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Assess the Knowledge and Attitude Regarding Blood and Organ Donation Among the College Students of Dadra & Nagar Haveli in Selected Colleges with A View to Develop a Self-Instructional Module

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ABSTRACT

Introduction: The life force in all human beings, regardless of colour, race or belief, flows through their arteries and veins; it is red liquid which depends on whether they are well or ill – bears good and bad tidings. Its various components form a highly developed Défense and transport system which gives and saves life.

Life is a dynamic process. It starts from birth and ends in to death. In between comes a different stage of life with different diseases and problems. The medical advancement of modern medicine is organ transplantation which has the power to save the lives of the clients.

Aims: The aim of the study to Assess the knowledge and attitude regarding blood and organ donation among the college students of Dadra & Nagar Haveli in selected colleges with a view to develop a self-instructional module.

Method: Non-experimental descriptive research design was used. A study conducted in selected college of Dadra & Nagar Haveli with the sample size 200 who met the sampling criteria were selected with the help of a simple random sampling technique the data collected using structure questionnaire schedule and Likert scale .

Results: The data obtained were analysed by using inferential and descriptive statistics. The findings of the study show that 62% of them had a average ,37% had a inadequate, 1% had a good knowledge of blood donation and 57%had a inadequate ,43% had a average knowledge of organ donation. For attitude both had a 99% of favourable and 1% has a unfavourable of blood and organ donation. The correlation between knowledge and attitude of blood donation (r=0.143) and for organ donation (r=0.162) both are positively correlation present. This study shows that association with the sociodemographic variables is significant for knowledge of blood and organ donation and for attitude of blood donation with the sociodemographic variables is significant.

Conclusion: This finding suggests positive correlation between knowledge and attitude of blood donation, positive correlation of organ donation.

Keywords: Knowledge. Attitude. Blood Donation. Organ Donation. College Students

INTRODUCTION

BACKGROUND OF THE STUDY

The life force in all human beings regardless of colour, race or belief, flows through their arteries and veins it is red liquid which depends on whether they are well or ill ,bears good and bad tidings. Its various components form a highly developed Défense and transport system which gives and saves life. Human blood is essentially a vital, life saving component, capable of saving millions of lives if ready availability can be ensured. According to the World Health Organization (WHO) at least 1% of the Nation's population should donate blood voluntarily to meet the basic requirement for blood and blood products.

The act of transferring organs from a human body, either voluntarily while the donor is still alive or after death for medical purposes, is known as organ donation[11].One donor's organs can save or benefit up to fifty individuals. Internal organs including the kidneys, heart, liver, pancreas, intestines, lungs, bone, and bone marrow, as well as exterior organs like the cornea and skin, are among the organs that can be given. The only treatment available to patients with end-stage organ failure is organ transplantation. When compared to greater requirements, there are less transplant donors. This is a result of misconceptions and a lack of knowledge about organ donation. More than 36,528 transplants gave patients and their families new life in 2018. In 2018, 62% of organ recipients were males and other 38% were females.

NEED OF THE STUDY:

Although blood transfusions save lives and enhance health, many people who need them do not have prompt access to healthy blood. Every nation's national health care policy and infrastructure should include safe and sufficient blood supply.WHO advises that through efficient management and integrated blood supply networks, all blood collection, testing, processing, storage, and distribution-related activities be coordinated at the national level. To ensure uniform application of standards and consistency in the safety and quality of blood and blood products, the national blood system should be regulated by national blood policy and legal framework.125 out of 171 countries, or 73% of the reporting countries, had a national blood policy in 2018. The safety and quality of blood transfusions are specifically covered by laws in 66% of reporting nations, or 113 out of 171 countries; this includes 79% of high-income countries, 63% of middle-income countries, and 39% of low-income countries.

The Transplantation of Human Organs (Amendment) Act 2011 was passed after the Indian government started the process of revising and changing the THOA 1994. High burden (deficit between supply and demand), inadequate infrastructure, particularly in government institutions, a lack of understanding of brain stem death among stakeholders, a lack of awareness and attitude regarding organ donation, and a low incidence of deceased organ donation are some of the problems and difficulties. One of the major developments in contemporary medicine is organ transplantation. It gives patients of all ages who have serious illnesses or accidents to their key organs a second chance at life. Other donated tissues, such as bones, tendons, and corneas, can improve lives by aiding in the restoration of movement, sight, and other bodily functions. However, there is a lot greater need for organ donation than there is supply. On any given day, more than 100,000 Americans are on the waiting list for a life-saving organ transplant. However, only roughly 40,000 transplants are performed annually.

Studies of knowledge and attitude are frequently employed to look at different facets of human conduct. The investigator is more equipped to understand people's perspectives on behavior and provide pertinent corrective actions by evaluating their knowledge and attitudes. Studies of knowledge and attitude have been widely employed to investigate the topic of voluntary blood donation. Reasons for giving or not

giving blood, information sources, variables that encourage or discourage voluntary blood donation, the influence of peer pressure on potential donors, etc.26 are among the frequently examined topics.

OBJECTIVES OF THE STUDY:

- To assess the level of knowledge and attitude regarding blood and organ donation among the college students of selected colleges of Dadra & Nagar Haveli
- To find the correlation between level of knowledge and attitude regarding blood and organ donation among the college students.
- To find the association between the level of knowledge and attitude regarding blood and organ donation among the college students of with their selected demographic variables

HYPOTHESIS:

Null Hypothesis:

H01: - There is no significant correlation between knowledge and attitude regarding blood and organ donation among college students at 0.05 level of significance.

H02: There is no significant association between level of knowledge and attitude regarding blood and organ donation among college students with their selected demographic variables at 0.05 level of significance.

Research Hypothesis:

H1 – There is a significant correlation between the knowledge and attitude regarding blood and organ donation among the college students at 0.05 level of significance.

H2- There is a significant association between level of knowledge and attitude regarding blood and organ donation among college students with their selected demographic variables at 0.05 level of significance.

