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## A descriptive study to assess the knowledge and attitude regarding organ donation among nursing students at selected nursing colleges of Kheda-Anand district

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### ABSTRACT

**Introduction:** Organ donation is a vital process that saves many lives each year by providing organs and tissues to those in need of transplants. This process typically requires consent from the donor while they are alive or from their next of kin after death.

**Aim:** To determine knowledge and attitude regarding organ donation among nursing students at selected nursing colleges of kheda-anand district.

**Methodology:** The non-experimental descriptive research design used for this study. The study was conducted on 250 nursing students from selected nursing colleges of kheda-anand district by systematic random sampling technique. A knowledge questionnaire tool and likert attitude scale was used for data collection.

**Results:** 1.6% students having good knowledge, 30.4% having average knowledge and 68% having poor knowledge regarding organ donation. The mean score of knowledge is  $12.132 \pm 4.363$ . when 70% students having positive attitude, 30% having negative attitude regarding organ donation. The mean score of attitude is  $65.67 \pm 9.168$ .

**Conclusion:** The study highlights the disparity between knowledge and attitude regarding organ donation among students. Although the majority lack adequate knowledge, a considerable number still maintain a positive attitude. This emphasizes the need for targeted educational interventions to improve understanding and promote positive attitudes toward organ donation.

**Key words:** Assess, Knowledge, Attitude, Organ donation, Nursing students

#### Article History

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### INTRODUCTION

Organ donation is a vital process that saves many lives each year by providing organs and tissues to those in need of transplants. Living donation, where a person donates an organ while still alive, is often possible for certain organs such as kidneys, liver segments, and parts of the pancreas and intestines. However, deceased donation is more common, where organs and tissues are donated after the donor has passed away. This process typically requires consent from the donor while they are alive or from their next of kin after death. Organs such as kidneys, heart, liver, pancreas, lungs, and intestines, as well as tissues like bone marrow, skin, and corneas, can be donated to help improve or save the lives of others through transplantation or research.

Observing World Organ Donation Day on August 13th is an important initiative to raise global awareness about the significance of organ donation. By combining these strategies and events like World Organ Donation Day, organizations and governments can work towards increasing public understanding and support for organ donation, ultimately leading to more donors and improved access to life-saving transplants for those in need.<sup>[1]</sup>

It's commendable to promote organ donation as a selfless act that transcends demographic factors such as age, caste, religion, or medical history. Indeed, organ donation has the potential to save numerous lives, and widening the donor pool increases the chances of finding matches for those in need.<sup>[2]</sup>

Worldwide, there is a significant rise in the number of individuals in need of donated organs for transplants, but there is a severe lack of organs available. The lack of specific guidelines for practice and the knowledge and attitudes of healthcare professionals have been suggested as potential factors contributing to this issue.<sup>[3]</sup>

In developed countries, the rate of willingness to donate organs typically ranges from 50% to 75%. However, in developing countries, data on willingness to donate organs are often scarce or little known. This discrepancy may be attributed to various factors such as differences in healthcare systems, cultural beliefs, religious practices, and access to education and information about organ donation.<sup>[4]</sup> To address the issue of low rates of organ donation consent, especially in developing countries, efforts should be made to raise awareness about the importance of organ donation, dispel myths and misconceptions surrounding donation, improve access to healthcare services, and establish effective organ procurement and transplantation systems. Additionally, cultural sensitivity and understanding must be considered when implementing strategies to promote organ donation in diverse communities.<sup>[5]</sup>

The data from the WHO Global Observatory on Donation and Transplantation (GODT) underscores the significant shortfall in meeting the global demand for organ transplants. With over 130,000 solid organ transplants performed annually worldwide, this figure represents less than 10% of the estimated global need for organ transplantation.<sup>[6]</sup>

The increase in organ donation rates in India from 0.05 to 0.8 per million populations over a few years is a positive development, but it still lags significantly behind rates observed in countries like Croatia, Spain, and the USA. Factors contributing to this disparity include cultural and spiritual beliefs, low awareness about organ donation, negative attitudes towards donation, and deficiencies in legislation such as "The Transplantation of Human Organs Act" (THOA) prior to its amendments in 2014.<sup>[7,8]</sup>

According to the international transplantation registry for organ donation and transplantation in 2018, out of the 111 countries engaged in organ donation or transplantation, 86 national reporters have provided data to IRODaT over the past 19 years. In 2016, data was available from 75 countries. Cyprus and the Dominican Republic showed significant improvements in deceased organ donation rates compared to 2015, with rates increasing from 2.5 to 5.17 per million population (pmp) and from 0.7 to 1.5 donors per million population, respectively. China and Malta also saw improvements of 55% and 67% in their deceased organ donation rates, rising from 2 to 3.1 pmp and from 15 to 25 pmp, respectively.<sup>[9]</sup>

