



## Assess the Knowledge and Attitude Regarding Organ Donation among Adolescents in Selected Higher Secondary Schools of Waghodia

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### ABSTRACT

*Introduction: Organ donation has not yet become more popular in India. The inadequate education and ignorance are the main causes of the organ scarcity in India. India currently has a cadaver organ donation rate of 0.08 per million. Only 0.01 percent of persons in India, according to the WHO, donate their organs after passing away. With 0.5 donors per million people, India has one of the lowest rates of organ donation in the world. Objective: Assess the knowledge and attitude regarding organ donation among adolescents at selected higher secondary schools of Waghodia, Vadodara, Gujarat. Methodology: A Quantitative research approach & Descriptive research design was used in research. Researcher selected 400 adolescents from selected higher secondary schools through Simple random sampling method. Self-structured questionnaire & self-structured Likert scale was used. Result: Findings of the study revealed that 14 (3.50%) of students had Good Level of Knowledge, whereas 362 (90.50%) students had Average level of Knowledge and only 24 (6 %) students had Poor level of Knowledge. 305 (76.25%) students having most favorable attitude, 95 (23.75 %) students having favorable attitude and no any student having unfavorable attitude towards Organ Donation. Correlation was used for identifying the correlation between knowledge and attitude regarding Organ Donation. Result shows that there was positive correlation ( $r=0.515$ ) between knowledge and attitude regarding Organ Donation. Conclusion: It is considered that almost adolescents were having good, average and poor level of knowledge. Majority of adolescents were having most favorable and favorable attitude towards Organ Donation. It indicates that with increase in knowledge there is an increase of attitude towards Organ Donation.*

**Keywords:** Knowledge, Attitude, Organ Donation, Adolescents.

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### INTRODUCTION

One of the biggest achievements in modern science and a fresh source of hope is organ donation [1]. Organ donation has not yet become more popular in India. The inadequate education and ignorance are the main causes of the organ scarcity in India. Today, social media and a number of other platforms may be used to spread the word about the advantages of organ donation and how doing so will save the lives of many others [2].

In 2021, there were 70 cadaveric donations reported by the State Organ and Tissue Transplant Organization (SOTTO), the nodal organization for facilitating donated cadaver organs [3]. Organ donation in India following brain stem death is uncommon. India currently has a cadaver organ donation rate of 0.08 per million [4].

According to the WHO, just 0.01 percent of persons in India give their organs after passing away, compared to 70–80 percent in western nations [5]. NOTTO 2020 reports that in India, 5486 kidneys, 1780 livers, 89 hearts, 67 lungs, 14 pancreases and 7 small bowels have been donated [6]. According HRSA (human resources and service administration): In 2021, more than 40,000 transplants were completed. A new person is added to the transplant waiting list every nine minutes [7].

India has one of the lowest rates of organ donation in the world— 0.5 donors per million people much lower than the above 30 donors per million in several western countries [8]. Although it is projected that 1.8 lakh people experience renal failure every year, only 6000 kidney transplants are carried out. An early liver transplant could potentially rescue 10-15% of the 2 lakh individuals in India who perish from liver disease or cancer each year [9].

## MATERIAL AND METHODS

A Quantitative research approach and Descriptive research design was implied to conduct this study. The study was conducted at selected higher secondary schools of Waghodia. Higher secondary school students are the sample for the study and sample size was 400. A probability simple random sampling technique was used for sample selection. Criteria for the sample, inclusion criteria include Participants who are studying in higher secondary school, Participants who are willing to participate during the data collection and exclusion criteria include Participants who are not available at that time of data collection. Tool used in this study was self structured knowledge questionnaire and self structured attitude five rating scale. The data collection tool was sent to 5 experts out of whom 5 received back with their valuable suggestions and comments on the study tool. 40 Sample were taken for the pilot study. The reliability for knowledge and Attitude was calculated using the split-half method. Reliability for knowledge calculated  $r=0.79$  and for attitude calculated  $r=0.97$  which is significant. Collected data were analyzed by using descriptive analysis and Karl Pearson's coefficient of correlation statistics.

## RESULT

### SECTION - I Distribution of Students According To Their Socio-Demographic Data

In age, students under the 15- 16 years of the age group were falls in 178(44.5%). 222 (55.5%) of students were come under 17-18 years of age group. In gender, majority of students were falls in to male category that was 224 (56%) and whereas 176 (44%) of students fall in to female category and no one students fall into other that was 0%. In the type of stream majority of the student's falls into commerce stream that was 300 (75%) and 100 (25%) of students from arts stream. No any student from science stream and diploma. In the religion, majority students were follows Hindu religion that was 361 (90.30%). 37 (9.30%) of students follow the Muslim religion and 2 (0.50%) students were follows the Christian religion. No any student from other religion. In types of residential area almost all the students belonging from rural area that was 400 (100%). In the types of family, majority students are come from extended family that was 330 (82.50%). 54 (13.50%) students were come from nuclear family. Very less students were come from single parent family that was 16 (4%). No any student from foster family. Number of siblings reveals that 17 (4.3%) of students were no siblings. 268 (67%) of students were having 1 sibling. 98 (24.5%) of students were having 2 siblings and 17 (4.3%) of students were having 3 and above siblings. In parent educational status, most of the student's parents were studied up to primary schooling that was 24 (6%). 210 (52.50%) of student's parents were studied up to secondary schooling. 127 (31.80%) of student's parents were studied up to higher secondary schooling. 28 (7%) of student's parents were studied up to graduation. 11 (2.80%) student's parents were illiterate. In family income per month variable, 24 (6%) of student's family income per month was RS. 5000 below. 193 (48.30%) of student's family income was fall in to RS. 5001-10,000. 121 (30.30%) of student's family income was fall in to Rs. 10001-20000. 62 (15.50%) of student's family income was fall in to Rs. 20,000 and above. In the Organ Donor registration 400(100%) of students was not registered as Organ Donor.

