



## **Organ Donation amongst Dental & Medical Students & Professionals in Bareilly International University**

<sup>1</sup>Dr. Oruba Anjum, <sup>2</sup>Dr. S. Gokkulakrishnan, <sup>3</sup>Dr. Archana Chaurasia, <sup>4</sup>Dr. Jitendra Kumar Diwakar

<sup>1</sup>PG Student, Dept. of Oral and Maxillofacial Surgery, Institute of Dental Sciences, Bareilly, U.P, India

<sup>2</sup>Prof. and Head, Dept. of Oral and Maxillofacial Surgery, Institute of Dental Sciences, Bareilly, U.P, India

<sup>3</sup>Reader, MDS, Dept. of Oral and Maxillofacial Surgery, Institute of Dental Sciences, Bareilly, U.P, India

<sup>4</sup>Assistant Professor, Institute of Dental Sciences, Bareilly, Uttar Pradesh, Bareilly International University, UP, India

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**Corresponding Author:** Dr. Oruba Anjum, PG Scholar, Dept. of Oral and Maxillofacial Surgery, Institute of Dental Sciences, Bareilly, U.P, India

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### **ABSTRACT**

#### **Introduction**

Transplantation involves transferring human cells, tissues, or organs to restore function in the body. Global interest in organ donation and transplantation has grown due to the scarcity of organs and the need for fairness, quality, and safety. India, despite performing the second-highest number of transplants globally, trails western countries in national donation rates, with only 0.65 per million people. Factors contributing to low performance include lack of public knowledge, religious beliefs, and strict restrictions.

#### **Aim**

This study aims to determine the knowledge, attitude and awareness towards organ donation amongst the

Students & Staff members of Institute of dental sciences, Rohilkhand Medical College and hospital, Bareilly.

#### **Result**

A study of 800 students and staff at the Institute of Dental Sciences and Rohilkhand Medical College And Hospital revealed that 46.5% of participants allowed legally removing their own organ, 51.5% sold it willingly, and 0.75% donated forcefully. The study surveyed dental UG students, medical UG students, and consultants about organ donation, finding most agreeing and willing to donate their organs. Most were registered donors, and 43.12% strongly agreed about

the likelihood of a complete recovery after an organ transplant. However, 14.75% did not want an organ donation form, emphasizing the importance of understanding organ donation among medical students.

### **Conclusion**

Increasing student awareness of organ donation can significantly improve medical and dental students' knowledge, attitudes, and practices, reducing discrepancies between donors and receivers.

### **Keywords**

Organ donation, attitude, religion,

### **INTRODUCTION**

Transplantation is defined as the transfer (engraftment) of human cells, tissues or organs from a donor to recipient with an aim of restoring function(s) in the body.<sup>1</sup> One of the most significant discoveries in the field of transplantation was made when the first organ transplant was performed on December 23, 1954<sup>2</sup>. Richard and Ronald Herrick, two identical twin brothers, underwent a kidney transplant from Dr. Joseph Hume at Brighton, Birmingham, for which the operating physician was awarded the noble prize. Organ donation is a very personal yet complex decision, intertwined with medical, legal, religious, cultural, and ethical issues.

Over the past ten years, both governmental and professional levels across the globe have shown a keen interest in the topics of organ donation and transplantation. Two primary elements have sparked this curiosity. The first is the global scarcity of organs for transplantation and the vast range of donation and transplantation activities across the world. Second, the need that all developments have a solid foundation in

law and ethics, with fairness, quality, and safety as their guiding principles.<sup>3</sup>

Despite performing the second - highest number of transplants worldwide in 2019 (behind the United States), India trails western countries like Spain (35.1 pmp), the United States (21.9 pmp), and the United Kingdom (15.5 pmp) in terms of national donation, with a rate of only 0.65 per million people (2019). This is likely due to India's enormous population. The World Health Organization estimates that barely 0.01 percent of Indians donate their organs after passing away. Every year, nearly 5 lakh people die due to non-availability of organs<sup>4</sup>.

Lack of public knowledge, people's religious or superstitious beliefs, and harsh restrictions are a few causes of such low performance. The ability of doctors to play a significant part in resolving this issue may be compromised by their inability to address patients' queries or reservations regarding organ donation.<sup>5</sup>

### **AIM**

This study aims to determine the knowledge, attitude and awareness towards organ donation amongst the Students & Staff members of Institute of dental sciences, Rohilkhand Medical College and hospital, Bareilly.

