



Survey on Awareness About Organ Donation Among Undergraduates and Postgraduate Paramedical Students in Andhra Pradesh

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ABSTRACT

Background: Organ donation is called as “When a person allows an organ of own or other people by removed, legally, either by consent while the donor is alive or after death with the assent of the next of individually.” Majorly organ transplantation is occurring with organs include kidney, heart, liver, pancreas, intestines, lungs, bones, bone marrow, skin and cornea, after organ donations. However, organs like kidney and tissues like a part of the liver, pancreas, lungs, and intestines could be donated while the donor is alive, majority of the organ donations occur only after the death of donors. Present study aim is to create, develop basic knowledge on organ donation in paramedical students from various institutes, organizations and health care centers in various regions of Andhra Pradesh. It contains predesigned Performa (questionnaire) used to collect data from 200 individual, of which 70 participants were postgraduate students and 100 undergraduate and 30 participants were faculty members.

Results: The results show that 79.17% (158) of participants were aware about organ donation, and out of all participants, families of only three have donated organ in the past 5 years. A total number of 12 (3.33%) participants have signed up for organ donation.

Conclusion: It was concluded that lack of awareness on mode, type of organ can be donated, in individual students. It could be better to educate the para medical students regarding importance of organ donation, will be beneficial for society, who are lack of money to bear the cost.

Keywords: Paramedical students, liver, kidney and organ donation.

1. BACKGROUND

Donation Organ is ethical process whenever a person required an organ of theirs to be replacing, legally, through the consent in case of the person who is donating organ is alive or after death with his approval of the next of kin. Mostly transplantations of organs include kidneys, liver, pancreas, intestines, heart, lungs, bones, bone marrow, skin as well as corneas of eyes. In few cases tissues and organs can be donated by living donors, like donating one kidney or part of the liver and pancreas, however part of the lungs and intestines also donated by some cases. Even though possible while living, most donations occur only after the donor's death¹. More number of deaths are due to organ failure can be reduced by donation of organ in timely. However, in India very a smaller number of organs available to transplants in emergency cases. India's organ donation rate (ODR) stands at a 0.34 per million populations (PMP), however other countries like United Kingdom, USA are having a donation rate of 36 PMP². The judicial foundation for brain death and organ donation, change in 2011, was officially implemented in India, under Transplantation of Human Organs Act (THOA)³. It gives a much-needed legal and transparent system for donation of organ. There are two systems for organ donation practiced worldwide, the family consent system and the presumed consent system. Countries like the United States, United Kingdom,

Germany, and Netherlands follow family consent system where people sign up as organ donors, and their family's consent is required⁴. ODR in these countries averages between 10 and 30 PMP. The more aggressive presumed consent system is adopted by countries like Singapore, Belgium, and Spain⁵. This system permits organ donation by default unless the donor has explicitly opposed it during his or her lifetime, it does not require family's consent. It is seen that the ODR in countries adopting presumed consent is double than the countries who have adopted family consent, averaging between 20 and 40 PMP^{6,7}. Current scenario in India is much cultural and religious trust is influencing the decision making regarding deceased organ donation. Lack of awareness (20.1%), religious trusts and superstitions (63.4%), and lack of faith in the healthcare system (17.3%) have been believed to be the most important reasons for the family members refusing for giving their consent for organ donation of their close relatives.

1.1. Organ donation in India

Data from 2019 show that as against the demand for 2laksof kidney transplants but there only 5000 transplants were done. Similarly, more than 75,000 people dying of end-stage liver disease, only 1500 got their liver transplanted. Statistics are distressingly poor in case of transplantation of heart or lung ². In India for cornea



Transplant rates are 1 in 25,000 while in United States and Brazil it was 1 in 199 and 1 in 14,000, respectively. Inspired by this outcome, the doctors of All India Institute of Medical Sciences, New Delhi, have recently suggested starting presumed consent in India too, especially in cases of accidental fatalities. Presumed Consent in India too, especially to reduce the deaths in accidental⁸.