ASSUMPTION

- College students may have some knowledge on blood and organ donation.
- Students' Knowledge influences the attitude regarding blood and organ donation

DELIMITATION

- College students who meet the inclusion criteria
- Data collection period of 4 week
- College students who studying in Dr. APJ Abdul Kalam Government College, Dokmardi, Silvassa.
- College students who are from bachelor of science, bachelor of commerce and bachelor of arts.
- The sample size is 200
- The data collection period in limited to 4 weeks

OPERATIONAL DEFINITION:

Knowledge:

knowledge (of about something) information, understanding and skills that you have gained through learning or experience.

In this study, the knowledge refers to understanding the fact regarding blood and organ donation.

Attitude:

Your attitude to something is the way that you think and feel about it, especially when this shows in the

way you behave.
In this study, attitude refers to settled way of thinking regarding blood and organ donation.

Blood Donation:

Blood donation is a voluntary procedure that can help save lives. There are several types of blood donation. Each type helps meet different medical needs.
In this study, Blood donation refers to when a person voluntarily gives his or her blood for others medical treatment.

Organ Donation:

Organ donation is the process when a person authorizes an organ of their own to be removed and transplanted to another person, legally, either by consent while the donor is alive, through a legal authorization for deceased donation made prior to death, or for deceased donations through the authorization by the legal next of kin.
In this study, Organ donation is the removal of specific organs of the human body from a person who has recently died, or from a living donor, for the purpose of transplanting them in to other persons.

College Students:

A person studying at a university or other place of higher education.[33]
In this study, college student means any undergraduate individual enrolled on a full-time basis in a college.

Self-Instructional Module:

It is the printed material consists of pictorial diagrams and information's.[34]
In this study, it is a printed material consists of pictorial diagrams and information regarding blood and organ donation which gives more knowledge to the adolescents regarding blood and organ donation.

RESEARCH METHODOLOGY

RESEARCH APPROACH: Quantitative research approach
RESEARCH DESIGN: correlational Research design

VARIABLES:

Research variables: In this study research variables were, knowledge and attitude regarding blood donation and organ donation**.**
Socio-Demographic variables: In this study socio-demographic variables were age, sex, religion, type of family, education, health information resources, Know any organization in our city for blood and organ donation, donated blood before, registered for organ donation.
SAMPLE: In the study sample consist of college students who were the 18 years or above of second year of college students from Dr APJ Abdul Kalam Government College, Dokmardi, Silvassa, Colleges of Dadra and Nagar Haveli.

SAMPLE SIZE: In this study, sample size consists of total 200, out of which 70 from Commerce students, 70 from Arts students and 60 from Science students.

SAMPLING TECHNIQUE: In present study simple random probability sampling technique was used to select the sample.

SAMPLING CRITERIA

Inclusion Criteria: In this study, students who are:

- both boys and girls
- second year of Arts, Commerce & Science
- available during data collection
- willing to participate

Exclusion Criteria: In this study, students who are

- not willing to participate in the study.
- sick
- absent
- studying in field of medical and paramedical.

DESCRIPTION OF TOOL

After reviewing the literature discussion with experts, a structured knowledge questionnaire, structured 5-point Likert scale was prepared. The tool consists of the following

Section:1 This section of tool consist of items related to demographic. It consist 10 items

Age ,Sex ,Religion, Type of family, Education, Health information resources, Knowing any organization of blood donation , Knowing any organization of organ donation , Registered organ donor

Section :2 Structured Questionaries (knowledge): It consists of 20 multiple choice questions regarding blood donation and 20 multiple choice questions regarding organ donation. It has four options among which, one is the correct response.

Section 2.1 Structured Questionaries (knowledge): It consists 20 multiple choice questions regarding blood donation.

Section 2.2 Structured Questionaries (knowledge): It consists of 20 multiple choice questions regarding organ donation.

Section: 3 Likert scale (Attitude): Five-point Likert scale consists of 10 statements for Blood donation & 10 statements for Organ donation to assess the attitude of the college student regarding blood and organ donation. Total score is 50.

Section 3.1: Five-point Likert scale consists of 10 statements for Blood donation.

Section 3.2: Five-point Likert scale consists of 10 statements for Organ donation

For the Positive and Negative attitude statements the score was measured as follows:

3.9.2 Scoring interpretation of the tool

Section -1: Demographic variables was filled according to their personal status.

Section -2: Scoring process for knowledge questionnaire

Table 3.9.1 criteria scoring and category for knowledge questionnaire

Level of knowledge	Scores	Percentage.
Good	16-20	76– 100 %
Average	11-15	51 - 75 %
Inadequate	0-10	0-50%

Selection -3: Scoring process for attitude scale

The score assigned were as follow:

Positive statement:

Strongly disagree-1, Disagree-2, Undecided-3, Agree-4, Strongly Agree-5

Negative statement:

Strongly disagree-5, Disagree-4, Undecided-3, Agree-2, Strongly Agree-1

Criteria scoring and category for attitude scale

Level of attitude	Scores	Percentage
Favourable	26-50	51- 100%
Unfavourable	0- 25	50 % and Less than

RESULT

DATA ANALYSIS & INTERPRETATION

SECTION. I: Assessment of college students according to their socio-demographic variables.

Table.4.1.1. Frequency and percentage distribution of college students according to the demographic variables

(N= 200).

