

Organ Donation and Transplant Trend in Sialkot

Syeda Abroo Fatima,¹ Laraib Malik,² Muhammad Asif Mughal,³ Dilaways Khalid,⁴ Laiba Zahid,⁵ Rehana Mushtaq⁶

Abstract

Objective: Objective of the study was to take information about trend of organ donation in general public of Sialkot and enlisting the names of people who would consent to donate organ.

Material and Methods: This was a cross-sectional study and was carried out at Sialkot Medical College. Through convenient sampling method, data was collected from 400 people of both sexes above 18 years of age. Study duration was 2 months i.e. 5.8.23 to 5.10.23. The collected data was analyzed and tabulated.

Results: 56.5 % agreed to support the organ donation. Among these 54.8 % agreed to donate during life. Among these, for liver donation 20.3% agreed followed by kidney donation 13.8 %.

Conclusion: General public of Sialkot has got much information about organ donation and transplantation. Females are more interested to donate organs as compared to males. Most of them agreed to donate within family.

Keywords: Donation, transplantation, liver, kidney, cornea.

How to cite: Fatima SA, Malik L, Mughal MA, Khalid D, Zahid L, Mushtaq R. Organ Donation and Transplant Trend in Sialkot. *Esculapio - JSIMS* 2024;20(04): 510-514

DOI: <https://doi.org/10.51273/esc24.251320412>

Introduction

Always remember this, during ups and downs of life: worry for man himself and his destiny should continuously shape the main interest of every single specialized attempt. It was stated by Albert Einstein.¹ This worry led to first organ transplantation which took place soon after the death of Albert Einstein in 1954. Transplantation has compelled our general public to reexamine the limits among life and death, science and religion, and right or wrong. As innovation keeps on progressing, the differentiations between the above divisions become progressively hard to find out.² Human organ transplantation, which entails the medicinal application of organs acquired from fit living or deceased contributors, represents the final option for the sustenance and prosperity of numerous individuals, including

males, females, and children who are afflicted by terminal organ malfunction.³ In May 2004 the World Health gathering embraced choice in acknowledgment of the worldwide increase in transplantation exercises, the related threats to patient security, the dealing of organs for transplantation and the managing of people as well-springs of such organs. This goal asked to apply in all states working in collaboration with World Health Organization for "successful public oversight of the procurement, processing and transplantation of human cells, tissues and organs".⁴

As the supply of organs for transplant are not meeting the needs. So use of organs of animals was considered to overcome the deficiency being faced.^{4,5} Transplantation and bonding have a long history. A long time back, methods for fixing disfigured noses utilizing autologous skin joins were conceived in India and later portrayed in Egyptian papyri.⁶ Beginning endeavors at blood bindings in the mid seventeenth century were fruitless; it was only after 1825 that blood was effectively bonded between people.⁷ Likewise around the turn of the nineteenth century, procedures for the transplantation of vessels and organs were created which would later shape the reason for fruitful organ transplantation.⁸

1,2,4-6. Sialkot Medical College, Sialkot

3. Department of Forensic Medicine, Sialkot Medical College, Sialkot

Correspondence:

Dr Muhammad Asif, Assistant professor, forensic medicine, Sialkot Medical College, Sialkot E-mail. drasif_hameed@hotmail.com

Submission Date:	05-08-2024
1st Revision Date:	27-10-2024
Acceptance Date:	10-12-2024

Effective human transfers started to happen in the mid 20th hundred years. The first effective corneal transfer happened in 1905, in the Czech Republic.⁹ Starting with the main kidney transfers during the 1954.¹⁰ Albeit the first fruitful heart relocate was acted in 1967, and the principal transfers of livers and lungs happened in 1963, these techniques kept on being trial during the 1970s because of the great level of dismissal by the beneficiary's invulnerable framework.¹¹ Transplant of kidney initiated in early eighties in government institute. The donated kidney was gift from the patients relative and both lived happy life later on.¹² Similarly in 2012 Shifa International Hospital took lead by transplanting liver first time in Pakistan.¹³

Material and Methods

Study was carried out at Sialkot Medical college. Study duration was 2 months 05.08.2023 to 05.10.2023.

After the approval from IRB Committee Ref No-SMC/ERB-05 Dated 17-10-2023. Sample Size was 400. Samples were selected through convenient sampling technique. Only major (18 years and above) people from both genders, residents of Sialkot were selected. Data was collected through questionnaire which was translated in Urdu too. It was presented to general public who consented to take part in the study. Age of the person was confirmed by looking at their computerized identity cards. Those who wanted to answer it through e mail, they were e mailed the questionnaire.

