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RESEARCH ARTICLE

STUDY ON KNOWLEDGE OF ANTENATAL MOTHERS REGARDING CORD BLOOD BANKING

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ABSTRACT

An exploratory study was conducted to assess the Knowledge of Antenatal Mothers regarding Cord Blood Banking in a Selected Hospital, Ludhiana, Punjab. Objectives of the study are to assess knowledge of antenatal mothers regarding cord blood banking to find the relationship of knowledge with following variables: age, educational status, occupational status, family income, place of living, gravida, type of family, type of medical services, source of information, to find out the deficit areas in knowledge and to prepare pamphlet for promotion of knowledge regarding cord blood banking of antenatal mothers. The conceptual framework of the study was based on a "three phase theory" described by Fitts and Posner (1967). A non experimental research design was adopted for the study. Structured knowledge questionnaire regarding cord blood banking was prepared after extensive review of literature and expert's opinion. The tool used had two sections, part one was to obtain demographic data. The second section had 3 areas with total 26 items on knowledge regarding cord blood banking. A try out of tool was done on 4 subjects. Pilot study was done on 20 subjects. The study accessible population was antenatal mothers admitted as well as visiting antenatal outpatient department in the selected hospital of Ludhiana, Punjab. 200 antenatal mothers were selected by purposive sampling technique. Data was collected from antenatal mothers by structured questionnaire. Data was analyzed by descriptive and inferential statistics and presented through tables and figures. Findings revealed that majority 55% of antenatal mothers had average knowledge regarding cord blood banking and 26.5% had below average knowledge. Mean percentage of knowledge score was highest (45.63%) in 'Advantages and disadvantages' and least in 'General information' (27.37%). Educational status, occupational status, family income were found to be significant factors related to knowledge of antenatal mothers, while other variables were found non significant related to knowledge. Majority of antenatal mothers had average knowledge regarding cord blood banking. Hence it is concluded that there is need to enhance the knowledge of antenatal mothers by means of pamphlet.

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INTRODUCTION

Health is the fundamental right which can be enjoyed by each one of us, only if we are self reliant and take responsibility to maintain optimum level of health. Unfortunately we could not be able to prove ourselves to maintain environmental hygiene, prevent adulteration of food, avoiding unnecessary exposure to harmful rays. As a result the rates of blood borne diseases such as leukemia, sickle cell anaemia, lymphoma, diabetes are rising day by day. Above mentioned view is supported by Arora RS, the standardized incidence of childhood cancer in India range from 38 to 124 per million children per year. The highest incidence is reported from Chennai and lowest from rural Ahmadabad.

According to a study by London based NGO "Punjab Roko Cancer" 9 to 15 women per lakh in rural areas are affected by the disease, while the number is 25-30 women per lakh in Urban India. Every year about 3,000 women get breast cancer in Delhi alone and 1000 die of breast cancer. In the early 1900's European researchers realized that the various type of blood cells e.g white blood cells, red blood cells and platelets all came from a particular 'stem cell'. Stem cells have an amazing ability to create different kinds of tissues when they divide and develop. Development in biotechnology in 1980s and 1990s saw the introduction of methods for growing human cells in the laboratory. The discovery of stem cells was one of greatest achievement of modern medicine.

In vitro studies shown the enough stem cells appear to be present in 60-100 ml of cord blood obtained after delivery of the infant. For this purpose, umbilical cord blood is collected

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after delivery of the baby twenty years ago, only one disease could be treated with umbilical cord stem cells. Today, umbilical cord stem cells have been successfully used in the treatment of more than 80 life threatening diseases lymphoma etc.

MATERIALS AND METHODS

Research approach and research design: For the present study quantitative research approach and non experiment research design were used to accomplish the stated objective.

Independent variables: Age, educational status, occupational status, family income, place of living, gravida, type of family, type of medical services, source of information.

Dependent variables: Knowledge related to cord blood banking.

Research setting: Antenatal OPD of Christian Medical College, Ludhiana, Punjab.

Target population: The target population of the study was the antenatal mothers visiting Antenatal OPD, of a selected hospital, Ludhiana, Punjab.

Sample and Sampling technique: Total sample was 200. The purposive sampling technique was used.

Development of tool: The tool for present study was structured knowledge questionnaire, developed on the basis of review of literature and with guidance of experts.

Description of tool with criterion measure: The tool consists of following two parts

Part 1: Sample characteristics

This part consists of 9 items regarding the demographic information of the subjects.

Part 2:

It consisted of 26 multiple choice questionnaires related to cord blood banking.