1.2. State wise organ donation status in India: Organ donation from deceased donors is slowly gaining momentum in India. In the year 2000, Mohan Foundation took the lead in setting up an organ sharing network, the Indian Network for organ sharing in the state of Tamil Nadu. This network facilitated the retrieval of 1033 organ and tissues. Many other states are also following Tamil Nadu with robust “Deceased organ donation and transplantation program.” According to 2014 data, Puducherry has got highest ODR in India with 10.4 organ donation PMP, followed by Chandigarh with an ODR of 5.7 PMP⁹. In terms of number of deceased organ donors, Tamil Nadu holds the number one spot with 136 donations during that year. “Jeevandan “is a program followed in Andhra Pradesh to improve the organ donation rate¹⁰. In Maharashtra “Zonal Transplant Coordination Center” to create awareness and to increase rate of organ donation¹¹. All these were already working for facilitating organ transplantation in those states. Mohan Foundation has been spearheading efforts in Delhi NCR (National Capital Region) and Chandigarh with encouraging results. Kerala government has set up “Mrithasanjeevani” and the Kerala Network for Organ Sharing¹². This has been running successfully since 2012 The Government of Rajasthan initiated the movement of organ donation with the setting up of the Rajasthan Network for Organ Sharing¹³. They have successfully retrieved 12 organs (liver and kidney) from five deceased donor within a period of 7 months since its inception in December 2014.

1.3. Objectives

1. To determine awareness and knowledge of educated [undergraduate (UG) students and postgraduate (PG) degree holders] population toward organ donation
2. To find out factors impeding the organ donation program in this part of the country
3. To observe differences between findings of UG students and PG degree holders (faculty).

2. METHODS:

India, we selected, Andhra Pradesh state in that major city where the region, serving a population of around 1 million. This study was conducted in the familiar educational institutes of Guntur, Vijayawada and Tirupathi. A predesigned questionnaire was used to collect data from 200 individuals with $n = 200$, 120 UG & 80 PG students. Data collected were analyzed using ANOVA, which were tabulated and figured accordingly. Comparison between

findings was analyzed using graph pad prism, and P value was calculated. P value < 0.005 was regarded as significant.

3. RESULTS AND OBSERVATION

3.1. Awareness about organ donation: The results showed that 158(79%) subjects were completely aware about organ donation, 33 (16.7%) were partially aware, and 7 subjects were totally unaware about organ donation. Comparison between UG students and PG degree holders showed significant difference; data show that all UG students were either partially or completely aware about organ donation, whereas 8.33% (17) of PG degree holders are completely unaware about it.

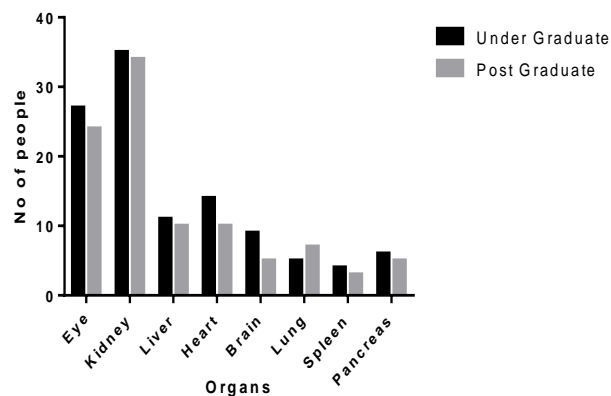


Figure 1: Graph indicates the knowledge of students about organs can be donated²

Most of the subjects, 120(60%) of 200, believed that only eye (cornea) and kidney are the organs available for donation. About one-third people, 46(23%), knew about liver and heart transplantation. Only few, 34(17%), were aware about donation of organs such as lungs, pancreas, and intestine. The results showed significant findings of UG students and PG degree holders.

3.2. Attitude toward the possibility of organ being used for donation²

42(52%) PG Students were definitely wanting to donate the organs towards the possibility of organ being donate, 25(31%) PG Students were willing to donate organs on special conditions, whenever the requirement is there. 13(17%) PG Students were not considered the organ transfer being uses full for need case. In case of undergraduates 68(68%) of peoples were definitely want to donate the organs towards the possibility of organ being donate, 27(27 %) UG Students will donate organs on special conditions, 15(15%) will think about the possibility of donating organ and reaming are not considered about it.

