure for data collection
The data collection was done for 4 weeks.After informed consent and willing from the study participant sthe study was conducted at Lal Bahadur Shastri Hospital SupelaBhilai (C.G).
The total of 60 samples was selected

Data Analysis
Descriptive statistics such as frequency, percentage, mean and standard deviation was used to assess the knowledge of pregnant women and effectiveness of video assisted teaching programm regarding stem cells and cord blood banking.

Analysis using mean, mean percentage and standard deviation.

Knowledge	Total	Mean	Mean %	SD
Pre-test	1161	19.35	48.3	±3.64
Post-test	2085	34.75	86.8	±2.87

Describes the effectiveness of video assisted teaching programme regarding knowledge of stem cells and cord blood banking among pregnant women.
The above table depicts that pre-test mean score knowledge among pregnant women regarding stem cells and cord blood banking was 19.35 and SD is 3.64 the post-test was 34.75 and SD is 2.87. The t-

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value of stem cells and cord blood banking knowledge was 2.02 which is highly significant at >0.05 which proves the effectiveness of the video assisted teaching programme .

Criteria wise analysis of pre-test and post-test knowledge score of stem cells and cord blood banking.

Knowledge	PRE-TEST		POST –TEST	
	FREQUENCY	PERCENTAGE	FREQUENCY	PERCENTAGE
EXCELLENT	0	0	54	90
GOOD	22	36.66	6	10
AVERAGE	37	61.66	0	0
POOR	1	1.66	0	0

Represent that knowledge of stem cells and cord blood banking 0% (0) sample were in excellent, 36%(22) sample were in good, 61.6% (37) sample were in average & 1.6% (1) sample were poor in pre-test and post-test majority 54 (90%) sample were excellent, (10%) 6sample were good, 0% (0) sample were average & 0% (0) sample were poor knowledge

Effectiveness of pre-test and post-test knowledge score of knowledge

Knowledge	Mean ±SD	Df	paired 't' value	Inference at 0.05
Pre test	48.3±3.64	59	26.1	
Post-test	34.7±2.87			

Represent that there was highly significant difference between the pre-test and post-test knowledge score of video assisted teaching programme as calculated value26.1, (df.59) was greater than table value 2.02 at 0.05 level of significance.

CHI-SQUARE ANALYSIS FOR ASSOCIATION BETWEEN PRE TEST KNOWLEDGE SCORE OF PEOPLE WITH SELECTED DEMOGRAPHIC VARIABLES.

Tab.4.12Association between pre-test knowledge with socio demographic variable of video assisted teaching programme.

S.N.	Socio - demographic variables	Excellent 31-40	Good 21-30	Average 11-20	Poor 1-10	Chi square	d.f.	Critical value At 0.05	Inference
1.	**Age(In years)**								
	A -18-20	0	5	10	0	1.81	9	16.9	NS
	B -21-25	0	12	18	1				
	C -26-30	0	7	7	0				
	D -Above-30	0	0	0	0				
2.	**Parity**								
	A Primipara	0	7	16	0	3.48	3	7.8	NS
	B -Multipara	1	17	18	1				
3.	**Types of family**								
	A-Nuclear family	0	3	4	0				
	B-Joint family		17	32	1	0.39			NS

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	C-Extended family	0 0	1	2	0		9	16.9	
4.	**Religion** A-Hindu B-Muslim C-Christian D-Others	 0 0 0 0	 15 6 1 0	 32 5 0 0	 0 1 0 0	 7.67	 9	 16.9	 NS
5.	**Education** A-Primary –Middle B-Middle school - Secondary C-Graduate-Postgraduate	 0 0	 5 12 5	 6 24 7	 0 1 0	 1.28	 9	 16.9	 **NS**
6.	**Occupation of women** A-Working B-house wife C-part time	 0 0 0	 3 17 2	 1 31 5	 1 0 0	 13.47	 9	 12.5	 **S**
7.	**Area of residency** A-Rural B-Urban	 0 0	 0 22	 0 37	 0 1	 32.70	 3	 7.8	 S
8.	**Family monthly Income** <10,000 RS 10001-15,000RS 15,001-20,000RS >20,000RS	 0 0 0 0	 11 11 0 0	 16 18 3 0	 1 0 0 0	 3.11	 9	 16.9	 NS

Result and Findings:

In this study, most of the pregnant women had average knowledge score (61.66%) regarding knowledge of stem cells and cord blood banking. These findings were supported by Ms. S. Vijayalakshmi an studywas conducted on Knowledge on collection and storage of cord blood in Bangalore In this study, most of the antenatal mothers had poor knowledge score (95%) regarding collection and storage of cord blood banking.

In this study there was a significant association between the knowledge score and the selected demographic variables such as Occupation of women and Area of residency. Other variables such as age, religion, parity, education, family monthly income, types of family were not showing any association with the knowledge score. These findings were supported by Catherine Edwin Francis et ala study was conducted on effectiveness of structured teaching programme on knowledge regarding stem cells and cord blood banking among antenatal mothers in an urban area at Mogappair, Chennai Tamil Nadu. In this study, most of the antenatal mothers are having inadequate knowledge score, 28.0% of them are having moderate knowledge score and 72% of them are having adequate score.

LIMITATIONS

- Pre experimental
- No control group
- Contamination was not prevented

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- The study was limited only to Lal Bahadur Shastri Hospital Supela, Bhilai (C.G.).

RECOMMENDATIONS

- A similar study can be replicated in a larger sample where the finding can be generalized.
- A similar study can be conducted among college students .
- A similar study can be done by giving structure teaching programme.
- A similar study can be done by comparing between urban and rural pregnant women.
- A similar study can be conducted among staff nurse in hospital setup.

Conclusion:

- For the last two centuries of medicine, doctors have used surgery or drugs as tools to help our patients and to treat disease. Drugs, however, do not alter the underlying disease. They treat the symptoms, but generally they aren't cures. Today we stand on the threshold of curing disease. Curing disease by transplanting stem cells is a huge change. Scientists believe research in this area holds promise for the treatment of many devastating diseases of humankind. This important scientific breakthrough has the potential to revolutionize the practice of medicine and improve the quality and length of life.Now, years after the first successful umbilical cord blood transplant, more families seek information about whether or not to save their newborn's cord blood. Childbirth educators may be one of the main sources that an expectant family depends on to gain more knowledge about cord blood banking in order to make an informed decision. Preserving umbilical cord blood in public banks is advisable for any family; however, it is recommended that expectant families only consider private cord blood banking when they have a relative with a known disorder that is treatable by stem cell transplants.

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