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Effectiveness of Informational Booklet on Knowledge Regarding Blood Donation among D.Ed. Students, in Selected Colleges at Tumkur

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Abstract: Background: Blood donation is an integral and essential part of our health care system without which many of the medical procedures could not take place. Blood can save millions of life, and young people are hope and future of safe blood. Blood Donation is important for proper and adequate supply of blood as it is the only source to fulfill the need of blood. **Objectives:** (1) To assess the knowledge regarding blood donation among D.Ed. students of selected colleges. (2) To evaluate the effectiveness of information booklet on knowledge regarding blood donation. (3) To find the association between pretest level of knowledge with selected socio-demographic variables. **Methodology:** Tool I: Self-administered knowledge questionnaire was prepared and used to assess the knowledge regarding blood donation among D.Ed. students consisted of two parts: Part I: Socio demographic variables. Part II: Self-administered knowledge questionnaire. **Results:** Majority of the D.Ed. students 37(74%) were in between age group of 18-20 years, followed by 13(26%) were in the age group of 21 and above. Out of 50 D.Ed. students, 30(60%) were male, 20(40%) were female. 25(50%) were living in urban area, followed by 25(50%) were in rural area. Out of 50 D.Ed. students, majority were exposed to mass media like newspaper 17(34%), TV 11(22%), health information booklet 14(28%), followed by others 8(16%). Among 50 D.Ed. students, 24(48%) were donated blood, followed by 26(50%) were not donated blood. **Interpretation and conclusion:** The overall findings of the study shown that D.Ed. students were having inadequate knowledge regarding blood donation. The gain in mean knowledge score after administration of informational booklet is statistically significant at 0.001 level.
Keywords: Effectiveness, informational booklet, blood donation, D.Ed. students.

Introduction

Blood is the life line of human body, supplying oxygen and other nutrients. An adult human body has approximately 5 liters of blood. The blood content is reduced in a disease process, accident and surgery. Blood transfusion plays a vital role in providing support to the treatment procedure. In recent years blood transfusion services have become an integral part of the health care system. The primary objective of a blood bank is to ensure adequacy, accessibility and efficient supply of blood and its products in a safe, cost effective and coordinated manner.[1]

Now a days all the hospitals have blood banks where blood and blood components are used frequently. The regional transfusion services also have facilities for removal of blood from donors. Donors are instructed to avoid heavy lifting for several hours, to avoid smoking for one hour, to avoid drinking alcohol beverages for three hours, to increase fluid intake for two days and to eat

healthy meals for two weeks. June 14 of every year is celebrated as World Blood donors' day and October 1st as National Voluntary Blood Donation Day.[2]

Blood donors should give their blood voluntarily and without expectation of payment. In most countries, adults comprise half to one third of the population; 50-90% of them are in good health. The young donor is the donor of the future; a high percentage of donations may come from college and university students. This group must be created awareness about blood donation through educational programs, information through booklets, pictures, drama, etc. All donors must be in good health. The decision as to whether an individual donor is suitable for blood donation is based upon the donor's health history, physical examination and tests done prior to donation.[3]

Facts and figures from Blood Safety Survey

- ✓ 65% of all blood donations are made in developed countries, home to just 25% of the world's population.
- ✓ In 73 countries, donation rates are still less than 1% of the population (the minimum needed to meet basic needs in a country). Of these, 71 are either developing or transitional countries.
- ✓ 42 countries collected less than 25% of their blood supplies from voluntary unpaid blood donors, which is the safest source.
- ✓ 31 countries still reported collecting paid donations in 2009, more than 1 million donations in total.
- ✓ 41 countries were not able to screen all blood donations for one or more of the following transfusion-transmissible infections (TTIs)–HIV, hepatitis B, hepatitis C and syphilis.[4]

Objectives of the study

1) To assess the knowledge regarding blood donation among D.Ed. students of selected colleges.
2) To evaluate the effectiveness of information booklet on knowledge regarding blood donation.
3) To find the association between pretest level of knowledge with selected socio-demographic variables.

Hypothesis

H_1: There is significant difference between pre-test and post-test knowledge scores among I year D.Ed. students on knowledge regarding blood donation.

H_2: There is significant association between the level of knowledge and selected socio-demographic variables on knowledge regarding blood donation among I year D.Ed. students.