3.3. Feel that organ donated may misuse or abused¹

Around 200 people, 41 % of UG students were felling that organ donation may be misused or abused sometimes. 28% of UG people were felling that organ donation is never misuse and abused. However, 20% of UG people were strongly felling that organ donation is always misuse and

abused.11% of people was doesn't have any idea about organ misuse and abuse.

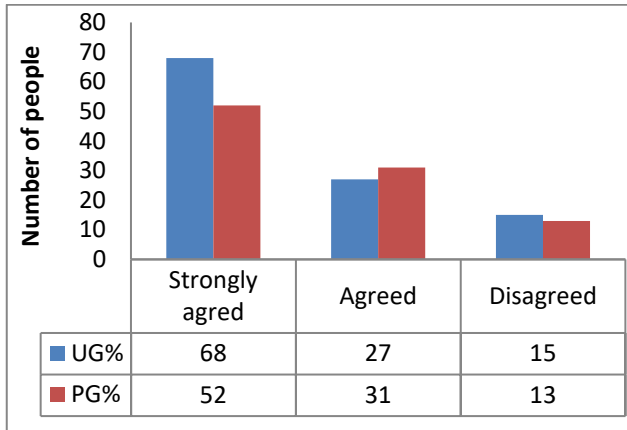


Figure 2: Graph indicates attitude of students against donating organ.

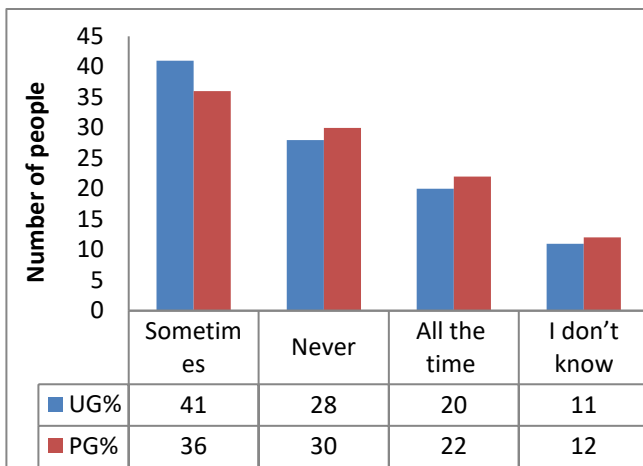


Figure 3: Graph shows that opinion of missing organ while donation.

3.4. Agree to donate organ when you die: overall 48% of UG people are willing to donate their organ after their death.17% were not willing to donate their organ even after death also.35% of UG people are willing to think about donation of organ after death¹.

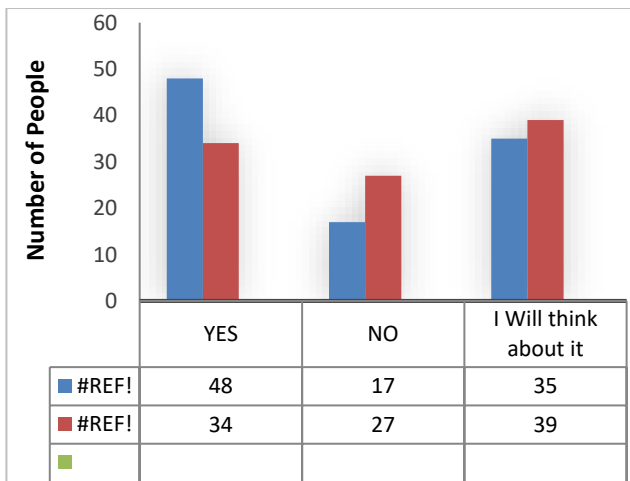


Figure 4: Graph shows that number of people are accepting organ donation after death

3.5. Racial discrimination prevents minority patients from receiving the transplant they need: ¹

28% of UG & 26 of PG students were strongly disagreed that racial discrimination prevents minority patients from receiving organ for transplantation whenever they required. 20% of UG and 21%PG people were disagreed, 35% of UG and 36 PG were strongly agreed with of racial discrimination prevents the organ donation in need cases also.