### **MATERIALS AND METHODS**

A survey based on questionnaire was conducted amongst the students and staff members of Institute of dental sciences, Rohilkhand Medical College and hospital, Bareilly. The study sample comprised of undergraduate & postgraduate dental students and the staff members from the dental college and medical college. Anonymity and confidentiality of respondents were maintained and participation was voluntary. A

15 item self-administered questionnaire was developed. The questionnaire comprised of questions to judge the knowledge of the individuals towards organ donation. Some questions were based on the dichotomous scale whereas other questions were based on a four point Likert scale. After obtaining permission from the higher authorities the questionnaires were distributed to the students during lecture classes. The participants were instructed not to discuss with one another to avoid the possibility of a bias or a confounding factor. Only questionnaires which were fully completed were included in the study. Once the questionnaires were completed the data was compiled into a Microsoft Excel spreadsheet and the statistical package for the social science, IBM (SPSS) software.

## RESULTS

A total of 800 questionnaires were handed out to the undergraduate students, postgraduate students and the staff members of the Institute of Dental Sciences & Rohilkhand Medical College And Hospital. 800 questionnaires were collected back after completion. Out of the 800 participants, 325 belonged to Institute of Dental Sciences, 435 belonged to Rohilkhand Medical College And Hospital and 40 were consultants. In the Institute of Dental sciences, 50 participants belonged to the first year, 40 belonged to the second year, 40 belonged to the third year, 55 belonged to the fourth year, 50 were from the Compulsory Rotary Internship, 20 belonged to the 1<sup>st</sup> year PG, 25 belonged to the 2<sup>nd</sup> year PG, 25 belonged to the 3<sup>rd</sup> year. In Rohilkhand Medical College And Hospital, 90 belonged to the first year, 70 belonged to the second year, 80 belonged to the third year, 70 belonged to the fourth year, 75 were from the

Compulsory Rotary Internship, 30 belonged to the 1<sup>st</sup> year PG, 20 belonged to the 2<sup>nd</sup> year PG, 20 belonged to the 3<sup>rd</sup> year. The study population comprised of 45.38% of males (n = 363) and 54.63 % of females (n = 437) (Table 1).

When asked what is organ donation, 46.5% (n= 372) answered Allow removing one's own organ legally, 51.5% (n=412) answered Sell the organ willingly, 1.25% (n=10) answered Sell the organ unwillingly and 0.75% (n=6) answered donate organ forcefully. 96% (n=768) were aware and 4% (n=32) were unaware that organs can be donated to save a life of a person (Chart 1).

58.2 % (n=117) dental UG students of participants, 92.9 % (n=65) dental PG students, 35.1 % (n=135) medical UG students, 78.6 % (n=55) medical PG students, and 75 % (n=35) consultants quoted media as their first source of knowledge about organ donation. 20.9 % (n=42) dental UG students of the participants, 19.5 % (n=75) medical UG students 7.1 % (n=5) medical PG students quoted the internet as their source of knowledge. 5 % (n=10) dental UG students of the participants, 7.1% (n=5) dental PG students, 6.5 % (n=25) medical UG students, and 12.5 % (n=5) consultants participants got their information about organ donation from pamphlets and brochures. 10.9 % (n=22) dental UG students of participants, 33.2 % (n=128) medical UG students, 7.1 % (n=5) medical PG students, and 5 % (n=2) consultants participants got their knowledge from friends & relatives. 5 % (n=10) dental UG students, 5.7% (n=22) medical UG students, 7.1 % (n=5) medical PG students, and 7 % (n=3) consultants of the study population reported that their source of knowledge was from the hospital (Chart 2).