Methodology

Variables

Independent variable: Informational booklet

Dependent variable: Knowledge score regarding blood donation.

Conceptual frame work

The following tool was used to collect the data

Tool I: Self-administered knowledge questionnaire was prepared and used to assess the knowledge regarding blood donation among D. Ed students consisted of two parts:

Part I: Socio demographic variables.

Part II: Self-administered knowledge questionnaire.

A self-administered knowledge questionnaire having 30 items was used to assess the knowledge of respondents regarding blood donation. The tool was validated by seven experts, pre testing was done by split half technique, which measures the co-efficient of internal consistency. The reliability of

knowledge items was found to be r=1, which indicated that the tool was reliable. Pilot study was conducted on five D.Ed. students, who met the inclusive criteria to confirm the feasibility and practicability. No modifications were found to be necessary. The main data was collected from 27-02-2010 to 29-03-2010. The data obtained was analyzed using descriptive and inferential statistics; data was presented using tables, based on the objectives of the study.

Knowledge score was analyzed using Karl Pearson's correlation Coefficient. Association between knowledge score of respondents regarding blood donation with selected socio-demographic variables were analyzed using chi-square test.

Organization of Findings

The data collected from the D.Ed. students has been organized and presented under the following headings;

Section I: Frequency and percentage distribution of D.Ed. students according to socio-demographic variables.

This section deals with the data pertaining to the base line proforma of D.Ed. students. The data analysed by using descriptive statistics and presented in terms of frequency and percentage.

Table 1. Frequency and percentage distribution of the according to D.Ed. students age, gender, place of residence, exposure to mass media, donated blood at any time (n= 50)

S. No.	Variable	Frequency (f)	Percentage (%)
1	**Age (in years)**		
	a) 18-20	37	74
	b) 21 and above	13	26
2	**Gender**		
	a) Male	30	60
	b) Female	20	40
3	**Place of residence**		
	a) Urban	25	50
	b) Rural	25	50
4	**Exposure to mass media**		
	a) News paper	17	34
	b) TV	11	22
	c) Health information booklet	14	28
	d) Others	8	16
5	**Donated blood at any time**		
	a) Yes	24	48
	b) No	26	52

Table 1 shows majority of the D.Ed. students 37(74%) were in between age group of 18-20 years, followed by 13(26%) were in the age group of 21 and above. Out of 50 D.Ed. students, 30(60%) were male, 20(40%) were female. 25(50%) were living in urban area, followed by 25(50%) were in rural area. Out of 50 D.Ed. students, majority were exposed to mass media like newspaper 17(34%), TV 11(22%), health information booklet 14(28%), followed by others 8(16%). Among 50 D.Ed. students, 24(48%) were donated blood, followed by 26(50%) were not donated blood.

Section II: Analysis of pre-test and post-test knowledge regarding blood donation among D.Ed. students.

This section deals with the analysis and interpretation of the data to assess the pre-test and post-test knowledge regarding blood donation among D.Ed. students. The data regarding pre-test and post-test knowledge score is presented in the table using frequency and percentage.

Table 2. Analysis of pre-test and post-test knowledge

Levels	Pre-test		Post-test	
	Frequency	%	Frequency	%
Adequate (21-30)	-	-	44	88
Moderately adequate (11-20)	50	100	6	12
Inadequate (0-10)	-	-	-	-

In the pre-test knowledge maximum of 100% D.Ed. students have moderately adequate knowledge. From the post-test knowledge 88% of the D.Ed. students have adequate knowledge and 12 % have moderately adequate knowledge.

Table 3. Area wise analysis of pre-test and post-test

Area	Max. score		Mean		SD		Mean difference	t-value	Result
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test			
Content and meaning (150)	102	120	34.00	40.00	9.17	6.56	6.00	2.88	NS P=0.102
Composition of blood (50)	28	31	28.00	31.00	--	----	--	--	--
Functions of blood (50)	33	35	33.00	35.00	--	--	--	--	--
Blood is required in the following conditions (50)	30	35	30.00	35.00	--	--	--	--	--
Different blood groups (150)	84	104	28.00	34.67	1.00	2.08	6.67	7.56	NS P=0.017
Blood donation (550)	286	397	26.00	36.09	3.38	2.26	10.09	10.14	HS P<0.001
Criteria needs to blood donation (300)	134	234	22.33	39.00	2.58	2.09	16.67	11.47	HS P<0.001
Importance of blood testing before blood donation (50)	21	39	21.00	39.00	--	--	--	--	--
Who cannot donate blood (100)	46	76	23.00	38.00	4.24	1.41	15.00	3.75	NS P=0.166
Benefits of blood donation (50)	24	35	24.00	35.00	--	--	--	--	--
NS= Not significant, HS= Highly Significant									

