

KNOWLEDGE AND ATTITUDE ABOUT ORGAN DONATION AMONG DENTAL STUDENTS: A SURVEY

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ABSTRACT

BACKGROUND

Organ transplantation (OT) is life-saving for patients with failing organs. Shortage of donor organs can be solved by raising the willingness of the population to donate organs. This study is aimed to assess the awareness and knowledge about organ donation among professional students from Manav Rachna Dental College.

MATERIALS AND METHODS

A cross sectional descriptive survey was administered. Specially designed self-administered questionnaire to assess knowledge and attitude towards organ donation (OD) was used to perform a survey on a representative sample of medical students in Manav Rachna Dental College, Faridabad.

RESULTS

Organ donation is the ultimate act of human kindness. Forced donation and organ theft is very common throughout the world. We found that awareness of organ donation is correlated with education and socioeconomic status.

CONCLUSION

Measures should be taken to educate people with relevant information, including the benefits of organ donation and possible risks as well so that people can make informed choices in future. Policy makers should also involve religious scholars for the mobilization of a favourable public opinion towards organ donation. Televisions, newspapers and media can be used as efficient sources of information.

KEYWORDS

Transplantation, donor, recipient, rejection.

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BACKGROUND

Organ donation is when a person allows healthy transplantable organs and tissues to be removed either after death or while the donor is alive and transported into another person. Common transplantations include kidneys, heart, liver, pancreas, intestine, lungs, bone marrow, skin and corneas.¹

Organ donation (OD) is the cornerstone in the process of transplantation. There is a worldwide shortage of donor organs in comparison to the need for transplantation. There is a significant relation between public attitude towards OD and availability of such organs. Thus the main concern of most transplant surgeons is to increase the donor pool and spread the willingness of donation among healthy individuals. Evaluation of public knowledge and attitude

towards OD is of crucial importance to evaluate and develop educational programs to raise the public commitment to OD. Knowledge and attitude of health care providers towards OD plays a major role in promoting the concept among population. Furthermore, it is of great importance to understand the impact of the educational process among other cultural factors on medical students' attitude towards OD.

Many organizations are currently working in India to promote and educate people on deceased organ donations and serves to bridge the gap in the functioning between the government, the hospitals and the organ donors. These are running with an objective of increasing awareness about organ donation in India and broadening the mindset of people towards the gift of life.²

Aims and Objectives

This study is aimed to assess the awareness and knowledge about organ donation among professional students from Manav Rachna Dental College.

Gift Your Organ

www.giftyourorgan.org

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Narmada Kidney Foundation

www.narmadakidney.org

Amit Gupta Foundation

www.amitfoundation.org

Shatayu

www.shatayu.org.in

Apex Kidney Foundation

www.apexkidneyfoundation.org

Mother

www.mother.org.in

Mohan Foundation

www.mohanfoundation.org

Tanker

www.tankerfoundation.org

NDTN India (National Deceased Donor Transplantation Network)

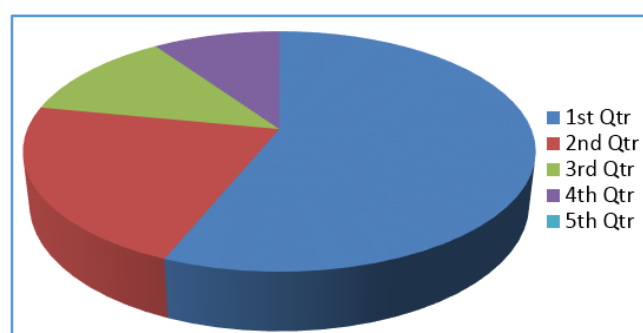
www.ndtnindia.org

NNOS (National Network for Organ Sharing)

www.nnos.org

India's first organ transplant was conducted in the 1970's. It was a kidney transplant. Organ transplantations save lives of patients affected by terminal organ failures and improve quality for life. They are essential for developed and mature health care systems. This program activity has been steadily growing. Since 1988, more than 3,90,000 organs have been transplanted, with approximately 80% of the transplanted organs coming from deceased donors. In 2005, 7,593 deceased donors provided 23,249 transplanted organs in the United States, and there were 6,896 living donors. The number of annual organ transplants has also significantly increases from an estimated 7,692 in 1984 to 28,110 in 2005.³

The need for organ donors has never been greater. More than half a million Indians are estimated to be in dire need of an organ transplant. As per the recent statistics in India.⁴

**Figure 1**

Number of People Who Die Because of	Figure
1 st Quarter: Corneal Blindness	1,000,000
2 nd Quarter: Non Availability of Organs	5,00,000
3 rd Quarter: Liver Diseases	2,00,000
4 th Quarter: Kidney Transplant	1,50,000
5 th Quarter: Heart Diseases	50,000

Table 1

Various surveys have already been conducted in different places across the globe.

