



ORIGINAL RESEARCH PAPER

Nursing

KNOWLEDGE REGARDING COLLECTION OF CORD BLOOD FOR STEM CELL THERAPY AMONG B.SC NURSING 3RD YEAR STUDENTS

KEY WORDS: 3rd year B.Sc Nursing students, collection of cord blood for stem cell therapy

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ABSTRACT

BACKGROUND:-Umbilical cord blood is blood that remains in the placenta and in the attached umbilical cord after child birth.
Material and Method: Quantitative research approach, a structured close ended questionnaire.
Statistical method- Students paired t test, Chi-square Test.
Result: - the mean post test knowledge score (18.82) is apparently higher than the mean pretest knowledge score (8.85). The dispersion of pre test scores (SD=1.605) is more than that of their post – test scores (SD=1.91) and the computed 't' value shows that there is a significant difference between pretest and posttest mean knowledge score (t=25.701) .This indicates that structured teaching programme was effective in increasing the knowledge of 3rd year B.Sc. nursing students of Bombay Hospital, College of Nursing, Indore. The demographic variables indicated that there is no significant association between, age, religion, sources of previous knowledge and there is significance in previous knowledge about collection of cord blood for stem cell therapy. Thus the hypothesis that there will be significant increase in mean post test knowledge score than mean pre test knowledge score is accepted.

INTRODUCTION:-

Health is not simply the absence of illness. Actual health is the will to overcome every form of adversity and use even the worst of circumstances as a springboard for new growth and development. The study and research of human body and related health issues helps to understand how human function and the application of that knowledge help to improve health and to prevent and cure diseases.

NEED FOR THE STUDY:-

Cord blood preservation is still a new concept in India and a lot of people are unaware about this concept. Due to unawareness many people lose once in a life time opportunity to bio-insure their child's future. The Indian council of medical research has estimated that some 50 million patients with heart disease, 5 million with Parkinson's disease and 5 million with Alzheimer's disease in India are "potential beneficiaries" of stem cell therapy.

PROBLEM STATEMENT

"A pre- experimental study to assess the effectiveness of Structured teaching programme on knowledge regarding collection of cord blood for stem cell therapy among 3rd year B.Sc Nursing students of Nursing college in Indore. (M.P)"

OBJECTIVES

1. To assess the level of knowledge regarding collection of cord blood for stem cell therapy among 3rd year B.Sc nursing students.
2. To evaluate the effectiveness of Structured teaching programme on the collection of cord blood for stem cell therapy among B.Sc nursing 3rd year students.
3. To determine the association of pre-test knowledge score regarding collection of cord blood for stem cell therapy with selected socio- demographic variables of B.Sc nursing 3rd year students.

HYPOTHESIS

Significant at level of 0.05.

H₁:- There is a significant differences in the mean pre- test and post- test knowledge scores regarding collection of cord blood for stem cell therapy among B.Sc nursing 3rd year students.

H₂:- There is a significant association between pre – test knowledge scores regarding collection of cord blood for stem cell therapy with selected socio demographic variables of B.Sc nursing 3rd year students.

ASSUMPTIONS

1. The student nurses will have inadequate knowledge regarding

collection of cord blood cells for stem cell therapy.

2. S.T.P may help to improve the knowledge of student nurses on collection of cord blood for stem cell therapy.

DELIMITATIONS

Students those who are not willing to take part in the study.
Students those who are absent at the time of study.

Review of literature

Asmitha Mabatho, et.al (2012) conducted a study to assess the knowledge and attitudes about collection, testing, and banking of cord blood stem cells among 443 women attending antenatal clinic. 70% of the women had very poor knowledge about cord blood banking; 68% of physicians should talk to pregnant women about the collection of cord blood. The study concluded that most of the women had lack of knowledge regarding cord blood stem cells

RESEARCH METHODOLOGY

Source of data: - B.Sc (N) 3rd year students, Bombay Hospital college of nursing, Indore. Data will be collected by using structured close ended questionnaire. Quasi experimental design.

