# Survey on Knowledge and Attitude about Organ Donation among All Medical Faculties of K.I.M.S.D.U, Karad

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Abstract: <u>Methods</u>: A Cross sectional study was done at Krishna Institute of Medical sciences deemed University, Karad, Maharashtra. Data containing sample size of 126 was collected through convenience sampling. After taking informed consent, questionnaires were filled. The data collection tool was a multipart questionnaire including demographic information, 15questions about knowledge and 15 question about attitude toward organ donation with dichotomous scale (Yes/No). <u>Results</u>: In the total of 126, majority of subjects 92 (73%) have average range of knowledge regarding organ donation, followed by 14 (11%) of subjects have good knowledge regarding organ donation and 20 subjects (16%) have poor knowledge about organ donation with the mean score of knowledge was 11.01 (SD 1.55). In attitude, majority of the subjects 65 (51.5%) have average attitude with score of being 11-12, followed by 39 (30.9%) having good attitude about organ donation with score of being > =13 and minority of the subjects 22 (17.46%) have poor attitude with score of being < =10. the mean attitude score was 11.1 with SD 1.45. <u>Conclusion</u>: There is overall a positive attitude of medical faculty towards organ donation. Study also implies awareness should be increased about the benefits of organ donation through the means of mass communication .Further studies are needed to promote and motivate the general population for organ donation.

Keywords: organ donation, knowledge, attitude, Medical faculty

#### 1. Introduction

"Don't take your organs to heaven for god known's they are needed here, you have the power to donate life."

#### Anonymous

Organ donation is the process of surgically removing an organ or tissue from one person (the organ donor) and placing it into another person (the recipient).Transplantation is necessary because the recipient's organ has failed or has been damaged by disease or injury. Organ transplantation is one of the great advances in modern medicine. Unfortunately, the need for organ donors is much greater than the number of people who actually donate <sup>(1)</sup>

Worldwide, kidneys are the most commonly transplanted solid organ followed by liver and then heart. Cornea and musculoskeletal grafts are the most commonly transplanted tissues; these outnumber organ transplants by more than tenfold. Nobody knows the actual need of people requiring an organ transplant. Since the untreated patients die and record not found in the hospital statistics or registries <sup>(2)</sup>

While 36 persons per million of population donated organs in Spain in 2014, 35 donated in Croatia, 27.02 donated in the United States, and only 0.34 donated in India. <sup>(3)</sup>In India, 500,000 people die because of non-availability of organs, 200,000 people die of liver disease, 50,000 people die from heart disease , 150,000 people await a kidney transplant but only 5,000 get one and 1,000,000 lakh people suffer from corneal blindness and await transplant .

Nationally, with a population of 1.2 billion people, the statistic stands at 0.08 persons as organ donors per million population (PMP). This is an incredibly small and insignificant number compared to the statistics around the world. <sup>(4)</sup>

Misconceptions and lack of information hinder the willingness of public to donate. Information transfer and education to the public is an important step to correct misconception and to motivate the population to donate. Health care professionals with good clinical vigilance are usually the first one to identify a suitable potential donor. On the other hand, it was suggested that failure of health professionals to obtain consent for organ donation is an important cause of shortage of organs. Thus, promotion program directed specifically to health care professionals are particularly crucial to the success of organ donation program. High turnover rate and busy clinical service rendered organ donation a secondary important task with insufficient effort devoted<sup>(5)</sup>

The reasons for this pathetic scenario may be the lack of awareness about the need of organ donation and the ignorance of common men about the importance, procedures, benefits and legal issues of organ donation. So, it is time to question ourselves in the medical field how best this situation can be handled and what must be our contribution in this regard. The best way to start this is to promote the awareness of the college students, especially those in the medical field, towards organ donation because they will be the most suitable persons to carry the message to the community. Through them it is possible to increase the social support for organ donation and motivate people to register as organ donors<sup>.(6)</sup> As a first step, it is necessary to assess the personal views, knowledge, attitudes and beliefs of the persons in medical field regarding organ donation. Keeping this in mind, an attempt had been made to do identify educational strategies that give greater emphasis, it is important to assess the degree of knowledge and the attitudes of medical faculty regarding organ donation

University medical faculty must have basic information about the procedures and ethical issues related to organ donation. Despite the importance of the subject, few studies have assessed the knowledge, attitudes and practice of medical faculties regarding organ donation. So this study occurred to determine knowledge and attitude of organ donation among medical faculties at KIMSDU, Karad