Demographic variables	Frequency f	Percentage %
1.Age in years:		
18	100	50
19	68	34
20	22	11
21 and above	10	5
2.Sex:		
Male	66	33
Female	134	67
Transgender	0	0
3.Religion:		
Hindu	184	92
Christian	8	4
Muslim	8	4
Others	0	0
4.Type of family:		
Nuclear family	82	41
Joint family	114	57
Extended family	4	2
5.Education:		
Bachelor of science	60	30
Bachelor of commerce	70	35
Bachelor of arts	70	35

6. Source of information:		
Television	43	21.5
Radio	1	0.5
Newspaper	16	8
Health workers	112	56
Other sources	28	14
7. **Ever donated the blood before**		
Yes	0	0
No	200	100
8.**know about any organization in our city for blood donation**:		
Yes	91	45.5
No	109	54.5
9. **know about any organization in our city for organ donation**		
Yes	34	17
No	166	83
10. **Register for organ donation**		
Yes	27	13.5
No	173	86.5

SECTION II: Distribution of level knowledge and attitude score regarding blood donation and organ donation among the college students

Table:4.2.1. Frequency and percentage wise distribution of level of knowledge and attitude regarding blood and organ donation among the college students

(N=200)

	Blood Donation		Organ Donation	
Level of knowledge	**f**	**%**	**f**	**%**
Inadequate	74	37	114	57
Average	124	62	86	43
Good	2	1	0	0
Level of attitude				
Unfavourable	2	1	2	1
Favourable	198	99	198	99

Figure:4.2.1The above table depict that in the test the maximum number of college students 124(62%) had average knowledge and 74 (37%) students had inadequate knowledge and 2(1%) studenrs had a good knowledge regarding blood donation.The above table depict that in the test the maximum number of college students 114(57%) had inadequate knowledge and 86 (43%) students had average knowledge and no studenrs had a good knowledge regarding organ donation.they had the poor knowledge may be because of lack of information and awarness regarding organ donation.

The above table depict that in the test the maximum number of college students 198(99%) had favourable attitude and 2 (1%) students had unfavourable attitude regarding blood donation.The above table depict

that in the test the maximum number of college students 198(99%) had favourable attitude and 2 (1%) students had unfavourable attitude regarding organ donation.

SECTION III: Correlation between knowledge and attitude regarding blood and organ donation among the college students.

Table.4.3.1 Mean, SD, Mean% to assess the knowledge regarding blood donation among the college students
(N=200)

Sr no.	Area of knowledge	No. Of item	Maxi score	Mean	Mean%	SD
1	General aspects	5	5	3.585	70%	1.043
2	Blood group & criteria	6	6	3.245	53.3%	1.086
3	Guidelines	5	5	2.435	48%	1.034
4	Precaution	4	4	1.685	40%	0.830
	Overall	20	20	10.75	54.75%	3.995

Figure:4.3.1.Describe the Mean, SD, Mean percentage wise distribution of level of knowledge regarding blood donation among college students.
Level of knowledge for blood donation is overall mean is 10.7, overall mean percentage is 54.75 and overall with standard deviation is 3.995.

Table.4.3.2 Mean, SD, Mean% to assess the knowledge regarding organ donation among the college students
(N=200)

Sr no.	Area of knowledge	No. Of item	Maxi score	Mean	Mean%	SD
1	General aspects	4	4	2.405	60%	0.919
2	Brain death & type of donor	5	5	2.245	44%	1.105
3	Eligibility of Organ donation	5	5	2.65	52%	1.083
4	Organs & duration of safe organ donation	6	6	2.415	40%	0.973
	Overall	20	20	9.715	48.57%	4.080

Figure:4.3.2. Describe the Mean, SD, Mean percentage wise distribution of level of knowledge regarding organ donation among college students.
Level of knowledge for organ donation is total mean is 9.715, total mean percentage is 48.57% and total standard deviation is 4.08.

Table.4.3.3. Mean, SD, Mean% to assess the knowledge and attitude regarding blood and organ donation among the college students
(N=200)

variables	Maximum Score	Knowledge score			Maximum score	Attitude score		
		Mean	SD	Mean %		Mean	SD	Mean %
Blood Donation	20	10.99	1.90	55	50	36.36	4.94	72
Organ Donation	20	9.72	2.27	49	50	34.61	4.30	69
Overall	**40**	**20.71**	**3.52**	**55**	**100**	**70.97**	**8.21**	**71**

Table.4.3.3 Describe the Mean, SD, Mean percentage wise distribution of level of knowledge and attitude regarding blood and organ donation among college students.
Level of knowledge for blood donation the mean is 10.99, SD is 1.90 and Mean % is 55 and organ donation mean is 9.72, SD is 2.27 and Mean % is 49. Total mean is 20.71, SD is 3.52 and Mean % is 55 for knowledge score.
Level of attitude for blood donation the mean is 36.36 , SD is 4.94 and Mean % is 77% and organ donation mean is 34.61, SD is 4.30 and Mean % is 69. Total mean is 70.97, SD is 8.21 and Mean % is 71 for attitude score.

Table.4.3.4 Mean, SD, Mean percentage and correlation between the knowledge and attitude regarding blood and organ donation among the college students
(N=200)

Sr no	Variables	Maxi-mum Score	Mean	SD	Mean%	'r'Value	P Value
1.	**Knowledge of blood donation**	20	10.75	3.98	54.75%	0.143	0.043*(S)
	Attitude of blood donation	50	36.36	4.94	72%		
2.	**Knowledge of organ donation**	20	9.715	4.06	48.575%	0.162	0.022*(S)
	Attitude of organ donation	50	34.61	4.30	69%		

Table 4.3.4 Describe the Mean, SD, Mean percentage wise distribution of level of knowledge and attitude regarding blood donation and organ donation among college students which was analyzed by using karl pearson's formula.
Correlation of Knowledge of blood donation with attitude of blood donation significant correlation r=0.143, correlation of knowledge of organ donation with attitude of organ donation r=0.162 is significant. Hence here the low positive correlation present . Hence the research hypothesis H1 is accepted.