### SECTION- II Level of Knowledge Regarding Organ Donation of the Students

Table 1 shows the Knowledge of students. The table depicted that out of 400 higher secondary school's students, 14 (3.50%) of students had Good Level of Knowledge, where as 362 (90.50%) students had Average level of Knowledge and only 24 (6 %) students had Poor Knowledge.

**Table 1: Frequency and Percentage Distribution of Students Based On Level of Knowledge**

Level of Knowledge	Classification of Score	Frequency ( f )	Percentage (%)
<b>Good</b>	Above 17	14	3.50%
<b>Average</b>	9-16	362	90.50%
<b>Poor</b>	Below 8	24	6%
<b>Total</b>		400	100%

### SECTION - III Level of Attitude Regarding Organ Donation of the Students.

Table 2 shows the Attitude of students. The table depicted that out of 400 higher secondary school's students, 305 (76.25%) students having most favorable attitude towards Organ Donation, 95 (23.75 %) students having favorable attitude and no any students having unfavorable attitude towards Organ Donation.

**Table 2: Frequency and Percentage Distribution of Students Based On Attitude Regarding Organ Donation**

Attitude towards Organ Donation	Classification of Score	Frequency (f)	Percentage (%)
Most favourable	78-105	305	76.25%
Favourable	49-77	95	23.75%
Unfavourable	48-21	0	0.00%
Total		400	100%

**SECTION - IV Correlation between Knowledge and attitude regarding Organ Donation.**

Table 3 shows the result of coefficient of correlation between Knowledge and Attitude towards Organ Donation at 0.01 level of significance. The value of "r" was 0.515, falling between 0 and 1. This means that it was significant statistically at the 0.01 level. As a result, the Graph shows a Positive relation between knowledge and attitude regarding Organ Donation. This shows that attitudes towards organ donation improve as knowledge grows.

**Table 3: Correlation between Knowledge and Attitude Regarding Organ Donation among Adolescents**

Variable	Mean	SD	r	p-value
Knowledge	12.00	2.364	0.515	0.000
Attitude	83.64	6.078		

**SECTION - V Association between Socio-Demographic Data with Knowledge of Students Towards Organ Donation.**

Table 4 shows that the association between socio-demographic variable with knowledge. Results showed that selected socio-demographic like types of stream ( $\chi^2= 6.001$ ,  $df=2$ ,  $p=0.050$ ), Parent educational status ( $\chi^2=17.199$ ,  $df=8$ ,  $p=0.028$ ) were found statistically significant association with knowledge score in students and was found significant at  $p \leq 0.05$  level of significance.

**Table 4: Association between Knowledge Regarding Organ Donation among Adolescents With Their Demographic Variable**

Sr. no	Variables	Knowledge			Total	Chi square ( $\chi^2$ )	df	p value
		Good	Average	Poor				
1	<b>Age</b>							
	15-16 years	6	162	10	178	0.103	2	0.950 <sup>NS</sup>
17-18 years	8	200	14	222				
2	<b>Gender</b>							
	Male	7	200	17	224	2.431	2	0.297 <sup>NS</sup>
	Female	7	162	7	176			
Other	0	0	0	0				
3	<b>Types of stream</b>							
	Science	0	0	0	0	6.001	2	0.050*
	Commerce	7	277	16	300			
	Arts	7	85	8	100			
Diploma	0	0	0	0				
4	<b>Religion</b>							
	Hindu	13	325	23	361	1.118	4	0.891 <sup>NS</sup>
	Muslim	1	35	1	37			
	Christian	0	2	0	2			
Other	0	0	0	0				
5	<b>Types of residential area</b>							
	Rural	14	362	24	400	0.0	0	0 <sup>NS</sup>
Urban	0	0	0	0				
6	<b>Types of family</b>							
	Nuclear family	1	46	7	54	8.037	4	0.090 <sup>NS</sup>
	Extended Family	13	302	15	330			
	Single parent Family	0	14	2	16			
Foster Family	0	0	0	0				
7	<b>Number of siblings</b>							