## 2. Literature Survey

- 1) K. Chakradhar, D. Doshi, B. Srikanth Reddy, S. Kulkarni, M. Padma Reddy et al 2016 conducted cross sectional study on "Knowledge, Attitude and Practice Regarding Organ Donation among 298 undergraduate dental students of the Panineeva Institute of Dental Sciences and Hospital, Hyderabad, India. A 27-item selfadministered questionnaire, which assessed the levels of knowledge (Q1-13), positive attitude (Q14-24) and practice habits (Q25-27) regarding organ donation with dichotomous scale (Yes/No). results shows that As compared to males, females reported better mean ±SD scores in knowledge  $(8.22\pm1.51)$  and practice  $(0.91\pm0.8)$ ; higher mean  $\pm$ SD attitude scores (8.55 $\pm$ 1.56) were reported among males (p<0.001). While second year dental students had higher scores for their knowledge  $(8.55\pm1.56)$  and practice  $(1.02\pm0.44)$  compared to other year of training, third year students showed a significant higher mean attitude score  $(1.73\pm1.17)$  (p=0.02).<sup>(7)</sup>
- 2) Hosam H\*, Mohamed E A, Khaled N Y, BahaaEldin F, Ayman El N et al ,2016 conducted cross sectional study on "Knowledge and Attitudes about Organ Donation among Medical Students in Egypt: A self-administered questionnaire to assess knowledge and attitude towards organ donation (OD) was used to perform a survey Results shows that total of 359 students completed the questionnaire. 36% of the students had good knowledge about OD; however, 11.7% of them had good knowledge about DD; however, 11.7% of students found their information resources insufficient. 77.7% of participants didn't know about the law regulating OD in Egypt. 37% of the students had positive attitude towards organ donation. <sup>(8)</sup>

## 3. Research Methodology

Cross-sectional study was adopted to explore the knowledge of Medical faculty possess and the attitudes they hold regarding organ donation . The sample consisted of 126 medical Faculties of KIMSDU ,Karad and samples were selected using simple random sampling technique

**Description of tool :** A self reported questionnaire on knowledge and attitude assessment regarding organ donation

among all medical faculties was prepared. It comprises of three sections.

### Section A: Demographic sheet

It has demographic information of medical faculty including age, gender , designation etc

# Section- B: Questionnaires on knowledge of organ donation.

It has 15 questions related to Knowledge on organ donation were included.

#### Section C: Questionnaires on attitude on organ donation

It has questions measures attitude towards organ donation were included. Right answer was given score '1' and wrong '0'. So the total score of attitude on organ donation ranged between 0-15

## 4. Method of Data Collection

After taking ethical committees permission and signed consent forms, In total of 126 medical Faculty of KIMSDU, Karad in 2017 were randomly selected., the methods and aims of the study were explained to them and ensured that the individual information will be kept confidential, Questionnaires were validated and modified as per expert's suggestion.

**Inclusion criteria** consist of medical faculty of KIMSDU who are willing to participate in the study.

**Exclusion criteria**; those who are absent and unavailbale on the particular day of data collection.

## 5. Results

### Section – I

This section deals with demographic details of subjects under study. A total of 126 eligible subjects returned the questionnaire.

Demographic variables	Frequency	Percentage
AGE		
18-25	28	22.22
26-35	70	55.56
36-45	10	7.94
46-55	12	9.52
56-63	6	4.76
Family		
Joint	11	8.73
Nuclear	115	91.26
Religion		
Christian	2	1.59
Hindu	120	95.23
Muslim	4	3.17
Designation		
PG Student	75	59.5
Staff	51	40.4
Marital status		
Married	60	47.62
Unmarried	66	52.38
Gender		
Female	45	35.71
Male	81	64.29

 Table 1: Socio-demographic characteristics of the Subjects

 Demographic Variables
 Frequency
 Percentage

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Table 1 shows that Among 126, maximum subjects 70 (55.5%) of them are in the age group of 26-35 years, 81(64 %) of them are male, 120 (95%) of them are Hindu in religion and 66 (47.62%) were married while 115 (91.2%) of them were belong to nuclear family. maximum subjects 75 (59.5%) of them were designated as post graduation students.

