

# A Questionnaire Based Study Evaluating Awareness for Organ and Body Donation and Cadaveric Dissection among the General Population Attending Medical and Dental Hospital

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## Abstract

**Introduction:** This study intended to assess the awareness among subjects regarding body donation and cadaveric dissection and their willingness to donate body.

**Methodology:** A cross sectional study conducted in Anatomy Department, SBKS Medical Institute and Research Centre, Vadodara. A self-administered questionnaire containing 18 questions was to be filled by the participants in 15 minutes. Responses of participants were collected and analysed.

**Results:** 130 participants were enrolled, 47.69% were males while 52.31% were females. Majority (38.46%) were  $\geq 45$  years in age. Around 41.54% of the participants had received no schooling. Majority of the participants were unaware of the Organ (54.62%) and Body donations (63.85%), however, around 51.54% of the subjects were aware of the cadaveric dissections occurring in medical colleges. Also, 50.77% agreed for body donations. As compared to males, higher proportion of females were aware of the organ (47.1%) and body (38.2%) donations and 61.8% females were willing to donate bodies. Higher proportion of subjects in the age groups of 26-45 years were aware of organ (52.3%) and body (38.6%) donation and cadaveric dissection (65.9%), however, proportionately more subjects in the age group of 18-25 years (77.8%) were willing to donate body. A higher proportion of subjects with college education were aware of the organ (84.6%) and body (92.3%) donation and cadaveric dissection (92.3%) and were also willing to donate body (92.3%).

**Conclusion:** Gender, education and socioeconomic background have an impact on organ/body donation and willingness to donate body.

**Keywords:** Body donation, Cadavers, Female, Male, Participants.

## Introduction

One of the fundamental subjects for medical student is Human Anatomy. With the surge in the number of medical colleges and number of students in medical

colleges the demand of cadavers has risen drastically.<sup>[1]</sup> However, there is mismatch in demand and availability of the same. This makes it necessary to increase the awareness among the masses about body donation and thus to meet the ever increasing requirements of the medical colleges.<sup>[2]</sup> The first step in this direction can be taken by spreading the awareness among the patients attending medical and dental colleges. This study intended to assess the awareness among participants regarding body donation and cadaveric dissection and their willingness to donate body. The findings of this study would help set goals and take necessary steps for increasing awareness among masses.

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## Materials and Method

This was a cross sectional study conducted in Department of Anatomy of SBKS Medical Institute and Research Centre, Piparia, Vadodara from December 2019 to February 2020. A self-administered questionnaire was to be filled by the participants. The questionnaire evaluated awareness, attitude, knowledge and willingness towards body/organ donation based on 18 points scale. Subjects were given questionnaire in the vernacular language and were asked to clarify doubts if any, prior to filling the questionnaire. The questionnaire had multiple choice questions and a separate space for providing personal option was also provided for each question. The researcher made the participants fill questionnaire in their presence and did not allow cross discussion among participants while filling it. Duly filled and signed questionnaire were collected from the participants. Each participant was given 15 minutes for filling the questionnaire.

A total of 130 participants, attending medical and dental outpatient department and providing written informed consent for participation in the study and agreeing to fill the questionnaire were enrolled in the study.

### Inclusion Criteria:

- i. Patients attending OPD department of medical and dental hospital
- ii. Patients aged 18 years and above

- iii. Those willing to give written informed consent for participation in the study

### Exclusion Criteria:

- i. Medical and dental students, doctors and faculty members were excluded
- ii. Those that did not give consent for participation in the study

The study was conducted an aim to study gender and age group based difference in awareness and willingness for organ and body donation and to evaluate familiarity with cadaveric dissection. The study also evaluated the impact of literacy on the awareness. The subjects were divided as those having no school education, those with primary, secondary, higher secondary and college education.

Data was entered in MS excel and analysed. Frequencies and percentages were calculated. Significance was assed using Chi square test.

## Results

A total of 130 questionnaire were collected and analysed.

Of the total subjects enrolled, 47.69% were males while 52.31% were females as shown in table 1. The age distribution of the population showed that a higher proportion of males and females were  $\geq 45$  years in age.