SECTION: IV Association between the level of knowledge and attitude regarding blood and organ donation among the college students with their selected demographic variables

Table.4.4.1. Association for level of knowledge regarding blood donation with their selected demographic data.
(N=200)

Demographic variables	Inadequate		Average		Good		χ2-value	p-value
	f	%	f	%	f	%		
1.Age in years:								
18	42	21	58	29	0	0	7.02	0.319
19	24	12	43	21.5	1	0.5	(df=6)	NS
20	6	3	15	7.5	1	0.5		
21 and above	2	1	8	4	0	0		
2.Sex:								
Male	21	10.5	44	22	1	0.5	1.322	0.516
Female	53	26.5	80	40	1	0.5	(df=2)	NS
Others	0	0	0	0	0	0		
3.Religion:								
Hindu	68	34	115	57.5	1	0.5	11.24	0.024*
Christian	3	1.5	4	2	1	0.5	(df=4)	S
Muslim	3	1.5	5	2.5	0	0		
others	0	0	0	0	0	0		
4.Type of family:								
Nuclear family	22	11	59	29.5	1	0.5	6.25	0.181
Joint family	50	25	63	31.5	1	0.5	(df=4)	NS
Extended family	2	1	2	1	0	0		
5.Education:								
Bachelor of science	19	9.50	41	20.5	0	0	2.10	0.717
Bachelor of commerce	28	14	41	20.5	1	0.5	(df=4)	NS
Bachelor of arts	27	13.5	42	21	1	0.5		
6. Source of information:								
Television								
Radio	14	7	29	14.5	0	0	4.88	0.770
Newspaper	0	0	1	0.5	0	0	(df=8)	NS
Health workers	8	4	8	4	0	0		
Other sources	39	19.5	71	35.5	2	1		
	13	6.5	15	7.5	0	0		
7. Ever donated the blood before								
Yes	0	0	0	0	0	0	0	1

Demographic variables	Inadequate		Average		Good		χ2-value	p-value
	f	%	f	%	f	%		
No	74	37	124	62	2	1	(df=1)	NS
8.know about any organization in our city for blood donation:								
Yes	29	14.5	60	30	2	1	4.00	0.135
No	45	22.5	64	32	0	0	(df=2)	NS
9. know about any organization in our city for organ donation								
Yes	10	5	23	11.5	1	0.5	2.39	0.302
No	64	32	10	50.5	1	0.5	(df=2)	NS
10. Register for organ donation								
Yes	8	4	19	9.50	0	0	1.12	0.570
No	66	33	105	52.5	2	1	(df=2)	NS

***p<0.05 significant, ** p<0.01 & ***p<0.001 Highly significant.**

Table 4.4.1 Shows the Association for level of knowledge regarding blood donation with their selected demographic data which were assessed by chi-square test.

Present study findings Shows that the Association for level of knowledge regarding blood donation Religion ($\chi 2_{(6,0.05)}$=7.02.,0.319;p>0.05).Hence research hypothesis is accepted at 0.05 level of significance.

Present study findings Shows that the Association for level of knowledge regarding blood donation Age($\chi 2_{(2,0.05)}$=11.2,0.024;p>0.05), Sex($\chi 2_{(2,0.05)}$=1.322,0.516;p>0.05), Type of family($\chi 2_{(4,0.05)}$=11.24,0.181;p>0.05), Education($\chi 2_{(8,0.05)}$=2.10,0.717;p>0.05), Source of information ($\chi 2_{(8,0.05)}$=4.88,0.770;p>0.05), Ever donated blood before ($\chi 2_{(1,0.05)}$=1,1;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(2,0.05)}$=4.00,0.135;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(2,0.05)}$=2.39,0.302;p>0.05), Register for organ donation ($\chi 2_{(2,0.05)}$= 1.12,0.057;p>0.05).Hence research hypothesis H2 is rejected.

Table.4.4.2.Association for level of knowledge regarding Organ donation with their selected demographic data.

(N=200)

Demographic variables	Inadequate		Average		χ2-value	p-value
	f	%	f	%		
1.Age in years:						
18	60	30	40	20	1.03	0.794
19	37	18.5	31	15.5	(df=3)	NS
20	11	5.5	11	5.5		

Demographic variables	Inadequate		Average		χ2-value	p-value
	f	%	f	%		
21 and above	6	3	4	2		
2.Sex:						
Male	41	20.5	25	12.5	1.05	0.305
Female	73	36.5	61	30.50	(df=1)	NS
3.Religion:						
Hindu	106	53	78	39		
Christian	4	2	4	2	0.347	0.840
Muslim	4	2	4	2	(df=2)	NS
Others	0	0	0	0		
4.Type of family:						
Nuclear family	36	18	46	23	9.86	0.007**
Joint family	75	37.5	39	19.5	(df=2)	HS
Extended family	3	1.5	1	0.5		
5.Education:						
Bachelor of science	24	12	36	18	11.15	0.004**
Bachelor of commerce	48	24	22	11	(df=2)	HS
Bachelor of arts	42	21	28	14		
6. Source of information:						
Television	27	13.5	16	8	3.49	0.478
Radio	0	0	1	0.5	(df=4)	NS
Newspaper	11	5.5	5	2.5		
Health workers	62	31	50	25		
Other sources	14	7	14	7		
7. **Ever donated the blood before**						
Yes	0	0	0	0	0	1
No	114	57	86	43	(df=1)	NS
8.**know about any organization in our city for blood donation**:					3.49	0.478
Yes	42	21	49	24.5	(df=4)	NS
No	72	36	37	18.5		
9. **know about any organization in our city for organ donation**					1.65	0.199
Yes	16	8	18	9	(df=1)	NS
No	98	49	68	34		
10. **Register for organ donation**						
Yes	11	5.5	16	8	3.37	0.067
No	103	51.5	70	35	(df=1)	NS

***p<0.05 significant, ** p<0.01 & ***p<0.001 Highly significant.**

Table 4.4.2 Shows the Association for level of knowledge regarding organ donation with their selected demographic data which were assessed by chi-square test.