RESULTS

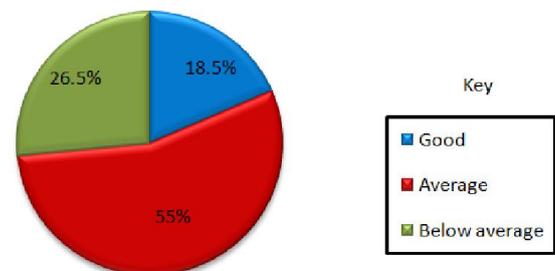
Section-1 socio demographic characteristics of sample

Table 1. depicts that nearly half of antenatal mothers (46%) were in age group of 26-30 yrs, 62.5% were graduate and above, 89.5% were housewives, 35% had family income Rs 5001-10,000 per month, 95% were from urban area, 59% were primi, 80.5% belonged to joint family, 87.5% were getting private medical services, 96% of the subjects had no information regarding cord blood banking

Table 1. Percentage distribution of sample

Demographic characteristics	n	%
N=200		
1) Age (in years)-		
20-25	82	41
26-30	92	46
31-35	22	11
≥36	4	2
2) Educational status		
No education	-	-
Primary	9	4.5
Matric, +2	66	33
Graduate and above	125	62.5
3) Occupational status		
Health professionals	10	5
Working mothers	11	5.5
Housewife	179	89.5
4) Family Income (in Rs.)		
≤5000	56	28
5001-10,000	70	35
10,001-20,000	48	24
Above 20,000	26	13
5) Place of living		
Urban	190	95
Rural	10	5
6) Gravida		
Primi	118	59
2 nd	64	32
3 rd & above	18	9
7) Type of family		
Nuclear	39	19.5
Joint	161	80.5
8) Type of medical services		
General	175	87.5
Private	25	12.5
9) Source of information		
Mass media	-	-
Relatives	5	2.5
Health team	3	1.5
No information	192	96

Objective 1: To assess the knowledge of antenatal mothers regarding cord blood banking



Percentage of Antenatal Mothers

Table 2. Frequency and Percentage Distribution of Antenatal mothers According to level of Knowledge Regarding Cord Blood Banking

N=200			
<u>Antenatal Mothers</u>			
Level of knowledge	score	n	%
Good	>12	37	18.5
Average	>8-12	110	55
Below average	≤8	53	26.5

Maximum score: 26
Minimum score: 0

Table 3. Depicts that majority of antenatal mothers had average (55%), 26.5% had below average and 18.5% had good knowledge regarding cord blood banking.

Table 4 (a): Analysis of Variance of Antenatal Mothers Regarding Cord Blood Banking According to Educational status

N=200				
Source of Variation	df	Sum of squares	Mean sum of squares	F
Between groups	2	68.39	34.19	5.4695*
Within groups	197	1231.68	6.25	
Total	199	1300.08	199	

Maximum score=26
Minimum score=0

*=Significant at (p<0.05) level

Table 4 (a) depicts that tabled F value for 2/197 degree of freedom was 2.99 at p<0.05 level of significance and calculated F value 5.4695, which was more than tabled value.

Therefore, the difference in mean was found statistically significant at p<0.05 level.

Table 5 (a) Analysis of Variance of Antenatal Mothers Regarding Cord Blood Banking According to Occupational status

Source of Variation	df	Sum of squares	Mean sum of squares	F
Between groups	2	99.33	49.66	7.923*
Within groups	197	1234.86	6.26	
Total	199	1334.19		

Significant at (p<0.05) level

Table 5 (a) depicts the tabled value for 2/197 degree of freedom was 2.99 at p<0.05 level of significance and calculated F value 7.923 was more than the tabled F value.

Therefore, the difference in mean was found statistically significant at p<0.05 level of significance.

Table 6 (a) Analysis of Variance of Antenatal Mothers Regarding Cord Blood Banking According to Family Income

Source of Variation	df	Sum of squares	Mean sum of squares	F
Between groups	3	61.35	20.45	3.1490*
Within groups	196	1272.86	6.49	
Total	199	1334.21		

Maximum score=26
Minimum score=0

Significant at (p<0.05) level

Table 6 (a) depicts that tabled F value for 3/196 degree of freedom was 2.99 and the calculated F value was 3.1490 which was more than tabled value. Therefore, the difference in mean was found statistically significant at p<0.05 level.

Conclusion

In the present study majority of antenatal mothers had average knowledge regarding cord blood banking. In demographic

characteristics educational status, occupational status, family income was found to be statistically significant at p ≤0.05 level.

Implication

The Obstetrical Nursing Curriculum for all levels of nursing trainings should give emphasis on enhancing the knowledge of nursing students regarding cord blood banking to overcome the problems related to life threatening diseases of present scenario.

Continuing education for nurses should be organized for nurses besides administrative support should be provided to conduct in-service educational programmes, incidental teachings and guidelines, above all more and more nurses should join together to conduct research studies on such topics.

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Conflict of interest: None

Source of funding: Self

Ethical consideration

A written permission for conducting the study was taken from ethical committee of CMC Hospital, Ludhiana as well as Principal, CMC, College of Nursing, Ludhiana, before starting the study. An informed written consent was obtained from each subject.

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