**Table 1: Gender and Age distribution of participants**

Gender Distribution	Males		Females		Total		P-value
	N	%	N	%	N	%	
	62	47.69%	68	52.31%	130	100%	0.0212
Age group (years)	N	%	N	%	N	%	
18-25	17	27.42%	19	27.94%	36	27.69%	
26 – 44	21	33.87%	23	33.82%	44	33.85%	
$\geq 45$	24	38.71%	26	38.24%	50	38.46%	0.0412

When the literacy of the study group was evaluated, it was observed that higher proportion of the females (45.59%) had no schooling as compared to males. The

literacy of the population was on lower side as shown in table 2.

**Table 2: Literacy status of participants**

Literacy	Males		Females		Total		P-value
	N	%	N	%	N	%	
No schooling	23	37.10%	31	45.59%	54	41.54%	0.0113
Primary	8	12.90%	15	22.06%	23	17.69%	
Secondary	12	19.35%	9	13.24%	21	16.15%	
Higher secondary	11	17.74%	8	11.76%	19	14.62%	
College educated	8	12.90%	5	7.35%	13	10.00%	

Majority of the participants were unaware of the Organ (54.62%) and Body donations (63.85%), however, around 51.54% of the subjects were aware of the cadaveric dissections occurring in medical colleges. Also, 50.77% agreed for body donations.

**Table 3: Awareness and willingness among participants**

Awareness/Willingness among participants	Aware		Not aware	
	N	%	N	%
Organ donation	59	45.38%	71	54.62%
Body donation	47	36.15%	83	63.85%
Cadaveric Dissection	67	51.54%	63	48.46%
Willingness for donation	66	50.77%	64	49.23%

Gender based evaluation of awareness of donation showed that as compared to males, higher proportion of females were aware the organ (47.1%) and body (38.2%) donations and 61.8% females were willing to donate bodies. (Table 5).

**Table 4: Gender based evaluation of awareness**

	Organ donation				Body donation				Cadaveric Dissection				Willingness for donation			
	Aware		Not aware		Aware		Not aware		Aware		Not aware		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Males	27	43.5%	35	56.5%	21	33.9%	41	66.1%	30	48.4%	32	51.6%	24	38.7%	38	61.3%
Females	32	47.1%	36	52.9%	26	38.2%	42	61.8%	37	54.4%	31	45.6%	42	61.8%	26	38.2%

Age group based evaluation, as shown in table 6, suggested that higher proportion of subjects in the age groups of 26-45 years were aware of organ (52.3%) and body (38.6%) donation and cadaveric dissection (65.9%), however, proportionately more subjects in the age group of 18-25 years (77.8%) were willing to donate body.

**Table 5: Age based evaluation of awareness**

Age groups	Organ donation				Body donation				Cadaveric Dissection				Willingness for donation			
	Aware		Not aware		Aware		Not aware		Aware		Not aware		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
18-25	14	38.9%	22	61.1%	12	33.3%	24	66.7%	22	61.1%	14	38.9%	28	77.8%	8	22.2%
26 - 44	23	52.3%	21	47.7%	17	38.6%	27	61.4%	29	65.9%	15	34.1%	24	54.5%	20	45.5%
≥45	22	44.0%	28	56.0%	18	36.0%	32	64.0%	22	44.0%	28	56.0%	14	28.0%	36	72.0%

As shown in table 7, a higher proportion of subjects with college education were aware of the organ (84.6%) and body (92.3%) donation and cadaveric dissection (92.3%) and were also willing to donate body (92.3%).