Survey 1

One of the survey conducted among medical students in Egypt⁵ showed that there was lack of sufficient knowledge about legal aspects, criteria of details of organ donation process which is directly contributing in reducing the positive attitude among Egyptian medical students.

Survey 2

The survey among the first year medical students in Germany showed that the students knew very little about the legal aspects and there was no gender difference in answers to the survey questions. Many students were having doubts regarding:⁶

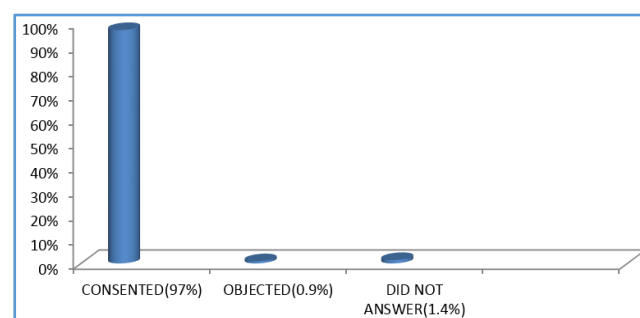
- Whether the donor should be dead at the time of donation.
- Some also mentioned religious/ethical doubts.
- If transplantation was truly necessary or not.
- And almost 48% indicated discomfort with donation of certain organs.

Similarly, many other surveys have been conducted and the results mainly indicated lack of knowledge and awareness regarding the topic. And less information about legal and illegal aspects and different laws proposed by the government.

Survey 3

This survey was conducted among 570 first year medical students in France. Main aim was to assess the knowledge, attitude, personal views and perceptions towards organ donation and transplantation were investigated prior to any medical course.^{7,8}

Results showed that, on asking for "willingness to donate" a kidney to a relative:

**Figure 2**

"Cadaveric Organ Donation"

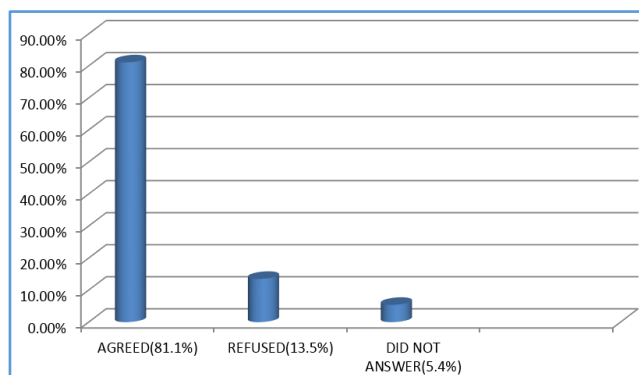


Figure 3

Methodology Used in the Study

A cross sectional survey was conducted at Manav Rachna Dental College consisting of 113 undergraduate students.

Students from 1st year: 47

Students from 2nd year: 41

Students from 3rd year: 25

RESULTS

Information was collected using a self-made questionnaire and face to face interviews based on a structured, pre-tested questionnaire. The study has been done under these categories of questions:

- Questions based on Personal Views-
 - Q4. Willingness to carry organ donor card.
 - Q5. Desire to donate organs
 - Q22. Regarding the meeting of recipient's and the donor's family.
- Questions based on General Awareness-
 - Q1. Age limit for organ donation.
 - Q2. About organ donor card.
 - Q3. Relatives whose organs have been donated.
 - Q6. Whether organ donation is possible while the donor is alive.
 - Q8. Factors determining organ transplant.
 - Q9. About cost of organ donation.
 - Q10. First organ to be transplanted.
 - Q11. About nursing care.
 - Q12. Commonly donated organs.
 - Q18. About disfigurement of donor after organ donation.
- Questions based on Knowledge of the students: -
 - Q7. Whether selling of organs is illegal or legal.
 - Q13. About parliamentary law.
 - Q14. Organs and tissues that can be donated
 - Q15. Part of eye that can be donated.
 - Q16. Criteria of death.
 - Q17. Lives that can be saved from deceased organ donor.
 - Q19. About failure of organ transplantation.
 - Q20. Concept of similar genes.
 - Q21. About donor-reactive lymphocytotoxic antibodies in the serum of recipient.⁹⁻¹¹

DISCUSSION

The findings of this study demonstrated that there were differences in the way of perception and knowledge towards organ donation and transplantation among the students of first year, second year and third year as well as the students of other countries. The level of knowledge varied between the students of India and other countries and among the students of respective years.

A total of 113 students took part in the survey all from 1st, 2nd and 3rd years. The important result of our study shows that knowledge about organ donation is more among Indian students in comparison to Egypt. Also, there is lack of awareness about parliamentary laws among students of Egypt. Indian students are more willing to donate organs in case of need either to relatives or as a social help. Also, students of France are the most willing to donate their organs among Egypt, India, Germany students. In comparison, students in India are much aware about organ donation. Just by improving the awareness of law and rules governing the organ transplantation, we can take this to a next level where help to patients can be offered more frequently and the transplantation can go more successful.