#### Section –II

**Knowledge and attitude about organ donation:** This section deals with assessment of existing level of knowledge and attitude of organ donation among Medical faculty

Table 2.	Knowledge	regarding	organ	donation
I able 2.	Knowledge	regarding	organ	uonation

Questionnaires	Right	Wrong
	answer	answer
Heard about the term organ donation	100%	0
Aware of donated organs can save a	100%	0
life of another person		
Know about organs can be donated	122 (96.8 %)	04 (3.17 %)
during life		
Know about organs can be donated	125 (99.20 %)	01 (0.79%)
after life		
Knowledge about which organs can	93 (74 %)	33 (26%)
be donated		
Have a relative whose organs have	22 (17.46 %)	104 (82.53%)
been donated		

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Heard of brain death	124 (98.4%)	02 (1.58 %)
As the next of kin ,willingness to	106 (84.12%)	20 (15.8%)
donate the organs of a brain death		
relative		
Aware about parliamentary law in	115 (91.26%)	11 (8.73%)
India about organ donation		
Heard about organ donation card	92 (73.01%)	34 (26.98%)
Know where to obtain organ	56 (44.4%)	70 (55.5%)
donation card		
Heard about organ transplant	124 (98.4%)	02 (1.58 %)
Know anyone waiting for a	27 (21.42%)	99 (78.57%)
transplant		
Organ donation could be misused or	27 (21.42%)	99 (78.57%)
misappropriated		
Know about donated dead body is	123 (97.61%)	03 (2.38%)
used for teaching learning purpose		

Only 74 % (93) of the subjects said that kidney, liver ,pancreas, bone, skin, eyes can all be donated. Remaining 26%(33) responded with more than one option. Among them only 73% (92) knew that there was organ donation card and 26.9%(34) are not aware of organ donation card .44.4 % (56) respondents knew where to obtain organ donation card and 55.5 % (70) were not knew about where to obtain organ donation card .among 126,78.5% subjects believe that there is danger that donated organs could be misused and misappropriated and minority subjects 21.4% believe that donated organs could be used appropriately.

Score	es of knowle	dge		Scores of attitude			
Description / Scores	Frequency	Percentage	P-value Description/scores Frequency Percentage I				P value
Good ( $\geq 13$ )	14	11		Good ( $\geq 13$ )	39	30.95	
Average (10 - 12)	92	73	0.0003*	Average (11-12)	65	51.58	0.0003*
Poor ( $\leq 9$ )	20	16		Poor ( $\leq 10$ )	22	17.46	

Questionnaires	Positive attitude	Negative	
		attitude	
Support organ donation	126 (100 %)	0 %	
Aware of term organ	126 (100 %)	0 %	
transplantation			
Feel comfortable to think or talk	125 (99.20 %)	01 (0.79%)	
about organ donation			
Willingness of organ donation	113 (89.68%)	13 (10.31%)	
after death			
Willingness to carry an organ	110 (87.30%)	16 (12.69%)	
donation card			
Agree to donate family	92 (73.01%)	34 (26.98%)	
member's organ			
Thinking of donating one's	121 (96.03%)	05 (3.96%)	
organ adds meaning to one's life			
Religion agree with organ	112 (88.88%)	14 (11.11%)	
donation			
Belief about body should be kept	94 (74.60%)	32 (25.39%)	
intact after death			
Ever donated an organ	0	126(100%)	
Belief towards premature	107 (84.92%)	19 (15.07%)	
termination of medical treatment			
for registered organ donor			
Want to sell your organ like	117 (92.85%)	09 (7.14%)	
kidney			
Have you pledged /signed to	18 (14.28%)	108	
donate any organ		(85.71%)	
Ever receive an organ for	09 (7.14%)	117	
transplantation		(92.85%)	
Suggest others to donate their	119 (94.44%)	7 (5.55%)	
organs			

#### Table 3: Attitude regarding organ donation

Among 126 subjects, overall medical faculty had a positive attitude towards organ donation. Their individual answers are mentioned in table 3. All the subjects 126 (100 %) support organ donation. 121 (96.03%) Subjects agreed that donating one's organ adds meaning to one's life. Majority of the subjects 113 (89.68 %) are willing about donation of their organs and the minority of the subjects 13 (10.31 %) are won't consider donation of their organ. Religion is not the matter when considering organ donation for 88.88% of the participant. For donating a relative's organs, 72 (73.01%) are willing and 34 (26.98%) are not agree to donating family member's organ .110 (87.30%) subjects are citied that they are willing to carry an organ donation card, while 16 (12.69%) are stated that not willing to carry an organ donation card. Further it was observed that only18 (14.28%) have pledged /signed to donate any organ and 108 (85.71%) haven't pledged /signed to donate any organ. Interestingly, 119 (94.44%) are willing to suggest others to donate their organs.