When asked about the time of organ donation 14.9 % (n=30) dental UG students 6.2 % (n=24) medical UG students stated after death and 85.1 % (n=171) dental UG students of participants, 100 % (n=70) dental PG students, 88.1 % (n=339) medical UG students, 100% (n=70) medical PG students, and 100 % (n=40) consultants answered both during life and after death. When asked which organs can be donated 100 % (n=201) dental UG students of participants, 100 % (n=70) dental PG students, 97.4 % (n=375) medical UG students, 100 % (n=70) medical PG students, and 100 % (n=40) consultants answered eye. 100 % (n=201) dental UG students of participants, 100 % (n=70) dental PG students, 96.1 % (n=370) medical UG students, 100 % (n=70) medical PG students, and 100 % (n=40) consultants answered kidney. 2.3 % (n=9) medical UG, 97.1 % (n=68) medical PG students, and 75 % (n=35) consultants answered skin. 76.1 % (n=153) dental UG students of participants, 91.4 % (n=64) dental PG students, 83.4 % (n=321) medical UG students, 100 % (n=70) medical PG students, and 95 % (n=38) consultants answered bone. 67.7 % (n=136) dental UG students, 91.4 % (n=64) dental PG students, 77.5 % (n=299) medical UG students, 100 % (n=70) medical PG students, and 100 % (n=40) consultants answered pancreas. 91.5 % (n=184) dental UG students, 97.1 % (n=68) dental PG students, 94.8 % (n=365) medical UG students, 100 % (n=70) medical PG students, and 100 % (n=40) consultants answered heart. 66.2 % (n=133) dental UG students of participants, 81.4 % (n=57) dental PG students, 90.9 % (n=350) medical UG students, 100 % (n=70) medical PG students, and 92.5 % (n=38) consultants answered lungs. Only 2.3 % (n=9) medical UG students, 97.1 % (n=68) medical PG

students, and 80 % (n=32) consultants answered all mentioned organs can be donated (Chart 3).

6.25 % of the participant's strongly agreed with the concept of organ donation (n = 50), 60 % of the participants somewhat agreed with the concept of organ donation (n = 480), 33.27 % neither agree nor disagree (n=270) with this concept, no one disagreed and no one strongly disagreed with the concept of organ donation.

68.75 % of the study population were familiar with the term brain death (n = 550) and 31.25 % of the study population were not familiar with the term brain death (n = 250).

When a question was proposed that are they willing to donate organ/tissues in the future? 12.50% were willing to donate their organs (n=100). 25% were unwilling to donate their organs (n=200). 62.50 % have yet not decided to do so. 1.9 % of the study population were registered organ donors (n = 15) and 98.1% of the study population were not registered organ donors (n = 785).

43.12 % of the population strongly agreed when asked whether most people who get an organ transplantation make a complete recovery (n = 345), 20.25 % of the population somewhat agreed (n = 162), 14.5 % of the study population somewhat disagreed (n = 116) and 22.12 % of the study population strongly disagreed to the aforementioned statement (n = 177). 9.5 % of the study population strongly believed that it is possible for a brain dead person to recover (n = 76), 17.9 % of the study population somewhat agreed to the belief that it is possible for a brain dead person to recover (n = 143), 24.9 % of the study population somewhat disagreed to the belief (n = 199) and 47.7 % of the study population strongly disagreed to the statement

(n = 382). 85.25% (n =682) did not want an organ donation form.  
 donation form while 14.75 (n=118) wanted an organ