Present study findings Shows that the Association for level of knowledge regarding organ donation Type of family($\chi2_{(2,0.05)}$= 9.86,0.007;p>0.05, Education ($\chi2_{(2,0.05)}$= 11.15, 0.004;p>0.05).Hence research hypothesis is accepted at 0.05 level of significance

Present study findings Shows that the Association for level of knowledge regarding blood donation Age in years ($\chi2_{(3,0.05)}$= 1.03, 0.794 ;p>0.05), Sex($\chi2_{(1,0.05)}$= 1.05, 0.305;p>0.05), Religion ($\chi2_{(2,0.05)}$= 0.347, 0.840,), Source of information ($\chi2_{(4,0.05)}$= 3.49, 0.478;p>0.05), Ever donated blood before ($\chi2_{(1,0.05)}$=0,1;p>0.05), Know about any organization on our city for blood donation ($\chi2_{(4,0.05)}$= 3.49,0.478;p>0.05), Know about any organization on our city for blood donation ($\chi2_{(1,0.05)}$= 1.65,0.199;p>0.05), Register for organ donation ($\chi2_{(1,0.05)}$= 3.37,0.067;p>0.05). Hence research hypothesis H2 is rejected.

Table.4.4.3.Association for level of attitude regarding blood donation with their selected demographic data.

(N=200)

Demographic variables	**Unfavourable**		**Favourable**		**χ2-value**	**p-value**
	f	**%**	**f**	**%**		
1.Age in years:						
18	2	1	98	49	2.02	0.568
19	0	0	68	34	(df=3)	NS
20	0	0	22	11		
21 and above	0	0	10	5		
2.Sex:						
Male	0	0	66	33	0.99	0.319
Female	2	1	132	66	(df=1)	NS
Transgender	0	0	0	0		
3.Religion:						
Hindu	2	1	182	91	0.175	0.916
Christian	0	0	8	4	(df=2)	NS
Muslim	0	0	8	4		
Others	0	0	0	0		
4.Type of family:						
Nuclear family	0	0	82	41	24.11	P<0.001
Joint family	1	0.5	113	56.5	(df=2)	***
Extended family	1	0.5	3	1.5		HS
5.Education:						
Bachelor of science	0	0	60	30	3.75	0.153
Bachelor of commerce	2	1	68	34	(df=2)	NS
Bachelor of arts	0	0	70	35		
6. Source of information:						
Television	0	0	43	21.5	2.48	0.647
Radio	0	0	1	0.5	(df=4)	NS
Newspaper	0	0	16	8		

Demographic variables	Unfavourable		Favourable		χ2-value	p-value
	f	%	f	%		
Health workers	1	0.5	111	55.5		
Other sources	1	0.5	27	13.5		
7. Ever donated the blood before						
Yes	2	1	198	99	0	1
No	0	0	0	0	(df=1)	NS
8.know about any organization in our city for blood donation:						
Yes	0	0	91	45.5	1.68	0.194
No	2	1	107	53.5	(df=1)	NS
9. know about any organization in our city for organ donation						
Yes	0	0	34	17	0.413	0.520
No	2	1	164	82	(df=1)	NS
10. Register for organ donation						
Yes	0	0	27	13.5	0.315	0.574
No	2	1	171	85.5	(df=1)	NS

***p<0.05 significant, ** p<0.01 & ***p<0.001 Highly significant.**

Table 4.4.3 Shows the Association for level of attitude regarding blood donation with their selected demographic data which were assessed by chi-square test.

Present study findings Shows that the Association for level of attitude regarding blood donation Type of family($\chi2_{(2,0.05)}$=24.11,0.001;p>0.05), Education ($\chi2_{(2,0.05)}$= 11.15, 0.004;p>0.05).Hence research hypothesis is accepted at 0.05 level of significance

Present study findings Shows that the Association for level of attitude regarding blood donation Age in years ($\chi2_{(3,0.05)}$= 2.02, 0.568 ;p>0.05), Sex($\chi2_{(1,0.05)}$= 0.99,0.319;p>0.05), Religion ($\chi2_{(2,0.05)}$= 0.175, 0.916, Education ($\chi2_{(2,0.05)}$= 3.75, 0.153;p>0.05).Source of information ($\chi2_{(4,0.05)}$= 2.48, 0.647;p>0.05), Ever donated blood before ($\chi2_{(1,0.05)}$=0,1;p>0.05), Know about any organization on our city for blood donation ($\chi2_{(1,0.05)}$= 1.68,0.194;p>0.05), Know about any organization on our city for organ donation ($\chi2_{(1,0.05)}$= 0.413,0.520;p>0.05), Register for organ donation ($\chi2_{(1,0.05)}$= 0.315,0.574;p>0.05). Hence research hypothesis H2 is rejected.

Table.4.4.4.Association for level of attitude regarding Organ donation with their selected demographic data.

(N=200)

Demographic variables	Unfavourable		Favourable		χ2-value	p-value
	f	%	f	%		
1.Age in years:						
18	1	0.5	99	49.5	0.475	0.924
19	1	0.5	67	33.5	(df=3)	NS

Demographic variables	Unfavourable		Favourable		χ2-value	p-value
	f	%	f	%		
20	0	0	22	11		
21 and above	0	0	10	5		
2.Sex:						
Male	1	0.5	65	32.5	0.264	0.607
Female	1	0.5	133	66.5	(df=1)	NS
3.Religion:						
Hindu	2	1	182	91	0.175	0.916
Christian	0	0	8	4	(df=2)	NS
Muslim	0	0	8	4		
4.Type of family:						
Nuclear family	1	0.5	81	40.5	0.097	0.952
Joint family	1	0.5	113	56.5	(df=2)	NS
Extended family	0	0	4	2		
5.Education:						
Bachelor of science	1	0.5	59	29.5	1.106	0.575
Bachelor of commerce	0	0	70	35	(df=2)	NS
Bachelor of arts	1	0.5	69	34.5		
6. Source of information:						
Television	1	0.5	42	21	1.23	0.873
Radio	0	0	1	0.5	(df=4)	NS
Newspaper	0	0	16	8		
Health workers	1	0.5	111	55.5		
Other sources	0	0	28	14		
7. **Ever donated the blood before**						
Yes	0	0	0	0	0	1
No	2	1	198	99	(df=1)	NS
8.**know about any organization in our city for blood donation**:						
Yes	2	1	89	44.5	1.23	0.873
No	0	0	109	54.5	(df=4)	NS
9. **know about any organization in our city for organ donation**						
Yes	1	0.5	33	16.5	1.56	0.212
No	1	0.5	165	82.5	(df=1)	NS
10. **Register for organ donation**						
Yes	0	0	27	13.5	0.315	0.574
No	2	1	171	85.5	(df=1)	NS

***p<0.05 significant, ** p<0.01 & ***p<0.001 Highly significant.**

Table 4.4.4 Shows the Association for level of attitude regarding organ donation with their selected

demographic data which were assessed by chi-square test.