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Demographic variables	Readings	Total	Good	Average	Poor	chi-square	p value
Family	Joint	11	13	9	0	61.16	< 0.0001
	Nuclear	115	12	83	105	61.16	
Designation	PG students	75	15	42	18	4.28	0.118
	Staff	51	7	23	21		
Marital status	Married	60	14	45	1	30.03	< 0.0001
	Unmarried	66	0	47	19	30.03	<0.0001

 Table 4: Scores of Medical faculty regarding knowledge and attitude regarding organ donation

Chi-square test was used to check the knowledge and attitude of medical faculty about the organ donation.

For the 126 medical faculty who answered the survey, the mean score was 11.01 (SD 1.55), with the highest score being  $\geq$ 13 and the lowest score being  $\leq$  9. From table4: it can be observed that majority of subjects 92 (73%) have average range of knowledge regarding organ donation, followed by 14 (11%) of subjects have good knowledge regarding organ donation and 20 (16%) have poor knowledge about organ donation with chi-square 16.531 with p-value0.003

It is also revealed that , in the total of 126 , majority of the subjects 65 (51.5%) have average attitude with score of being 11-12 , followed by 39 (30.9%) having good attitude about organ donation with score of being  $\geq$ 13 and 22 (17.46%) have poor attitude with score of being  $\leq$  10 . the mean attitude score was 11.1 with standard deviation of 1.4

**Section III:** Association of demographic variables with knowledge regarding organ donation among medical faculty

Chi Square test was used to compare categorical variables. The analysis revealed that there is significant association was found knowledge with family and marital status (p < 0.05) and no significant association was found with age, gender, and education qualification.

In Attitude, significant association was found only with type of family (P < 0.05). Hence we conclude that there is no significant association between the knowledge and attitude scores of medical faculty with demographic variables.

### 6. Discussion

Assessment on knowledge and attitude of organ donation is essential for better understanding of the medical faculty on different aspects of organ donation as health professionals may play an important role in eliminating barriers and increasing organ donation..

## Section I: Findings in relation to the demographic variable

Among 126, maximum subjects 70 (55.5%) of them are in the age group of 26-35 years and majority 81(64 %) of them are male. 120 (95 %) subjects are belong to Hindu. Maximum subjects 75 (59.5 %) of them were having designated as post graduation students. Majority subjects 66 (52.3%) are married and maximum subjects 115 (91.2%) were belong to nuclear family

# Section II – Findings in relation to knowledge about the organ donation $% \left( {{{\mathbf{F}}_{\mathbf{n}}}^{T}} \right)$

In this study, among 126 subjects, all of them (100%) were aware about organ donation. This awareness was really interesting when compare to a study Annadurai K et al <sup>(9)</sup> done in Tamil Nadu in the year 2013 which also reported that Of the 440 participants, all the participants (100%) were aware about organ donation.

Only 74 % of the subjects knew that kidney, liver, pancreas, bone, skin, eyes can all be donated. Remaining 26% responded with more than one option .similar findings were reported by Annadurai K et al <sup>(9)</sup> study done in Tamil Nadu, where it was 16.1% of study population knew that kidney, blood, heart, eyes, liver, lungs, skin and bone marrow can all be donated. Remaining 83.86% responded with more than one option. This finding was comparable lower than present study.

As for willingness to donate the organs of a brain death relative, 106 (84.12%) of the medical faculty reported that they would willing to donate their relatives organ and only 20 (15.8%) are not willing as because of ethical issues concerning organ donation, like whether to consider the wishes of the deceased or the family regarding organ donation, concern about disfigurement fear of harvesting before death, inappropriate use of organs, and religious believes . A study among university students in Karnataka by Shreya Agarwal in 2015  $^{(10)}$  showed that Regarding whether brain dead patients can be considered as potential donors for organ donation, 300(76.3%), stated it as true. It was answered correctly by 66 (67.3%) first year, 66(66.7%) second year, 82 (85.4%) third year and 86(86%) fourth year medical students. A high level of significance was found between year of medical school and knowledge on this question (p value= 0.003). These percentages suggest that among medical faculty, the willingness to donate is differ from that of the public.