The above table 3, gives Max. score, Mean, SD, SEM, Mean difference, t-value and Result of the pre & post-test of the present study. With respect to Blood donation and criteria need to blood donation are highly significant. i.e. significant at 0.001 level. Content and meaning, different blood groups and who cannot donate the blood are not significant.

Section III: Effectiveness of informational booklet on knowledge regarding blood donation among D.Ed. students.

This section deals with the analysis and interpretation of the data to evaluate the effectiveness of informational booklet on knowledge regarding blood donation among D.Ed. students.

Table 4. Range, mean, mean percentage and standard deviation of pre-test and post-test knowledge score of D.Ed. students regarding blood donation (n=50)

Knowledge	Range	Mean	Mean %	SD
Pre-test	12-19	15.92	31.84	1.66
Post-test	20-27	22.24	44.48	1.64

The data described in the table 4, reveals that the students' knowledge score was higher in the post-test (range 20-27) than that in the pre-test (range 12-19). It is also evident that mean post-test knowledge score (22.24) was higher than that of pre-test (15.92).

Significance of mean difference between pre-test and post-test knowledge scores of D.Ed. students regarding blood donation.

Testing of hypothesis

To find out the significance of mean difference between the pre-test and the post-test knowledge scores of respondents regarding blood donations, the following hypothesis was stated;

H_1- There is significant difference between the pre-test and the post-test knowledge scores on knowledge regarding blood donation among D.Ed. students.

The above stated hypothesis was tested by using paired 't' test.

Knowledge

Pre-test	**Post-test**
Mean score = 15.9	Mean score = 22.24
SD score = 1.66	SD score = 1.64

Table 5. Mean difference between pre-test and post-test knowledge scores of D.Ed. students regarding blood donation.

Parameter	Mean	SD	Range	Mean%	t -value	Result
Pre-test	15.92	1.66	12-19	31.84	20.68	HS
Post-test	22.24	1.64	20-27	44.48		P<0.001
Improvement	6.32	0.02				
HS= Highly significant						

The Table 5; shows that, mean score has increased in the post test. The mean in the post test was 22.24 and the mean in the pre-test was 15.92. Similarly the variation was also increased in the post test compared to pre-test. SD in the post test is 1.64 and in the pre-test was 1.66.

The mean is improved by 6.32 and variation was increased by 0.02. The calculated value of 't' is 20.68, which is highly significant at 0.001 level. This indicates the informational booklet is effective.

Section IV: Association between pre-test knowledge score with selected socio-demographic variables.

This section deals with the findings of the association between pre-test knowledge score and selected socio-demographic variables. The mean of the pre-test knowledge score was calculated and found to

be 15.92. The number of D.Ed. students, who were above and below the median were identified and grouped according to their socio-demographic variables like age, gender, place of residence, source of information and donated blood at any time.

To test the association between the knowledge score and socio-demographic variables, the following hypothesis was formulated.

H_2: There is significant association between pre-test level of knowledge and selected socio-demographic variables of D.Ed. students.

Table 6. Association between pre-test knowledge score with selected socio-demographic variables (n= 50)

S. No.	Variable	Below median (<M)	Above median (>M)	df	Chi-square value (X^2)	P-value	Result
1	**Age (in years)**						
	a) 18-20	13	24				
	b) 21 and above	10	5	1	3.82	0.05	SIG
2	**Gender**						
	a) Male	17	13				
	b) Female	10	10	1	0.33	0.56	NS
3	**Place of residence**						
	a) Urban	8	17				
	b) Rural	17	8	1	3.92	0.048	SIG
4	**Exposure to mass media**						
	a) News paper	5	12				
	b) TV	8	3	3	9.92	0.019	SIG
	c) Health information booklet	6	8				
	d) Others	6	2				
5	**Donated blood at any time**						
	a) Yes	10	14				
	b) No	18	7	1	3.89	0.049	SIG
S= Significant, NS= Not significant							

The findings in the Table 6, reveal that, there was no significant association between pre-test knowledge scores with selected socio-demographic variable such as gender (X^2 =0.33) at the level of 0.001 level. But there was significant association between pre-test knowledge scores with selected socio-demographic variable such as age (3.82), gender (0.33), place of residence (3.92) and exposure to mass media (9.92), donated blood at any time (3.89) at 0.001 level of significance.