Present study findings Shows that the Association for level of knowledge regarding blood donation Age in years ($\chi2_{(3,0.05)}$= 0.475, 0.924 ;p>0.05), Sex($\chi2_{(1,0.05)}$= 0.264,0.607;p>0.05), Religion ($\chi2_{(2,0.05)}$= 0.175,0.916, Type of family($\chi2_{(2,0.05)}$=0.097,0.952;p>0.05), Education ($\chi2_{(2,0.05)}$= 1.106, 0.575;p>0.05).Source of information ($\chi2_{(4,0.05)}$= 1.23, 0.873;p>0.05), Ever donated blood before ($\chi2_{(1,0.05)}$=0,1;p>0.05), Know about any organization on our city for blood donation ($\chi2_{(4,0.05)}$= 1.23,0.873;p>0.05), Know about any organization on our city for organ donation ($\chi2_{(1,0.05)}$=1.56,0.212;p>0.05), Register for organ donation ($\chi2_{(1,0.05)}$= 0.315,0.574;p>0.05). Hence research hypothesis H2 is rejected.

DISCUSSION

This study designed to assess the correlation between knowledge and attitude regarding blood and organ donation among college students with view to develop an self- instructional module in selected colleges of Dadra and Nagar Haveli. Data collection and analysis were carried out based on the objectives and hypothesis of the study. It represented on the following headings:

SECTION 1: Assessment of college students according to their socio-demographic variables.

SECTION 2: Distribution of level knowledge score and attitude score regarding blood donation and organ donation among the college students

SECTION 3: Correlation between knowledge score and attitude score regarding blood and organ donation among the college students**.**

SECTION 4: Association between the level of knowledge and attitude regarding blood and organ donation among the college students of selected colleges with their selected demographic variables

SECTION 4.1: **Assessment of college students according to their socio-demographic variables.**

In the study **Age** wise distribution of college students shows that 50% of the students belongs to 18 years, 34%of them were 19 years, 11% of them were 20 years, 5% of them were 21 and above of Age years. These supportive study was done by D. Priyanka 'study to assess knowledge, attitude on organ donation among medical students in a medical college, Telangana, India', in these study most of the subjects 18-19 years of age group.[99]

In the study **Sex** wise distribution of college students shows that 67% of the female and 33% of them are male. These supportive study was done by Zeeshan Ahmed on 'Knowledge, Attitude and Practices about Blood Donation among Undergraduate Medical Students in Karachi' in these study the most of the subjects are female 69.8%.[100]

In the study **Religion** wise distribution of college students shows that 92% of them were Hindu, 4% them were christian , 4% them were Muslim. In the present study conducted by Nissy Paul shows religion wise distribution of college students shows that 41 % of them were nuclear family, 87% of them.[101]

In the present study **Type of family** wise distribution of college students shows that 41 % of them were nuclear family, 57% of them were joint family, 2% of them were extended family These supportive study was done by Nissy paul on 'assessment of knowledge and attitude of adolescents Regarding blood and organ donation in selected rural areas of Shimla, Himachal Pradesh, in these study the most of the subjects are from nuclear family 71%.[101]

In the present study **Education** wise distribution of college students shows that 35% of them were bachelor of Arts , 35% of them were bachelors of Commerce, 30% of them were bachelors of Science students.

In the present study **Source of information** wise distribution of college students shows that 21.5 % of th-

em were from television , 0.5 % of them were from Radio, 8% of them were from Newspaper, 56% of them were from Health worker, 14% of them from others. These supportive study was done by Jinu k .Rajan on 'assessment of knowledge and attitude of adolescents Regarding blood and organ donation in selected rural areas of Shimla, Himachal Pradesh, in these study the most of the subjects are get source of information from Televion programme is 61% blood and organ donation.[64]

In the present study **Ever donate blood before** wise distribution of college students shows that 100% of them were not donate blood before.

In the present study **know about any organization in our city for blood donation** wise distribution of college students shows that 45.5% of them were know the organization ,55.5% of them were not know the organization of blood donation in their city.

In the present study **know about any organization in our city for organ donation** wise distribution of college students shows that 17% of them were know the organization ,87% of them were not know the organization of organ donation in their city.

In the present study **register for organ donation** wise distribution of college students show that 13.5% of them were register , 86.5% of them were not register for organ donation.These supportive study was done by Jinu k .Rajan on 'assessment of knowledge and attitude of adolescents Regarding blood and organ donation in selected rural areas of Shimla, Himachal Pradesh, in these study the most of the subjects are not registered for organ donation 93%.[64]

SECTION 4.2: Distribution of level knowledge and attitude regarding blood donation and organ donation among the college students

To assess the level of knowledge and attitude regarding blood and organ donation among the college students of selected colleges of Dadra & Nagar Haveli.In the present study, the analysis of knowledge and attitude on blood and organ donation. In this study findings show that 62% of them adequate , 37% of them inadequate and 1% of them good knowledge of blood donation. For the organ donation show that 57% of them inadequate, 43% of them adequate and no one of them had good knowledge. In this study findings show that 99% of them favourable and 1% of them unfavourable attitude for same of blood and organ donation.