## METHODS

This descriptive study was conducted after institutional ethical committee approval. A pre-validated knowledge questionnaire tool and Likert attitude scale regarding organ donation was circulated to 250 nursing students from selected nursing colleges of Kheda-Anand district by used systematic random sampling techniques from 02/01/2024 to 12/01/2024. Written informed consent was obtained from all participants under and who belong under 18 years of age, with parental consent provided through an assent form. For knowledge questionnaire tool regarding organ donation, the total minimum score is 0 and total maximum score is 30. The cut off score and category were calculated as 23-30 indicate good knowledge, 15-22 indicate average knowledge and below 15 indicate poor knowledge regarding organ donation. For Likert attitude scale regarding organ donation, the total minimum score is 20 and total maximum score is 100. The cut off score and category were calculated as 60-100 indicate positive attitude and 20-59 indicate negative attitude regarding organ donation. The students were included 1<sup>st</sup> year GNM nursing and 1<sup>st</sup> year Basic BSc nursing programme from Dinsha patel college of nursing, Nadiad, Zydus college of nursing, Anand and Vinayaka institute of nursing, Bakrol, Anand. Data of both components were

distributed in percentage based on age, gender, family monthly income, place of residence, religion, program of study, having previous history of organ donation in family. The association between knowledge regarding organ donation with their selected demographic variables and also between attitude regarding organ donation with their selected demographic variables determined. Correlation between knowledge and attitude regarding organ donation also determined.

### **Ethical consideration:**

Ethical approval for the present study was obtained from Institutional Ethics Committee for Human Research of Maganbhai Adenwala Mahagujarat University, Nadiad.

(Approval No: MAM Uni/IECHR/321/2023) (Ref. No: IEC-MAM Uni/2023-24)

## **RESULT**

Demographic data of 250 students were normally distributed. In that, 116(46.4%) in 18-19 years, 205(82%) are females, 88(35.2%) having above 30,000 family monthly income, 205(82%) are belonging from Hindu religion, 178(71.2%) of students are studying in Basic B.Sc. nursing program, 185(74%) students having information regarding organ donation in which 105(56.75%) get information from media and 231(92.4%) are not having history of organ donation in family. (Table-1)

**Table 1: Frequency and percentage distribution of selected demographic variables of nursing students**

N=250

<b>No.</b>	<b>Variables</b>	<b>Frequency (%)</b>
<b>1.</b>	<b>Age in years</b>	
	16-17 years	08(3.2%)
	17-18 years	83(33.2%)
	18-19 years	116(46.4%)
	> 19 years	43(17.2%)
<b>2.</b>	<b>Gender</b>	
	Male	45(18%)
	Female	205(82%)

<b>3.</b>	<b>Monthly family income (in rupees)</b> Below 10,000 10,001-20,000 20,001-30,000 Above 30,000	51(20.4%) 55(22%) 56(22.4%) 88(35.2%)
<b>4.</b>	<b>Place of residence</b> Home Hostel Paying guest	206(82.4%) 41(16.4%) 03(1.2%)
<b>5.</b>	<b>Religion</b> Hindu Christian Muslim	205(82%) 14(5.6%) 31(12.4%)
<b>6.</b>	<b>Program of study</b> General nursing and midwifery (GNM) Basic B.Sc. nursing	72(28.8%) 178(71.2%)
<b>7.</b>	<b>Do you know regarding organ donation?</b> Yes No	185(74%) 65(26%)
<b>8.</b>	<b>If yes, sources of information</b> Media Health professions Family Friends	105(56.75%) 34(18.37%) 25(13.51%) 21(11.31%)
<b>9.</b>	<b>Having previous history of organ donation in family</b> Yes No	19(7.6%) 231(92.4%)

The highest number students having poor knowledge regarding organ donation 170(68%) and also having positive attitude regarding organ donation 175(70%). Participants having under age group of 18-19 years had more poor knowledge regarding organ donation and more positive attitude regarding organ donation. Females having more positive attitude and poor knowledge regarding organ donation than males. (Table-2)

**Table-2: The level of knowledge and attitude regarding organ donation in various demographic variables**

N=250

No.	Variables	Knowledge			Attitude	
		Good	Average	Poor	Positive	Negative
1	<b>Age in years</b>					
	16-17 years	1	2	5	5	2
	17-18 years	1	17	65	58	25
	18-19 years	1	34	81	81	36
	> 19 years	1	23	19	31	12
2.	<b>Gender</b>					
	Male	3	13	29	23	22
	Female	1	63	141	152	53
3.	<b>Monthly family income (in rupees)</b>					
	Below 10,000	1	6	44	33	18
	10,001-20,000	1	16	38	39	16
	20,001-30,000	1	18	37	38	18
	Above 30,000	1	36	51	65	23
4.	<b>Place of residence</b>					
	Home	2	65	139	154	52
	Hostel	1	10	30	20	21
	Paying guest	1	1	1	1	2
5.	<b>Religion</b>					
	Hindu	2	55	148	138	67
	Christian	1	8	5	10	4
	Muslim	1	13	17	27	4
6.	<b>Program of study</b>					
	General nursing and midwifery (GNM)	1	31	40	22	50
	Basic B.Sc. nursing	3	45	130	153	25