Results

Statistical analysis was done by using SPSS 25. Frequency and percentages of different ages of samples is shown in table no 1. Table No 1: Frequency and percentages of age & Sex. Results of the questions asked are

Table 1: Descriptive data of age and sex

AGE	Frequency	Percentage	FEMALE Frequency	Percentage	MALE Frequency	Percentage
18-22 years	27	6.75%	15	3.75%	12	3%
23-27	127	31.75%	80	20%	47	11.5%
28-32	98	24.5%	46	11.5%	52	13%
33-37	42	10.5%	23	5.75%	21	5.25%
38-42	41	10.25	19	4.75%	22	5.5%
43-47	21	5.25%	9	2.25%	12	3%
48-52	24	6%	15	3.75%	9	2.25%
53-0wnward	20	5%	12	3%	8	2%
TOTAL	400	100%	219	54.75%	181	45.25%

Table 2: Results of the questionnaire

Questions	%age of answering yes	%age of answering no	%age of answering maybe
Knowledge about organ donation.	72.4%	27.6%	-
How many people support organ donation?	56.5%	43.5%	-
People who agree to donate organ after death.	45.2%	54.8	-
People who agree to donate organ during life.	54.8%	45.2	-
Will you donate organ to your family member?	26.2%	46.2%	27.6%
People who will sign agreement about organ donation.	28.5%	71.5%	-
People who will agree to register their names for organ donation.	23.8%	76.2%	-
People who got organ transplant.	2.25%	97.75%	-

Table 3: Percentage of the organ which will be donated

Corneal donation	36.2%
Kidney donation	13.8%
Liver donation	20.3%
Any organ after death	29.7%

shown in table no 2. Which organ will be donated is shown in Table No 3.

Discussion

A Government hospital was pioneer to begin kidney

transplant in Pakistan. It was 1979 when a close relative donated kidney to transplant to a renal failure patient.¹⁴ In beginning as the living people were reluctant to get operated to give his or her kidney. This state of mind created acute shortage of donated organs. But demand was high. The patients with a strong financial background offered a high price to donate the organ. The poor people attracted to these offers to overcome their financial deficiencies. They started to donate their organs for money. A new business started to collect the human body organs for sake of money. The private hospitals took lead in it.¹⁵ In the current study which was carried out on people 18 years and above, different questions were offered to consented people. All people replied. Age group of 23-27 years replied maximum 31.75%. The age group which replied minimum was 53 years onward with only 5%. Females were 54.75% and males were 45.25%. 56.5% agreed to support the organ donation. 54.8% wanted to donate organ during life and 45.2% agreed to donate organ after death. 20.3 % agreed to donate liver, 13.8% agreed to donate kidney, 6.2% wished to donate their cornea and 29.1% said donation of any organ after death. The reason not to donate, religious 35.4%, cosmetic 26.8%. 28.5% agreed to sign an agreement to donate the organs. 2.25% had got organ transplanted. Transplantation of kidney was 4 which followed by liver and cornea at 2. Spain is an example of overcoming adversity, with the largest number of expired givers PMP universally (49.6 in 2019, contrasted with 36.8 in the USA for 2019). In Pakistan not a single donation from dead one was noted. According to a report in 2022, living organ donation rate in Pakistan there were 5.1 pmp while Turkey was highest donation rate with 52.6 pmp.¹⁶ As the living persons don't like to give his body organ to someone so that donated organ remained at low. But changed life style and use of chemicals has increased different organ failures, leaving transplant a single hope for life. A person dies waiting for organ transplant.¹⁷ Organ donation is deeply depended upon health education, religious believes and financial status. So percentage of people consenting for organ donation varies throughout the world.¹⁸ 88% people of one of advanced country of the world had prior knowledge of organ donation. In some countries like Turkey only 60% people knew about it.^{19,20} A survey conducted in a metropolitan city of Sind Pakistan a bit less than

40% samples showed willingness for giving his organ to someone. A very low percentage agreed to give his organ during life. More than fifty percent remained unclear about their reply. Only 2 % refused straight forward. These findings are similar to those in our current study, where 54.8% expressed a desire to donate organs during their lifetime, and 45.2% agreed to do so after death. In terms of reasons for not donating, only 7.3% cited religious beliefs in the previous study, while our study found that 35.4% listed religious reasons.²¹ Another study carried in the same city addressing mainly the ladies as done in current study. Only 20% had prior awareness about organ donation. More than 40% consented to donate to their blood relations only.²² In current study ,42.6% agreed to donate their organ to their family members. Friends will be donated 13.5%. A study carried out in India nearly 30% had the comprehension of organ donation.²³ As willingness revolves around the cultural and religious factors so in certain studies only 8% people agreed to donate the organs which contrasts another survey where more than 30% agreed to donate.^{22,24} An other survey carried out for believes about donation of organ in Muslims showed that more than 70% people deem it against the rules of Islam.²²

Among various organ donations, renal donations marked the list at top then corneal donations. In current study it was seen that donation consent was maximum for kidney then liver and cornea.^{22,25} Eye has also been included in top priority while trends of organ donation were studied in some other areas maximum.²⁵

Conclusion

General public of Sialkot has got much information about organ donation and transplantation. Females are more interested to donate organs as compared to males. Most of them agreed to donate within family.