A similar study conducted by show that 25% of them adequate , 22.96% of them inadequate and 52.04% of them moderately knowledge of blood donation. Study regarding blood donation findings show that 32.65% of them positive , 44.90 of them neutral and 22.45% of them negative attitude regarding blood donation. A similar study conducted by show that 52.78% students had fair knowledge score regarding organ donation and 72.78% students had favourable attitude score regarding organ donation.[67]

SECTION 4.3: Correlation between knowledge and attitude regarding blood and organ donation among the college students.

In this study finding correlation between knowledge and attitude of blood donation among colleges students was analysed by using Karl's Pearson's formula for the correlation . calculated values of knowledge and attitude of blood donation 'r; value 0.143 and p-value 0.043 show significant. Hence , research hypothesis is accepted at 0.05 levels of significance which shows that there is positive correlation between knowledge and attitude of blood donation. In these supportive research study conducted by Nunung Saroh 2024 findings shows that there is a moderately positive correlation between knowledge and attitude of the students on blood donation ($r = 0.37$) which was statistically significant at 0.05 level of significance with corresponding p value <0.001. Thus, research hypothesis H1 is accepted and null hypothesis H01 is rejected.[102]

In this study finding correlation between knowledge and attitude of organ donation among colleges students was analysed by using Karl's Pearson's formula for the correlation . calculated values of knowledge and attitude of organ donation 'r; value 0.162 and p-value 0.022 show significant. Hence , research hypothesis is accepted at 0.05 levels of significance which shows that there is positive correlation between knowledge and attitude of organ donation. In these supportive research study conducted by Dr.E.Premila findings shows that correlation between knowledge and attitude of organ donation among college students was analysed by using Karl's Pearson's formula for the correlation . calculated values of knowledge and attitude of organ donation 'r; value 0. 268 and p-value 0.195 show significant. Hence, research hypothesis is accepted at 0.05 levels of significance which shows that there is positive correlation between knowledge and attitude of organ donation.[47]

SECTION 4: Association between the level of knowledge and attitude regarding blood and organ donation among the college students with their selected demographic variables.

4.4.1. Association for level of knowledge regarding blood donation with their selected demographic data.

Present study findings Shows that the Association for level of knowledge regarding blood donation Religion ($\chi 2_{(6,0.05)}$=7.02.,0.319;p>0.05).Hence research hypothesis is accepted at 0.05 level of significance. Present study findings Shows that the Association for level of knowledge regarding blood donation Age($\chi 2_{(2,0.05)}$=11.2,0.024;p>0.05), Sex($\chi 2_{(2,0.05)}$=1.322,0.516;p>0.05), Type of family($\chi 2_{(4,0.05)}$=11.24,0.181;p>0.05), Education($\chi 2_{(8,0.05)}$=2.10,0.717;p>0.05), Source of information ($\chi 2_{(8,0.05)}$=4.88,0.770;p>0.05), Ever donated blood before ($\chi 2_{(1,0.05)}$=1,1;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(2,0.05)}$=4.00,0.135;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(2,0.05)}$=2.39,0.302;p>0.05), Register for organ donation ($\chi 2_{(2,0.05)}$= 1.12,0.057;p>0.05).Hence research hypothesis H2 is rejected.

This supported study findings was conducted by Nissy Paul (2022) showed that there was statistically significant association between the level of knowledge with age (x 2=13.58) at p<0.05) level. Therefore the research H2= There will be significant association between knowledge score regarding blood and organ donation among adolescents with their selected demographic variables was accepted except for sex, religion, family type, education, health resources, registration.This finding is consistent with the findings, the results revealed the study samples from different culture and language groups showed difference in the knowledge related to organ donation.

4.4.2. Association for level of knowledge regarding Organ donation with their selected demographic data.

Present study findings Shows that the Association for level of knowledge regarding organ donation Type of family($\chi 2_{(2,0.05)}$= 9.86,0.007;p>0.05, Education ($\chi 2_{(2,0.05)}$= 11.15, 0.004;p>0.05).Hence research hypothesis is accepted at 0.05 level of significance.

Present study findings Shows that the Association for level of knowledge regarding blood donation Age in years ($\chi 2_{(3,0.05)}$= 1.03, 0.794 ;p>0.05), Sex($\chi 2_{(1,0.05)}$= 1.05, 0.305;p>0.05), Religion ($\chi 2_{(2,0.05)}$= 0.347, 0.840,), Source of information ($\chi 2_{(4,0.05)}$= 3.49, 0.478;p>0.05), Ever donated blood before ($\chi 2_{(1,0.05)}$=0,1;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(4,0.05)}$= 3.49,0.478;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(1,0.05)}$= 1.65,0.199;p>0.05), Register for organ donation ($\chi 2_{(1,0.05)}$= 3.37,0.067;p>0.05). Hence research hypothesis H2 is rejected.

The This findings was supported by the study conducted by Jinu.K.Rajan 2020 showed that there was

statistically significant association between the level of knowledge with age ($\chi 2$ =13.58) at p<0.05) level. Therefore the research H2= There will be significant association between knowledge score regarding organ donation among adolescents with their selected demographic variables was accepted except for sex, religion, family type, education, health resources, registration.

4.4.3. Association for level of attitude regarding blood donation with their selected demographic data

Present study findings Shows that the Association for level of attitude regarding blood donation Type of family ($\chi 2_{(2,0.05)}$=24.11,0.001;p>0.05), Education ($\chi 2_{(2,0.05)}$= 11.15, 0.004;p>0.05).Hence research hypothesis is accepted at 0.05 level of significance.Present study findings Shows that the Association for level of attitude regarding blood donation Age in years ($\chi 2_{(3,0.05)}$= 2.02, 0.568 ;p>0.05), Sex($\chi 2_{(1,0.05)}$= 0.99,0.319;p>0.05), Religion ($\chi 2_{(2,0.05)}$= 0.175, 0.916, Education ($\chi 2_{(2,0.05)}$= 3.75, 0.153;p>0.05).Source of information ($\chi 2_{(4,0.05)}$= 2.48, 0.647;p>0.05), Ever donated blood before ($\chi 2_{(1,0.05)}$=0,1;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(1,0.05)}$= 1.68,0.194;p>0.05), Know about any organization on our city for organ donation ($\chi 2_{(1,0.05)}$= 0.413,0.520;p>0.05), Register for organ donation ($\chi 2_{(1,0.05)}$= 0.315,0.574;p>0.05). Hence research hypothesis H2 is rejected.