Population:- B.Sc(N) Final Year students of selected college in Indore

Target population: -3rd year B.Sc Nursing 40students of Nursing college in Indore. (M.P).

Sample size: - B.Sc (N) Final Year 40 students

sampling technique: - Non probability Convenient Sampling Technique

INDEPENDENT VARIABLES

structured teaching programme on collection of cord blood for stem cell therapy.

DEPENDENT VARIABLE

the knowledge of B.Sc Nursing 3rd year students regarding collection of cord blood for stem cell therapy.

EXTRANEIOUS VARIABLE

In this study it refers to age, religion, any previous knowledge regarding collection of cord blood for stem cell therapy, sources of previous knowledge gained.

CRITERIA FOR SELECTION OF SAMPLE

INCLUSIVE CRITERIA

- B.Sc Nursing 3rd year students who are willing to participate.
- B.Sc Nursing 3rd year students who are available during the period of data collection.

EXCLUSIVE CRITERIA

- B.Sc Nursing 3rd year students of the colleges.
- Students who are not willing to participate.

RELIABILITY: - Tested by implementation of knowledge based on structured teaching and reliability will be calculated by using formula by (Guttman split-half).

RESULTS:- ORGANIZATION AND PRESENTATION OF THE DATA

The collected data were edited, tabulated, analyzed, interpreted and findings obtained were presented in the form of tables and diagrams which were represented under the following sections:

SECTION – 1:- This part deals with description of demographic characteristics of sample.

SECTION – 2:- Assessment of pre-test and post-test knowledge of students regarding collection of cord blood for stem cell therapy.

SECTION – 3 :- Findings related to effectiveness of structured teaching programme by comparing the mean pre-test and mean post-test knowledge scores.

SECTION – 4:- Association of post-test knowledge scores of students with the selected demographic variables.

SECTION – 1:- This part deals with description of demographic characteristics of sample.

TABLE – 1 DISTRIBUTION OF SAMPLES ACCORDING TO SELECTED DEMOGRAPHIC VARIABLES

DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE %
1.AGE IN YEARS	0	0%
i.16 – 18 years	40	100%
ii.19 – 21 years	0	0%
iii.22 -23 years	0	0%
iv.24 – 25 years	0	0%
2.RELIGION	4	10%
i.Hindu	36	90%
ii.Christian	0	0
iii.Muslim	0	0
iv.Others	0	0
3.DO YOU HAVE ANY PREVIOUS KNOWLEDGE REGARDING COLLECTION OF CORD BLOOD FOR STEM CELL THERAPY?	29	72.5%
ii.11	11	27.5%
i.Yes		
ii.No		
4.THE PREVIOUS KNOWLEDGE GAINED FROM?	10	25%
9	22.5%	
i.News paper	10	25%
ii.Seminar	11	27.5%
iii.Workshop/Conference		
iv.Unknown		
DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE %
5.AGE IN YEARS	0	0%
v.16 – 18 years	40	100%
vi.19 – 21 years	0	0%
vii.22 -23 years	0	0%
viii.24 – 25 years	0	0%

SECTION 4. ASSOCIATION BETWEEN PRETEST KNOWLEDGE SCORE AND SELECTED DEMOGRAPHIC VARIABLES.

TABLE NO:-4

NS =Not significant at p ≤ 0.05 level

S* = Significant at p ≤ 0.05 level

Marks	1-6 (poor)	7-12 (average)	13-19 (good)	20-24 (Excellent)	D.F	X2 value

6.RELIGION	4	10%
v.Hindu	36	90%
vi.Christian	0	0
vii.Muslim	0	0
viii.Others		
7.DO YOU HAVE ANY PREVIOUS KNOWLEDGE REGARDING COLLECTION OF CORD BLOOD FOR STEM CELL THERAPY?	29	72.5%
11	27.5%	
iii. Yes		
iv. No		
8.THE PREVIOUS KNOWLEDGE GAINED FROM?	10	25%
9	22.5%	
v.News paper	10	25%
vi.Seminar	11	27.5%
vii.Workshop/Conference		
viii.Unknown		