Comparative Statistics

	EGYPT	INDIA
Knowledge About Organ Donation	36%	67.49%
Knowledge About Laws	22.3%	41.39%
Willingness to Donate	37%	69.51%

Table 2

Approximately, 85% of the students from 3rd year were willing to carry an organ donor card whereas the percentage went from 60% to 63% in 1st and 2nd year students. Approximately, 50% students were not aware about the parliamentary laws and orders related to organ donation. Further, if we talk about marketing, selling and buying of organs (which is considered to be illegal) approximately 40% to 50% students were aware of this procedure.

Charts and graphs has been made for the comparative studies among 1st, 2nd and 3rd year students.¹²⁻¹⁸

Graphs and Statistics-

- Students who know the age limit for organ donation.

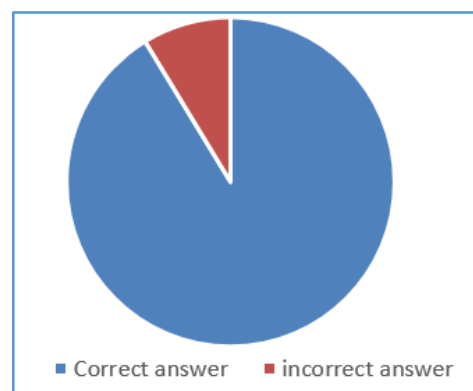


Figure 4

Answer	Percentage
Correct answer	91.28
Incorrect answer	8.72

Table 3

From table 3, it can be concluded that 91.28% of students know that there is no age limit for donating the organs.

2. Students willing to carry an organ donor card.

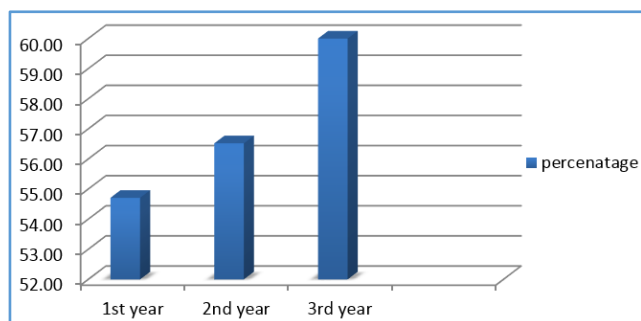


Figure 5

Year	Percentage
1 st year	54.71
2 nd year	56.52
3 rd year	60

Table 4

Analysis shows that 3rd year students are more willing to carry an organ donor card as compared to 1st and 2nd year students.

3. Students having relatives whose organs have been donated.

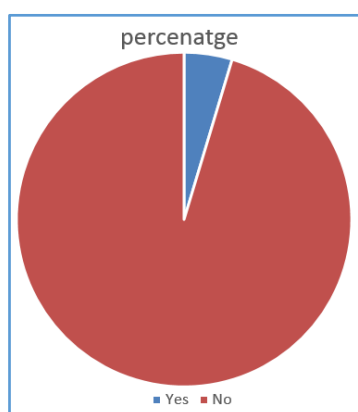


Figure 6

Whether organs have been donated	Percentage
Yes	4.64
No	95.36

Table 5

The figure shows that only a small percentage, that is, about 4.64% relatives of the students have donated their organs.

4. Students who are aware of parliamentary law in India regarding organ donation.

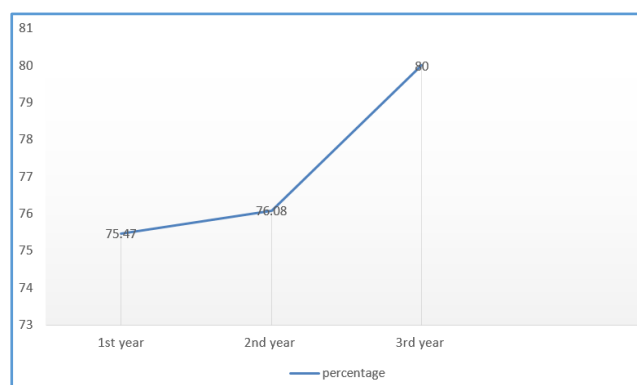


Figure 7

Year	Percentage	Students
1 st year	75.47	40
2 nd year	76.08	35
3 rd year	80	20

Table 6

About 80% students of 3rd year are aware about the parliamentary law in India regarding organ donation. This shows that 3rd year students have more knowledge about the legal aspects.