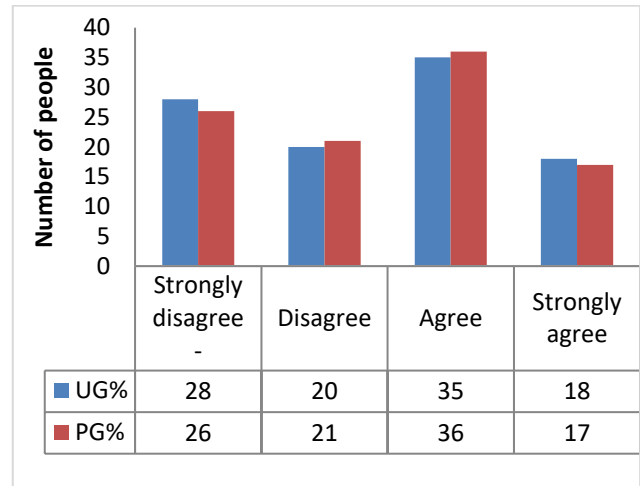


Figure 5: Graph shows that impact of racial difference on organ donation.

3.5. A rich person has a better chance of getting an organ transplant than an ordinary working person²

46% of UG and 43% of PG people are strongly agreed with that rich person have a better chance of getting an organ for their need when compare to poor people. 10% of UG and 13% of PG peoples only strongly disagree to, that rich persons only have the chance of getting organ when compare to poor people.

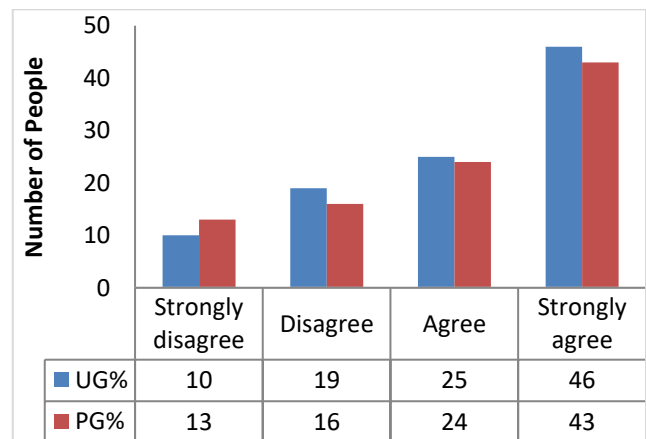


Figure 6: Graph shows that impact of economy on donating/receiving organ.

3.6. Need an organ transplant at some time in my life¹

out of 200 people 25% of UG and 23% PG students were strongly disagreeing with that, need of an organ transplant at any time in their life.34% of UG and 36% PG students were disagreeing and only 10% of UG 15% of PG were

strongly agree with that they may require organ transplantation in their life.

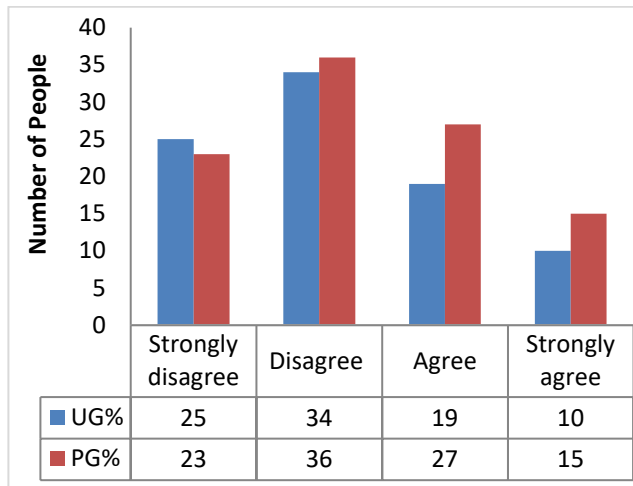


Figure 7: Graph shows that need of organ transplantation at some time in rest of life.

3.6. It is possible for a brain-dead person to recover from their injuries

44(44%) UG people were strongly disagree with that recover from brain dead people, 18(18%) were strongly agreed that possibility is there for recovering injuries from brain injuries. In case of PG students (30%) 24 were strongly disagree with that recover from brain dead cases, however (20%) 16 are strongly agreed that possibility is there for recovering from brain dead cases².