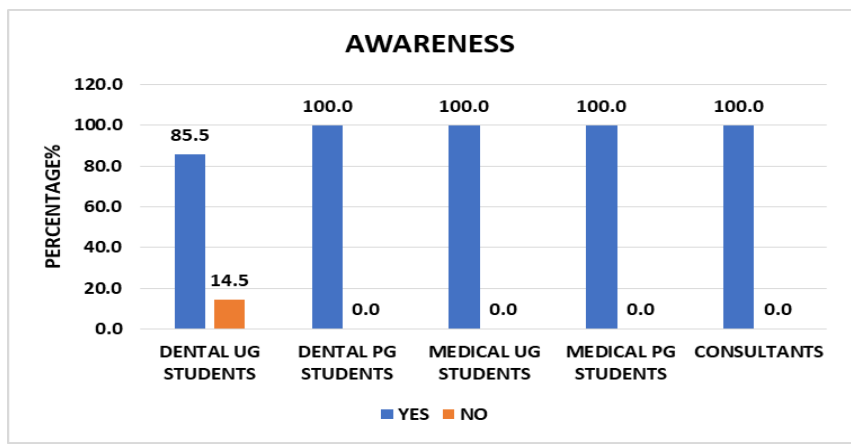


Chart 1: Awareness among medical and dental students and staff

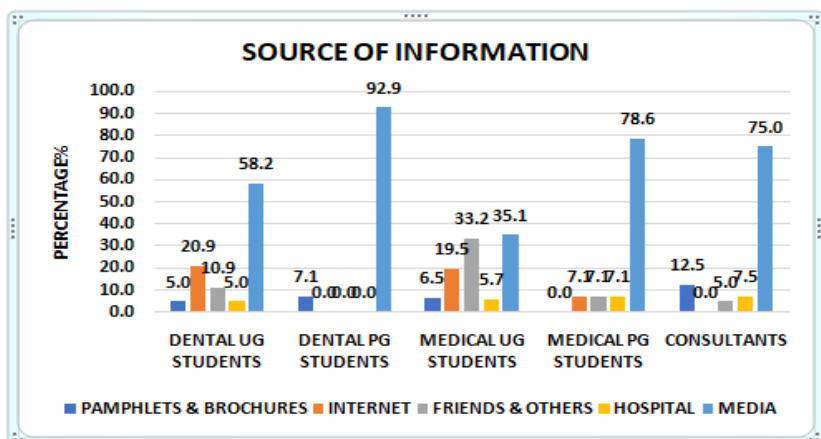


Chart 2: source of information

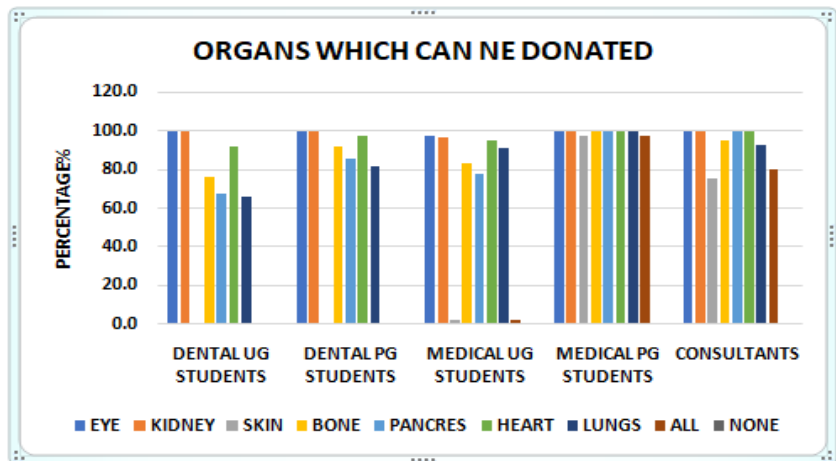


Chart 3: organs which can be donated

SEX	NUMBER	%
MALE	363	45.38
FEMALE	437	54.63
TOTAL	800	100.00

Table 1: Sex Distribution

## DISCUSSION

Organ donation can be a life-saving treatment option for persons with end-stage organ illness, but in most countries, there is a large unbalanced between the number of willing organ donors and the number of waiting receivers. This gap might be attributable to a misunderstanding of the organ donation method. A range of factors, including ethical convictions, religious trends, and information from a variety of sources, can all have a significant impact on one's readiness to give one's organs. As healthcare professionals, we continue to be one of the most significant sources of information for the general public on organ donation. As a result, before we can tell others about organ donation, we must first adequately educate ourselves. There have been several research published on the knowledge, attitude, and practises of healthcare workers about organ donation <sup>6,7,8,9-14</sup>. According to Coad et al's study on young individuals in the UK, 95% were aware of "organ donation" and "organ transplantation," and the findings for this specific issue were comparable in our study<sup>15</sup>. In our study, we also analysed additional factors that might influence people's attitudes about organ donation, such as gender, religion, family background. Males were more ready to donate organs

in our study than females, which contradicts studies on European medical students by Burra et al<sup>16</sup> and Mekahli et al<sup>17</sup>, in which females showed a more favourable attitude.

The primary drawback of our study was that the samples were drawn from a single geographical region, therefore we were unable to investigate the differences in attitudes across persons from other geographical locations. As a result, our findings cannot be generalised to the more diverse population. Increased awareness of organ donation and organ donor registries will aid in closing the gap between organ donors and organ receivers. More research with a larger population from various geographical locations are necessary.

## CONCLUSION

By boosting student awareness, medical and the dental students' knowledge, attitudes, and practices regarding organ donation can be considerably enhanced. Education on organ donation is the initial stage, followed by education about various government and commercial organisations for organ donation. If these procedures are taken, the discrepancy between donors and receivers may be reduced.

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