115 (91.26%) of respondents actually knew that there was law in India which regulates the future practice related to organ donation and transplantation, 11 (8.73 %) answered that there was no law or they did not know about that law. This was contrary to the findings Nahida Khan et al conducted study in Pakistan .2013 <sup>(11)</sup> . 27% of respondents actually knew that there was law in Pakistan, 24% replied that there was no law while 49% said that they did not know about that law which may be attributed to lower literacy rate of the country..

Further it was observed that 92 (73.01%) were heard about organ donation card and only 56 (44.45%) know where to obtain organ donation card. These observation of present study is comparable with a study done in Iran by Mohadese

B et al , 2015 <sup>(12)</sup>, which reported that 96.6% of those have any donation card believed it is not easy to register for organ donation and 100% of them did not know from where to receive such card. This study result was also slightly higher than the *H. Bilgel1* et al <sup>[13]</sup> in which it was Only 1.2% of the students had an organ donation card, and 3.4% of the students had at least one family member with an organ donation card.

## Section III – Findings in relation to attitude about the organ donation

Medical faculty have essential role for transplant centers in cadaver organ donation. It is assumed that their attitudes toward donating their own organs will influence their readiness to participate in the cooperation process.

In this study, We found that medical faculty had more positive attitudes toward organ donation, 100 % of subjects support organ donation and majority 125 (99.20%) responded that they feel comfortable to think or talk about organ donation . most of the respondents 113 (89.68%) are willing to donate their organ after death . This finding was more appreciable and it was much higher than the findings from a study done in *H. Bilgel*, et al <sup>[13]</sup> where About 17.1% of them would donate their organs without any hesitation, and a further 41.3% had some doubts and needed persuasion for donate their organs to their relatives.

An interesting observation was that only 14 (11.11%) considered their religious beliefs as a limiting factor for not allowing organ donation and religion was not the criteria for organ donation for 112 (88.88%) of the respondents. This is lower when compared to data from a study done in Annadurai K et al.<sup>(9)</sup> reported that 95.94/5% of respondents were answered religion was not the criteria for organ donation.

It was noted that despite being medical faculty only 18 (14.28%) have pledged /signed to donate any organ and most of the subject 108 (85.71%) had not pledged /signed to donate any organ. This observation is comparably higher than the findings of study done by Juan M in Puerto Rico ,2013 <sup>(14)</sup> Of the students surveyed, 10.9% answered that they did not want to be organ donors, and 23% answered that they already were active donors (having signed an organ donor card or a living will.) This highlights the point that medical faculty is ignorant and not focusing towards organ donation may be due to routine their work schedule and further studies may be conducted to analyze the reason behind it.

Present study showed 94.44 % of the population said positive response to suggest others to donate their organs after death and This finding was more appreciable and it was much higher than the findings from a study done in Tamil Nadu , Annadurai K et al<sup>.(9)</sup> where Seventy- five percent of respondents were in favor of organ donation promotion in the future.

Section IV – Findings in relation to Association of demographic variables with knowledge and attitude regarding organ donation among medical faculty. In current Study showed significant association between knowledge

with demographic variables such as family, and marital status (p < 0.05) and no significant association was found with attitude and demographic data where p > 0.05

## 7. Conclusion

The conclusion dawn from the findings of the study are as follows .The objective of the present study was to determine the level of knowledge and attitude towards organ donation as the medical faculty have important role in organ donation and transplantation .Overall to conclude it can be said that medical faculty are quite keen on learning about organ donation and transplantation and there is a positive attitude of medical faculty towards organ donation This study found out that even though there was the willingness for organ donation among medical faculty only few were registered.. The implications of this study are to emphasize the need to sensitize medical students about organ donation and registration for organ donation. The results of this research also indicate the need for more intensive interdisciplinary discussion and information to prepare the next generation of healthcare professionals about transplants and organ donation<sup>(13).</sup> Creating a sufficient knowledge base by promoting organ donation .Further studies are also needed to promote and motivate the general population for organ donation and transplantation, through inclusion in medical curriculum or through social media.

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