**Table 6: Literacy based evaluation of awareness**

Literacy	Organ donation				Body donation				Cadaveric Dissection				Willingness for donation			
	Aware		Not aware		Aware		Not aware		Aware		Not aware		Yes		No	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No schooling	11	20.4%	43	79.6%	9	16.7%	45	83.3%	15	27.8%	39	72.2%	15	27.8%	39	72.2%
Primary	9	39.1%	14	60.9%	7	30.4%	16	69.6%	11	47.8%	12	52.2%	11	47.8%	12	52.2%
Secondary	13	61.9%	8	38.1%	6	28.6%	15	71.4%	12	57.1%	9	42.9%	12	57.1%	9	42.9%
Higher secondary	15	78.9%	4	21.1%	13	68.4%	6	31.6%	17	89.5%	2	10.5%	16	84.2%	3	15.8%
College educated	11	84.6%	2	15.4%	12	92.3%	1	7.7%	12	92.3%	1	7.7%	12	92.3%	1	7.7%

## Discussion

Organ and body donation is a noble cause. The need to spread awareness among the masses about organ/body donation led to conduct of this study. The intent was to evaluate the awareness of general public about organ/body donation. In Current study, it was view that forty thirty eight percentages. of the subjects were aware of organ donations while only 36.15% subjects were aware of body donation. However, in the study by Charmode SH, et al. overall awareness about organ donation and body donation was 63.39 %and 70.09 %, respectively. This was higher compared to our study, the reason for the same may be due to the fact the study by Charmode SH, et al. was conducted in medical and dental students whereas our study was conducted in patients attending medical and dental OPD.<sup>[1]</sup> The fact that our hospital receives drainage from rural population may also have impact on the outcome of the study. The reasons for the same are as follows: a higher proportion of subjects lack literacy, this is reflected from the fact that 41.54% of the subjects received no schooling while 17.69% subjects had received primary education. Dope SA et al have highlighted the fact that education background of the subjects influences their understanding of organ/body donations and also influences their willingness to donate body.<sup>[2]</sup>

Charmode SH, et al. also observed that medical students as compared to other student were more acquainted with cadaveric dissection and had better awareness regarding organ donation (91.86%) and body donation (94.18%) as compared to general public/patient (nonacquainted group). Similar findings were also observed by Chung CK et al and P Burra, Burra P, et al.<sup>[4,5]</sup>

In the study by Dope SA et al where in the data was collected from patients visting the hospital, it was observed by the authors that total 68% people were knowledge about body donation and were also aware that cadavers or donated bodies were purpose for the medical student study. <sup>[2]</sup> Bharambe V K et al in their study conducted in patients attending OPD observed that 78% participant were aware of Organ donation concept but 22% were unaware of the same.<sup>[3]</sup>Chung CK et al in a study conducted in medical students observed that among the student of 3, 4 and 5<sup>th</sup> years, 67% of the questions correctly, while only of years 1 and 2 students answered correctly. <sup>[4]</sup>Panshewdikar P et alobserved that 76.84% of the enrolled subjects were aware about the body donation.<sup>[6]</sup> Singh LP and Vyas PC in their study conducted in nursing staff observed that all the staff members were aware of the donation process.<sup>[7]</sup> Tamuli RP et al observed in their study that 79.17% (285) of participants were aware about organ donation: <sup>[8]</sup>

In the present study 50.77% of the subjects were willing to donate body. The willingness was more among females and in those that had higher educated. It was also high in those in the age group of 18-25 years, this may have been due to the fact that young and educated are more aware of the importance of body donations. Those that rejected the idea of body donation gave religion as the reason for the same, majority of the times. In the study by Dope SA et al around 41% person did not believe in body donation and religious beliefs was the commonest reason behind the same. Also, 10% of the total believed donated bodies were being misused. <sup>[2]</sup> Even in the studies by Charmode SH, et al, Bilgel H et al and Tamuli RP et al a higher proportion of females were willing to donate bodies and showed better awareness of the concept of organ and body donations.<sup>[9]</sup>

Balajee KL observed in their study that 88% of the subjects were aware of organ donation and awareness was highest (98.8%) in the 18–30 years age group, male 91% and those educated to higher secondary and above 100%.<sup>[10]</sup>

Thus it can be seen that there are various factors that influence the awareness of the population regarding organ/body donation and their willingness to donate body.

### Conclusions

Females have better awareness of the process of organ/body donation and have proportionately higher willingness to donate body. Education and socioeconomic background have an impact on it.

**Ethical Clearance:** Taken from Sumandeep Vidyapeeth University committee.

**Source of Funding:** Self

**Conflict of Interest:** Nil

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