5. Students who are aware of Cornea Transplantation.

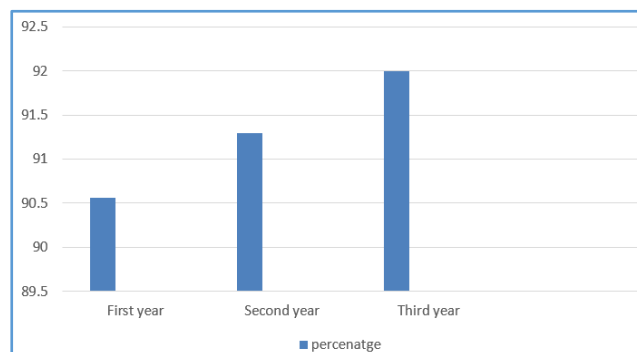


Figure 8

Year	Percentage
1 st year	90.56
2 nd year	91.3
3 rd year	92

Table 7

From table 7, it is evident that the students of all the three years are almost equally aware about corneal transplantation.

6. Students who consider "brain death" as the criteria of death.

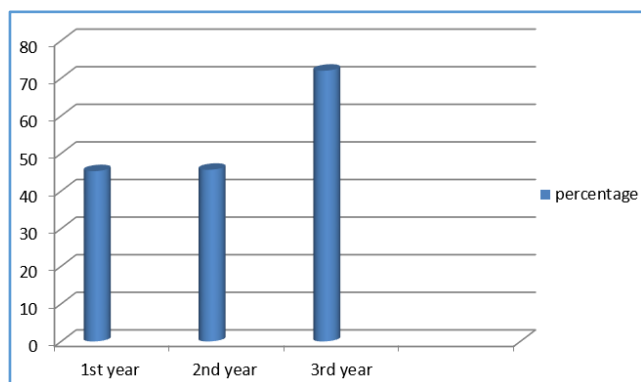


Figure 9

Year	Percentage	Students
1 st year	45.28	24
2 nd year	45.65	21
3 rd year	72	18

Table 8

The statistics show that most of the 1st and 2nd year students are not aware about the criteria of death as "brain death".

7. Students who say that selling organs is illegal.

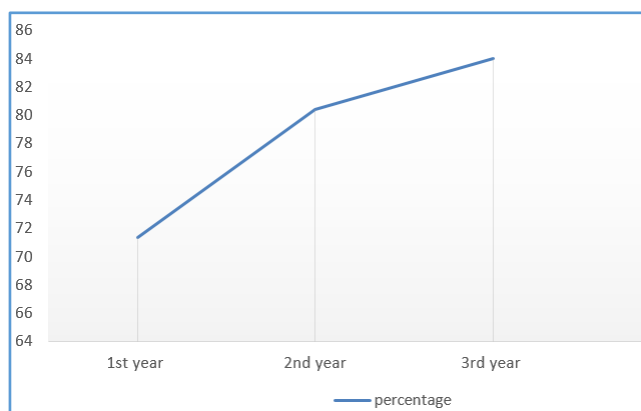


Figure 10

Year	Percentage	Students
1 st year	71.35	41
2 nd year	80.43	37
3 rd year	84	21

Table 9

If we compare the answers of 1st, 2nd and 3rd year students, it reveals that almost all students consider selling of organs as illegal.

8. Students who think that organ transplantation fails if transplanted organ is perceived as a toxin by recipient's body.

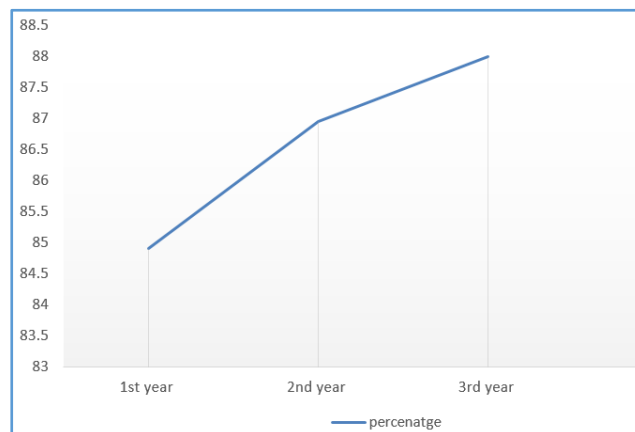


Figure 11

Year	Percentage
1 st year	84.90
2 nd year	86.95
3 rd year	88

Table 10

Almost all the students know the correct answer about the basis of failure of organ transplantation.

CONCLUSION

It can be concluded that for Indian students pursuing professional courses, there is a need for intervention of proper awareness and knowledge. This can be achieved by providing them with guidance and perfect teachings in their respective institutions. Various other ways are there to spread awareness among students to indulge them in the helpful act of providing organs in their future for the needy. Televisions, media, campaigns, organizations, surveys, magazines, social networking sites are also helpful for the development of adequate and appropriate knowledge regarding organ transplantations.

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