COMPARISON BETWEEN PRE TEST AND POST TEST KNOWLEDGE SCORES

TABLE:-2

N = 40

Score	Grading	Pretest		Post test	
		Frequency	Percentage	Frequency	Percentage
19-24	Excellent	0	0%	21	52.5%
13-18	Good	0	0%	19	47.5%
7-12	Average	32	95%	0	0%
1-6	Poor	8	5%	0	0%

Data in the above table shows that maximum number of students had increased knowledge as seen in post test. In pre test, 0 % had scores between 19-24 as compared to 52.5% in post test. 47.5% had good Knowledge scores between 13-18 in post test while only 0 % had good score in pre test. 95 % had pre test score of average that is between 7-12 and 5 % had pretest score of poor i.e., between 0-6 i.e. while none of the participants had average and poor scores in post test.

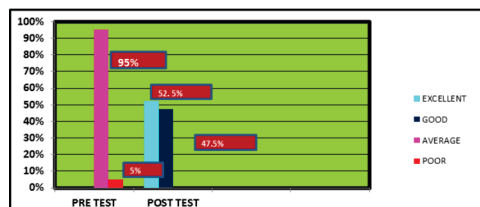


Fig 1:- Bar Diagram showing categorical comparison of knowledge scores between Pre Test and Post Test.

SECTION 3-Effectiveness of structured teaching programme in terms of gained knowledge scores.

This section deals with analysis and interpretation of the data in order to evaluate the effectiveness of Structured Teaching Programme in terms of gain knowledge.

TABLE No. 3 Mean, standard deviation and't' value of pretest and post test knowledge score. (N=40)

Knowledge score	Mean	Standard deviation	Mean difference	't' value
Pretest	8.85	1.65	10.075	25 . 701
Posttest	18.82	1.91		

Df-P ≤ 0.05

N = 40

Age in years	16-18	0	0	0	0	3	0 NS
	19-21	2	38	0	0		
	22-23	0	0	0	0		
	24-25	0	0	0	0		
Religion	Hindu	1	3	0	0	3	3.741 NS
	Christian	1	35	0	0		
	Muslim	0	0	0	0		
	Others	0	0	0	0		
Do you have any previous knowledge regarding collection of cord blood for stem cell therapy	Yes	1	3	0	0	1	7.868 S*
	No	1	35	0	0		
The previous knowledge is gained from	Newspaper	1	9	0	0	3	4.098 NS
	Seminar	0	9	0	0		
	Workshop/Conference	0	10	0	0		
	Unknown	1	10	0	0		

The data in table 4.5 depicted the computed chi-squares values between pretest knowledge score and the demographic variables indicated that there is no significant association between, age, religion, sources of previous knowledge and there is significance in previous knowledge about collection of cord blood for stem cell therapy.

IMPLICATIONS OF THE STUDY

1. Structured teaching programme is an effective way of delivering knowledge to 3rd year B.sc nursing students. Nurses can use this structured teaching programme to distribute and circulate among the 3rd year B.Sc nursing students in colleges.
2. Nurse administrator should take an initiative in creating policies or plans in providing education to the patients during their hospital stay and at the time of the discharge.

RECOMMENDATION

On the basis of the findings of the study, it is recommended that,

1. A similar study can be replicated on a large sample so that the finding can be generalized.
2. A comparative study may be conducted to find out the effectiveness between structured teaching programmes regarding the same topic.
3. A study can be conducted to assess the long term effects of structured teaching programme in 3rd B.Sc nursing students regarding regular screening.
4. An exploratory study may be conducted to identify the knowledge of 3rd B.Sc nursing students regarding collection of cord blood for stem cell therapy.

CONCLUSION

After the detailed analysis, this study leads to the following conclusion that 3rd year B.Sc nursing students that did not have enough knowledge of collection of cord blood for stem cell therapy. they require further education and information because all of them need to enhance their knowledge regarding collection of cord blood for stem cell therapy.

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