Findings of the study

Section I: Distribution of respondents according to socio-demographic variables.

Majority of the respondents 37(74%) were in between age group of 18-20 years, followed by 13(26%) were in the age group of 21 and above, out of 50 respondents, 30(60%) were male, 20(40%) were female, among 50 of them 25(50%) were living in urban area, followed by 25(50%) were in rural area. Out of 50 respondents, majority were exposed to mass media like newspaper 17(34%), TV 11(22%), health information booklet 14(28%), followed by others 8(16%), among 50 respondents, 24(48%) were donated blood, followed by 26(50%) were not donated blood.

Section II: Analysis of pre-test and post-test knowledge regarding blood donation among D.Ed. students.

In the pre-test majority 100% of the D.Ed. students had moderately adequate knowledge regarding blood donation. But in the post-test knowledge 88% D.Ed. students had adequate knowledge, 12% had moderately adequate knowledge regarding blood donation. The data reveals that the D.Ed. students' knowledge score was higher in the post test (range 20-27) than that in the pre-test (range 12-19). It is also evident that mean post-test knowledge score (22.24) was higher than that of pre-test (15.92).

The data gives Max. score, Mean, SD, Mean difference, t-value and result of the pre and post-test of the present study. With respect to Blood donation and criteria need to blood donation are highly significant. i. e. significant at 0.001 level. Content and meaning, different blood groups and who cannot donate the blood are not significant.

Section III: Effectiveness of informational booklet on knowledge regarding blood donation among D.Ed. students.

The data reveals that the students' knowledge score was higher in the post test (range 20-27) than that in the pre-test (range 12-19). It is also evident that mean post-test knowledge score (22.24) was higher than that of pre-test (15.92), there mean score has increased in the post test.

The mean in the post test was 22.24 and the mean in the pre-test was 15.92. Similarly the variation was also increased in the post test compared to pre-test. The mean difference between pre-test and post-test knowledge score was a true difference and not a chance difference.

SD in the post test is 1.64 and in the pre-test was 1.66. The mean is improved by 6.32 and variation was increased by 0.02. The calculated value of 't' is 20.68 is highly significantly at 0.001 level. This indicates the informational booklet was significantly effective in increasing the knowledge of D.Ed. students.

Section IV: Association between pre-test knowledge score with selected socio-demographic variables.

The findings of the study reveal that, there was no significant association between pre-test knowledge scores with selected socio-demographic variable such as gender (X^2 =0.33) at the level of 0.001 level. But there was significant association between pre-test knowledge scores with selected socio-demographic variable such as age (3.82), gender (0.33), place of residence (3.92), and exposure to mass media (9.92), donated blood at any time (3.89) at 0.001 level of significance.

Interpretation and conclusion

The overall findings of the study shown that D.Ed. students were having inadequate knowledge regarding blood donation. The gain in mean knowledge score after administration of informational booklet is statistically significant at 0.001 level. It is proved that informational booklet is an effective method in improving the knowledge of D.Ed. students. Educational authorities must provide effective education and proper encouragement for the same. Informational booklet prepared by the investigator for the study can also be used as a reference for teaching other personnel.

The present study in short gave the researcher a new experience, a chance to widen the knowledge and venue to work with students. Constant encouragement and guidance of the guide, cooperation of the educational authorities and D. Ed. students have contributed to the fruitful completion of the study.

Conflicts of interest

There are no conflicts of interest.

References

1. Lewis SM. Medical-surgical Nursing: Assessment and Management of Clinical Problems. Elsevier Mosby; 2004.
2. Blood donation, Available from: http//www.Don't forget to bookmark BloodBook.com
3. Copyright©2010 Maharashtra State Blood Transfusion Council. Designed and developed by aarogya.com
4. Based on WHO Global Database on Blood Safety (GDBS) and Blood Safety Indicators. Available from: http//www.globalbloodbank.com

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