7.	<b>Having previous history of organ donation in family</b>					
	Yes	2	7	10	10	9
	No	2	69	160	165	66

In the distribution and frequency of knowledge regarding organ donation among nursing students, there are 4(1.6%) students having good knowledge, 76(30.4%) having average knowledge and 170(68%) having poor knowledge regarding organ donation. The mean score of knowledge is  $12.132 \pm 4.363$ . where the distribution and frequency of attitude regarding organ donation among nursing, students there are 176(70%) students having positive attitude, 75(30%) having negative attitude regarding organ donation. The mean score of attitude is  $65.67 \pm 9.168$ . (Table- 3)

**Table-3: Frequency and distribution of level of knowledge and attitude regarding organ donation among nursing students.**

N=250

Knowledge		Attitude	
Good	4 (1.6%)	Positive	175 (70%)
Average	76 (30.4%)	Negative	75 (30%)
Poor	170 (68%)		

There are association between attitude regarding organ donation with their selected demographic variables. Fisher Chi square test has been applied as some cells have p value more than 0.05. it seen that attending the class is not significantly associated with the scores while association between knowledge regarding organ donation with their selected demographic variables. Fisher Chi square test has been applied as some cells have p value less than 0.05. it seen that attending the class is significantly associated with the score.

The knowledge mean is 12.132 with SD 4.363 and the attitude mean is 65.67 with SD 9.168 and obtained "r" value is 0.37 which was calculated by Karl Pearson correlation coefficient method. It was found positively weak correlated.

## DISCUSSION

This study was done to assess the knowledge and attitude regarding organ donation among nursing students. It showed an overall poor knowledge and positive attitude regarding organ donation, which was contradictory to findings of a study done by DoaaEisaa Mohamed et.al.<sup>[10]</sup> (2022) who found fair knowledge and positive attitude regarding organ donation and transplantation regarding organ donation towards nursing students. This study had more female compared to male suggesting that females are poor knowledge and positive attitude regarding organ donation which aligns with the current findings of our study where majority of females (55.3%) having poor knowledge and positive attitude regarding organ donation and they are found correlation is similar to our study is positively weak correlation. Another study was done by Nasar Alwahaibi et.al.<sup>[11]</sup> (2023) who found on knowledge and attitude regarding Omani university students. To check knowledge and attitude showed similar result to our study.

that 31.9% of the students were males and 68.1% were females. Most of the students were in the age group 17–24 years old (93.1%), About two-thirds (65.9%) of the students had poor knowledge about organ donation. Most of the students heard about organ donation (98.5%).

According to T. K. Ghose et.al.<sup>[12]</sup> who found Knowledge and attitude towards organ donation: a study among medical and nursing students of a medical college 68% students had fair knowledge and the 82% students were positive. Which is similar to our study.

As per findings of study of Sachdeva Seema<sup>[13]</sup> who found knowledge and attitude towards organ donation among the students of under graduate health sciences, in which nursing students had more favourable attitude towards organ donation.

Our study states that nursing students have a poor knowledge and positive attitude regarding organ donation suggesting that students have aware about organ donation but there is lack of knowledge regarding organ donation.

## CONCLUSION

According to findings of this study, students have poor knowledge and positive attitude regarding organ donation. There are significant association between knowledge regarding organ donation with selected demographic variables, but not more significant association between attitude regarding organ donation with their selected demographic variables. There are positively weak correlation between knowledge and attitude regarding organ donation nursing students. Age, gender, religion, program of study has a considerable impact on one's knowledge and attitude regarding organ donation. The study highlights the disparity between knowledge and attitude regarding organ donation among students. Although the majority lack

adequate knowledge, a considerable number still maintain a positive attitude. This emphasizes the need for targeted educational interventions to improve understanding and promote positive attitudes toward organ donation.

**Limitation:**

Since the study focuses only on 250 nursing students from selected colleges in specific kheda-anand district, the findings may not be applicable to nursing students in other regions or to the general population. The study might have been conducted within a limited timeframe, which could have impacted the depth of data collection and analysis. A longer duration might have allowed for a more comprehensive study. As a descriptive study, this research might only provide a snapshot of the knowledge and attitudes of nursing students at a particular point in time. It cannot capture changes or trends in these factors over time.

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