THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE AND PRACTICE REGARDING BLOOD TRANSFUSION AMONG STAFF NURSES

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DOI: <http://doi.org/10.47211/trr.2021.v07i01.014>

ABSTRACT

Life begins not at the time of fertilization or conception but when blood first appears in the embryo, at about 20 days following conception. Blood is a specialized bodily fluid in animals that delivers necessary substances such as nutrient and oxygen to the cells and transports metabolic waste products and carbon dioxide away from that same cell. In human life blood are travel by vessels (artery and veins) it consist 8% of total body weight. The average adult has a blood volume of 5 litter and Blood pH is regulated to stay within the narrow range of 7.35 to 7.45, making it slightly alkaline. Blood are composed of several kinds of cells plasma and, Cells these formed 45% elements of blood are erythrocytes (Red blood cells RBC's) it constitute about 45% of whole blood, leukocytes (White blood cells) about 0.7%, and thrombocytes (platelets) about 54.30%. Plasma these formed about 55% of blood .it is straw-yellow colour. The blood plasma volume total of 2.7-3.0 litter in an average human. It's containing 92% water and 8% blood plasma protein and trace amount of other materials. Plasma circulates dissolved nutrients, such as glucose, amino acids and fatty acids. Massive blood transfusion saves the lives of thousands of severely injured patients each year. Injury is rapidly becoming the second leading cause of death in the world. These deaths are highly preventable with social and engineering controls and good trauma care. Massive transfusion is readily available, safe, effective and cheap in the context of modern trauma center care.

Key Words: Erythrocytes, Thrombocytes, Plasma and Cells

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INTRODUCTION

Life begins not at the time of fertilization or conception but when blood first appears in the embryo, at about 20 days following conception. Blood is a specialized bodily fluid in animals that delivers necessary substances such as nutrient and oxygen to the cells and transports metabolic waste products and carbon dioxide away from that same cell. In human life blood are travel by vessels (artery and veins) it consist 8% of total body weight. The average adult has a blood volume of 5 litter and Blood pH is regulated to stay within the narrow range of 7.35 to 7.45, making it slightly alkaline. Blood are composed of several kinds of cells plasma and, Cells these formed 45% elements of blood are erythrocytes (Red blood cells RBC's) it constitute about 45% of whole blood, leukocytes (White blood cells) about 0.7%,and thrombocytes (platelets) about 54.30%. Plasma these formed about 55% of blood .it is straw-yellow colour. The blood plasma volume total of 2.7-3.0 litter in an average human. It's containing 92% water and 8% blood plasma protein and trace amount of other materials. Plasma circulates dissolved nutrients, such as glucose, amino acids and fatty acids.

OBJECTIVES

1. To assess the knowledge regarding blood transfusion among staff nurses before administration of self-instructional module.
2. To assess the practice regarding blood transfusion among staff nurses before administration of self-instructional module.
3. To assess the knowledge regarding blood transfusion staff nurses after administration of self-instructional module.
4. To assess the practice regarding blood transfusion among staff nurses after administration of self-instructional module.
5. To evaluate the effectiveness of self-instructional module regarding blood transfusion.
6. To find out association of level of knowledge with their selected demographic variables.

ASSUMPTIONS

The study assumes that:

1. The self-instructional module may improve the knowledge and practice on blood transfusion among staff nurses.
2. The knowledge and practice of blood transfusion will be different among staff nurses.
3. Staff nurses may be co-operative with study.

RESEARCH HYPOTHESIS:

H 1 :- The mean post-test knowledge score is higher than mean protest knowledge score of staff nurse regarding blood transfusion.

H 2 :- There will be significant difference in the level of practice regarding blood transfusion between pre-test and post-test scores.

H 3 :- There will be significant association between knowledge regarding blood transfusion and selected demographic variables of staff nurses.

SETTING OF THE STUDY

Setting may be natural setting or laboratory setting depending upon study topic and researcher choice.

Setting refers to the areas where the study in conducted. Qualitative researchers deliberately strive to study their phenomenon in a variety of natural contexts.

The setting for this study was Narayana Multi Specialty Hospital, Pratap Nagar, Jaipur.

VARIABLES UNDER THE STUDY

A variable is an attribute of person or object that varies that is taken on different value. Two types of variables are used in this study. They are

1. Independent Variable
2. Dependent Variable
3. Demographic Variable

1. Independent variable

The independent variable is the condition or characteristics manipulated by the researcher. In this study, the independent variable was self-instructional module regarding blood transfusion.

2. Dependent Variable

The dependent variable is referred to as the criterion variable. It is the effect of the section of the independent variable. The dependent variable was knowledge and practice of staff nurses regarding blood transfusion.

3. Demographic variable

An uncontrolled variable that greatly influences the results of the study is called as the demographic variables, Demographic variables selected for this study are age, gender, religion, professional education, area of working, year of experience, Previous knowledge regarding blood transfusion throughout .