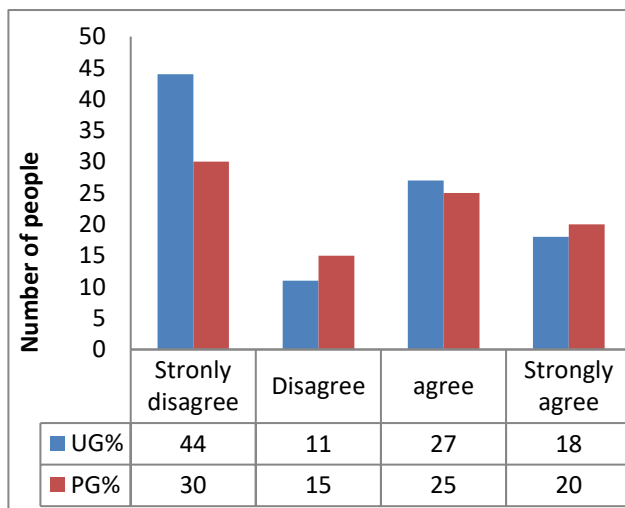


Figure 8: Graph shows possibility for a brain-dead person to recover from their injuries.

3.7. People who choose to donate a family member’s organs end up paying extra medical bills²

Out of 120 UG students 22(26%) were strongly disagreed that donating organ for family members may need to pay extra medical bills, (38%) 32 members were strong agreed that people who are willing to donate organ to their family members were need to pay extra bills instead of others.

3.8. After transplant the person is never healthy enough to return to work or school¹

Among 200 participants, it was found that only (30%) UG were strongly disagreeing that people who ever gone organ transplantation doesn’t have chance to go their work normally, 25% were strongly agreed that recover of people from organ transplantation cases.

DISCUSSION

High level of awareness or consciousness is usually associated with a higher rate of organ donation. Moderate percentage of study population, (60%) was aware about organ donation, with in that majorly donation of about kidney, eye, liver and heart is well known by people with the percentage of 46 (23%), while donation of lungs and spleen is very less 17(8%), was very completely unaware about it. The reasons may be a difference in level of both education and social awareness between the two populations. This study was conducted in the state of Andhra Pradesh, which is the forerunner of organ donation in India. It reported a better result with participants of their study claimed to have had a history of organ donation in the family (6.6%). In our study, the majority of the participants (90.6%) agreed that organ donation should also be promoted. With the level of awareness being comparable (79.17%) with the studies conducted by TOI (94%) and (97.6%), the rate of organ donation was much better with Deepthi (6.6%) while compared with our study (0.83%).

200 pharmacy students both graduates and undergraduates from Guntur and vijayawada received the questionnaire, all students gave the good response. Questionnaire was framed with codes that may allow certain questions to formed depending on answer from a respondent what had given. It was found that 97% pharmacy students were found more interesting to check laboratory valves, 86.69% medication reviews, 81.86% counseling regarding medications 84.8% provide counseling regarding disease, 79.36% providing information on storage of drugs, and 63.89% providing information on disposal of drugs. Pharmacy students are providing more information regarding health, through improving patient care, and improve their medical expertise and the knowledge on drug administration. We got mean age of people was 20.2 with SD (2.03) the both genders were involved in this study, programme wise responses were collected and shown in (figure-1 &2) when compare to male female students were showing more interest towards donation of organ. In case programme wise, PG Students (81.4%) highly responded to this survey.

Limitations of the study

Its observational study carried out in the students from pharmacy institutes at Vijayawada, Tirupati and Guntur might not exactly be representing the scenario of organ donation in Andhra Pradesh, but it is definitely highlighting a few important factors that need to be addressed at this point of time.



CONCLUSION

Donation of organs in India is very poor level that negligible one. It is due to lack of awareness in people as well as society. As a health care professional, like doctors, pharmacist and nurses have the major role to educate the people regarding importance of organ donation and its significance in terms of give beneficial effects who are actual need of organ for their disability or improving life span. Government medical colleges and hospital are the major place where the organ transplantation procedure was done. Due to lack of infrastructure for preserve the organs and carryout surgical procedure in the government hospitals, hence it became very poor number of organs were stored, that could not meet the requirement for who are in need. Even though procedure for organ donation is available under regulations provided by the government in this part of the country, a more organized and proactive approach by the policy makers is need of the hour.

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