This findings was supported by the study conducted by Nunung Saroh 2024 showed that there was statistically significant association between the level of knowledge with age (x^2=13.23) p<0.05 at level. Therefore the research H_2 = There will be no significant association between attitude score regarding blood donation among college students with their demographic variables was not accepted for religion, education, donated blood before, sources of information, type of family.

4.4.4 Association for level of attitude regarding Organ donation with their selected demographic data

Present study findings Shows that the Association for level of attitude regarding organ donation Age in years ($\chi 2_{(3,0.05)}$= 0.475, 0.924 ;p>0.05), Sex($\chi 2_{(1,0.05)}$= 0.264,0.607;p>0.05), Religion ($\chi 2_{(2,0.05)}$= 0.175,0.916, Type of family($\chi 2_{(2,0.05)}$=0.097,0.952;p>0.05), Education ($\chi 2_{(2,0.05)}$= 1.106, 0.575;p>0.05).Source of information ($\chi 2_{(4,0.05)}$= 1.23, 0.873;p>0.05), Ever donated blood before ($\chi 2_{(1,0.05)}$=0,1;p>0.05), Know about any organization on our city for blood donation ($\chi 2_{(4,0.05)}$= 1.23,0.873;p>0.05), Know about any organization on our city for organ donation ($\chi 2_{(1,0.05)}$=1.56,0.212;p>0.05), Register for organ donation ($\chi 2_{(1,0.05)}$= 0.315,0.574;p>0.05). Hence research hypothesis H2 is rejected.

This findings was supported by the study conducted by Jinu.K.Rajan 2020 showed that there was statistically significant association between the level of Attitude with sex ($\chi 2$ =5.98) and religion ($\chi 2$ =7.89) at P<0.05 level. Therefore the research H2 = There will be significant association between attitude score regarding organ donation among adolescents with their demographic variables was accepted except for age, type of family, education, health resources, registration.

CONCLUSION

In present study researcher identified that the level of knowledge for blood donation mean score of the student is 10.99 and level of knowledge for organ donation mean score of the students is 9.72 and standard deviation of blood donation is 1.90 and standard deviation of organ donation is 2.27. Mean percentage of blood and organ donation is 55% and 49 %. Overall mean percentage 55%.In present study researcher identified that the level of attitude for blood donation mean score of the student is 36.36 and level of attitude for organ donation mean score of the students is 34.61 and standard deviation of blood donation

is 4.94 and standard deviation of organ donation is 4.30. Mean percentage of blood and organ donation is 72% and 69%. Overall mean percentage 71%.

The correlation between knowledge and attitude of blood donation and organ donation among college students which was analyzed by Karl Pearson's formula.

The knowledge and attitude of blood donation is very highly correlation (r= 0.143, 0.043) and knowledge and attitude of organ donation is very highly correlation (r= 0.162, 0.022). Hence the research hypothesis is accepted. In the present study researcher identified that there in association with the sociodemographic variable of knowledge of blood and organ donation and present association of attitude of blood donation in findings of these present study.

NURSING IMPLICATIONS:

Nursing implication of the study could be discussed under nursing education, nursing practice, nursing administration and nursing research.

Nursing Education:

- The nurse educator should create awareness regarding blood and organ donation and its importance.
- The nurse educators can recommend this topic to the students for health education activities of the community for increasing awareness and for increasing the knowledge level of people regarding blood and organ donation
- Students should be given the opportunity to organize and conduct awareness programmes on blood and organ donation in hospitals as well as in community.
- Teachers can motivate the students to do mini project among various age groups on blood and organ donation.
- Students can conduct mass education programme in community by using A. V such as handout, poster, television and awareness programme for young peoples

Nursing Practice:

- Health education is one of the vital responsibilities of nurses. During school health programmes, Community visits- the students and family members should be educated about the importance and benefits of donating blood and organ**.**
- The Self Instructional module (SIM) can be used by community health nurse to implement the health education and for conducting awareness programmes in the community.

Nursing Administration:

- Providing the suggestions to Directorate of Medical and Health Service (DMHS) through nursing administration for providing the awarness programmes ,camps for encourage of young adults to actively involved in donation programmes
- Nursing administrator can formulate policies that will include all nursing staff to be actively involved in health education programme in their respective community areas.
- Nurse administrators have more responsibility as supervisors on creating awareness among various age groups regarding blood and organ donation by facilitating free distribution of booklets, handouts charts regularly to various age groups in urban and rural areas.

Nursing Research:

The findings may be utilized by the emerging researchers for their reference purpose.

- A Qualitative study can be conducted among people who had given blood and organs.

- An Experimental study can be conducted among the schools and colleges
- Through the topic blood donation is very common one. According to many studies the students are unaware and have negative attitude towards Blood donation, it's benefits and importance. Therefore, extensive research is necessary regarding blood donation. The findings of the study will help to explore the scientific body of knowledge upon which further research can be conducted. Use of research findings should become a part of quality assurance evaluation to enhance the individual performance as a whole.

LIMITATIONS

- Generalization of the findings was restricted for professional, paramedical, medical students.
- The study was limited those students who studying in Dr APJ Abdul Kalam Government College, Dokmardi, Silvassa.
- The study was limited to second year of students.
- The study was limited to college students.

RECOMMENDATIONS

- A similar study can be done in different settings such as urban and rural areas.
- Similar study can be done on larger samples.
- Similar study can be conducted among different general population.
- Similar study can conducted separately on organ and blood donation.
- A study regarding practice of Blood and organ donation among Post Graduate students can be conducted.

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