Figure:-1: Modified Conceptual Framework Based on System Model

RESEARCH METHODOLOGY

Figure No. 2: Schematic Representation of research methodology

RESULTS

This deals with the data analysis and interpretation of the data collected through structured knowledge questionnaire. All obtained data were analysed and interpreted on the basis of research objectives. Then the findings were printed in different graphs and tables of percentage.

SECTION 1: DESCRIPTION OF DEMOGRAPHIC VARIABLES OF THE STAFF NURSES**Table No.: 1 Description of demographic variables of the staff nurses****N= 60**

Variable	Experimental Group	Control Group			Total	Percentage
	Frequency	Percentage	Frequency	Percentage		
Age In Year						
<25	8	26.67%	7	23.33%	15	25.00%
26- 30	10	33.33%	10	33.33%	20	33.33%
31- 35	5	16.67%	5	16.67%	10	16.67%
36- 50	7	23.33%	8	26.67%	5	25.00%
Gender						
Male	13	43.33%	12	40%	25	41.67%
Female	17	56.67%	18	40%	35	58.33%
Religion						
Hindu	13	43.33%	12	40%	25	41.67%
Muslim	5	16.67%	5	16.67%	10	16.67%
Christen	10	33.33%	10	33.33%	20	33.33%
Sikh	2	06.67%	3	10%	5	08.33%
Prof. Qualification						
G.N.M.	15	50%	15	50%	30	50%
B.Sc. Nursing	8	26.67%	7	23.33%	15	25%
Post basic B.Sc. Nursing	5	16.67%	5	16.67%	10	16.67%
M.Sc. Nursing	2	06.67%	3	10%	5	08.33%
Area of Working						
SICU	5	16.67%	5	16.67%	10	16.67%
CTVS	12	40%	13	43.33%	25	41.67%
MICU	10	33.33%	10	33.33%	20	33.33%
CCU	3	10%	2	06.67%	5	08.33%
Year of Experience						
0-5 years	10	33.33%	10	33.33%	20	33.33%
6-10 years	7	23.33%	8	26.67%	15	25%
11-15 years	8	26.67%	7	23.33%	15	25%
Above 15 years	5	16.67%	5	16.67%	10	16.67%
Previous knowledge through						
Seminar	10	33.33%	10	33.33%	20	33.33%
workshop	7	23.33%	8	26.67%	15	25%
Mass median	8	26.67%	7	23.33%	15	25%
Internet	5	16.67%	5	16.67%	10	16.67%

SECTION 2: EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE

Table No. 2 is showing that in experimental group the mean of pre-test is 14.5, median is 14.5, SD is 1.707 whereas the mean of post-test is 19, median is 19 and SD is 1.86.

Group	Experimental Group			Control Group			df	Tabulated Value	Calculated Value
	Mean	Median	SD	Mean	Median	SD			
Pre-Test	14.5	14.5	1.707	11.5	11.5	1.84	58	1.671	13.604
Post Test	19	19	1.86	12.5	13	1.59			

SECTION 3: ASSOCIATION BETWEEN KNOWLEDGE LEVELS OF STAFF NURSES WITH DEMOGRAPHIC VARIABLE

Table No. 3: Association between knowledge levels of staff nurses with demographic variable

S.No.	Demographic variable	Df	Tabulated Value	Calculated value		Significant/ Not significant
				Pre test	Post test	
1.	Age	4	9.49	0.6663	0.1431	Not Significant
2.	Gender	2	5.99	0.0837	0.5713	Significant
3.	Religion	6	12.99	4.3447	4.6182	Significant
4.	Professional education	6	12.99	1.31	5.8401	Significant
5.	Area of working	6	12.99	2.4628	1.9213	Significant
6.	Experience	6	12.99	1.2755	7.9342	Significant
7.	Previous knowledge throughout	2	5.99	1.8741	0.6101	Not Significant

CONCLUSION

Transfusion of blood saves life. An error in blood transfusions, at the same time, takes life. Children are more vulnerable to disease. Nurses being responsible for the final bedside check before transfusion, have the final opportunity to prevent a mis-transfusion. An understanding and knowledge of the path physiology of transfusion reaction, symptoms and treatment is essential to safely administer and monitor transfusion. So researcher has come across many nurses negligence's in blood transfusion. So researcher has come across mortality of children. So researcher has found a need to administer structured teaching programmed on blood transfusion among nurses in order to decrease morbidity and mortality rate.

REFERENCES

1. [Http://www.religioustolerance.org/abo_when3.htm/witness.htm#med](http://www.religioustolerance.org/abo_when3.htm/witness.htm#med)
2. [Http://en.wikipedia.org/wiki/blood](http://en.wikipedia.org/wiki/blood)
3. Luckmann, sorensen, yoyce m black, harcourt brace
4. Saunders international edition. medical surgical nursing, a psychophysiologic approach, 4th ed. philadelphia.
5. Lackritz e.m. campbell cc, ruebush tk 2nd, 'effect of blood transfusion on survival among children in a kenyan hospital'. lancet'. 1992 aug 29; 340(8818):524-8.