	0	1	16	0	17	6.351	6	0.385 <sup>NS</sup>
	1	12	240	16	268			
	2	1	89	8	98			
	3	0	17	0	17			
8	<b>Parent educational status</b>					17.199	8	<b>0.028*</b>
	Primary schooling	2	17	5	24			
	Secondary Schooling	9	193	8	210			
	Higher secondary schooling	3	116	8	127			
	Graduation	0	25	3	28			
	Illiterate	0	11	0	11			
9	<b>Family income per month</b>					4.220	6	0.647 <sup>NS</sup>
	Rs. 5000 Below	0	21	3	24			
	Rs. 5001-10000/-	7	176	10	193			
	Rs. 10001-20000/-	6	108	7	121			
	Rs. 20001/- & Above	1	57	4	62			
10	<b>Registration as Organ Donor</b>					0	0	0 <sup>NS</sup>
	Yes	0	0	0	0			
	No	14	362	24	400			

NS- Non Significance

\*- Significance at p≤0.05 level

**SECTION - VI Association of Socio-Demographic Data With Attitude of Students Towards Organ Donation.**

Table 5 reveals that the association between Attitude with socio-demographic variable. Results showed that selected socio-demographic like types of stream ( $\chi^2= 6.300, df=1, p=0.012$ ), Types of family ( $\chi^2=6.796, df=2, p=0.033$ ), Number of siblings ( $\chi^2=12.160, df=3, p=0.007$ ), Parent educational status ( $\chi^2=11.604, df=4, p=0.021$ ) were found statistically significant association with knowledge score in students and was found significant at p≤0.05 level.

**Table 5: Association between Attitudes Regarding Organ Donation among Adolescents with Their Demographic Variable**

Sr. no	Variables	Attitude			Total	Chi square ( $\chi^2$ )	df	p value
		Most favorable	Favorable	Unfavorable				
1	<b>Age</b>					0.776	1	0.378 <sup>NS</sup>
	15- 16 years	132	46	0	178			
	17-18 years	173	49	0	222			
2	<b>Gender</b>					0.439	1	0.507 <sup>NS</sup>
	Male	168	56	0	224			
	Female	137	39	0	176			
	Other	0	0	0	0			
3	<b>Types of stream</b>					6.300	1	<b>0.012*</b>
	Science	0	0	0	0			
	Commerce	238	62	0	300			
	Arts	67	33	0	100			
	Diploma	0	0	0	0			
4	<b>Religion</b>					0.740	2	0.691 <sup>NS</sup>
	Hindu	274	87	0	361			
	Muslim	29	8	0	37			
	Christian	2	0	0	2			
	Other	0	0	0	0			
5	<b>Types of residential area</b>					0	0	0 <sup>NS</sup>
	Rural	305	95	0	400			
	Urban	0	0	0	0			
6	<b>Types of family</b>					6.796	2	<b>0.033*</b>
	Nuclear family	35	19	0	54			
	Extended Family	255	75	0	330			
	Single parent Family	15	1	0	16			

	Foster Family	0	0	0	0			
7	<b>Number of siblings</b>							
	0	14	3	0	17	12.160	3	<b>0.007*</b>
	1	215	53	0	268			
	2	62	36	0	98			
	3	14	3	0	17			
8	<b>Parent educational status</b>							
	Primary schooling	13	11	0	24	11.604	4	<b>0.021*</b>
	Secondary Schooling	165	45	0	210			
	Higher secondary schooling	97	30	0	127			
	Graduation	19	9	0	28			
Illiterate	11	0	0	11				
9	<b>Family income per month</b>							
	Rs. 5000 Below	18	6	0	24	0.503	3	0.918 <sup>NS</sup>
	Rs. 5001-10000/-	145	48	0	193			
	Rs. 10001-20000/-	95	26	0	121			
Rs. 20001/- & Above	47	15	0	62				
10	<b>Registration as Organ Donor</b>							
	Yes	0	0	0	0	0	0	0 <sup>NS</sup>
No	395	95	0	400				

**NS- Non Significance**\*- Significance at  $p \leq 0.05$  level**DISCUSSION**

The similar study conducted by KK Manojan, Ramiz Raja, Vincy Nelson et al, Knowledge and Attitude towards Organ Donation in Rural Kerala. 97% of the participants had therefore heard about organ donation. Only 4% of participants had poor awareness, 43% had moderate knowledge, and 53% had good understanding of organ donation. Mahteme Bekele, Wubshet Jote et al, conducted study on Knowledge and Attitudes about Organ Donation among Patient Companion at a Tertiary Hospital in Ethiopia. In result, 219(52.9%) had favorable attitudes towards organ donation, and 195(47.1%) reported unfavorable attitudes. Gursangeet Kaur Sidhu, Mandeep Kaur, conducted study on Knowledge and Attitude Regarding Organ Donation among Nursing Students. In result, It was discovered that there was an aimed level of attitude and knowledge score of nursing students on organ donation that had a positive relation, however it was significant ( $r = 0.042$ ) at the 0.05 level.

**CONCLUSION**

From the above findings it is considered that Adolescents were having good, average and poor level of Knowledge and most favorable and favorable attitude towards Organ Donation, also there was positive correlation between Knowledge and attitude towards Organ Donation among adolescents. Which indicate that attitudes towards organ donation improve as knowledge grows.

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