Conflict of Interest: *None*

Funding Source: *None*

References

1. Shroff S. Legal and ethical aspects of organ donation and transplantation. Indian journal of urology. 2009 Jul 1;25 (3):348-55.doi: 10.4103/0970-1591.56203.
2. Vanholder, R., Domínguez-Gil, B., Busic, M. et al. Organ donation and transplantation: a multi-stakeholder call to action. Nat Rev Nephrol 17, 554–568 (2021). <https://doi.org/10.1038/s41581-021-00425-3>.

3. Wynn JJ, Alexander CE. Increasing organ donation and transplantation: the US experience over the past decade. *Transplant International*. 2011 Apr;24(4):324-32. doi: 10.1111/j.1432-2277.2010.01201.x. Epub 2011 Jan 5. PMID: 21208297.
4. White SL, Hirth R, Mahillo B, Domínguez-Gil B, Delmonico FL, Noel L, Chapman J, Matesanz R, Carmona M, Alvarez M, Núñez JR. The global diffusion of organ transplantation: trends, drivers and policy implications. *Bulletin of the World Health Organization*. 2014 Aug 22;92:826-35. |http://dx.doi.org/10.2471/BLT.14.137653
5. Matesanz R, Mahillo B, Alvarez M, Carmona M. Global observatory and database on donation and transplantation: world overview on transplantation activities. In *Transplantation proceedings 2009 Jul 1* (Vol. 41, No. 6, pp. 2297-2301). Elsevier. doi:10.1016/j.transproceed.2009.05.004
6. Jawoniyi O, Gormley K, McGleenan E, Noble HR. Organ donation and transplantation: awareness and roles of healthcare professionals—a systematic literature review. *Journal of clinical nursing*. 2018 Mar;27(5-6): e726-38.https://doi.org/10.1111/jocn.14154
7. Girlanda R. Deceased organ donation for transplantation: challenges and opportunities. *World journal of transplantation*. 2016 Sep 9;6(3):451. doi: 10.5500/wjt.v6.i3.451
8. Alvarado-Esquivel C, Sánchez-Anguiano LF, Hernández-Tinoco J, Ramos-Nevarez A, Estrada-Martínez S, Cerrillo-Soto SM, Medina-Heredia GE, Guido-Arreola CA, Soto-Quintero AA, Beristain-García I. Association between *Toxoplasma gondii* infection and history of blood transfusion: a case-control seroprevalence study. *Journal of International Medical Research*. 2018 Apr; 46(4):1626-33. doi:10.1177/0300060518757928
9. Barker CF, Markmann JF. Historical overview of transplantation. *Cold Spring Harbor perspectives in medicine*. 2013 Apr;3(4). doi: 10.1101/cshperspect.a014977
10. Crawford AZ, Patel DV, McGhee CN. A brief history of corneal transplantation: From ancient to modern. *Oman journal of ophthalmology*. 2013 Sep;6(Suppl 1): S12. DOI: 10.4103/0974-620X.122289
11. Vergheze PS. Pediatric kidney transplantation: a historical review. *Pediatric research*. 2017 Jan;81(1):259-64. doi:10.1038/pr.2016.207
12. Barbara DW, Rehfeldt KH, Heimbach JK, Rosen CB, Daly RC, Findlay JY. The perioperative management of patients undergoing combined heart-liver transplantation. *Transplantation*. 2015 Jan 1;99(1):139-44. DOI: 10.1097/TP.0000000000000231
13. Rizvi SA, Naqvi SA, Zafar MN, Mazhar F, Muzaffar R, Naqvi R, Akhtar F, Ahmed E. Commercial transplants in local Pakistanis from vended kidneys: a socio-economic and outcome study. *Transplant International*. 2009 Jun;22(6):615-21. doi:10.1111/j.1432-2277.2009.00836.x
14. Dar FS, Bhatti AB, Dogar AW, Zia H, Amin S, Rana A, Nazer R, Khan NA, Khan EU, Rajput MZ, Salih M. The travails of setting up a living donor liver transplant program: experience from Pakistan and lessons learned. *Liver Transplantation*. 2015 Jul;21(7):982-90. DOI 10.1002/lt.24151
15. Rizvi SA, Naqvi SA, Zafar MN, Hussain Z, Hashmi A, Akhtar F, Hussain M, Ahmed E. Pakistan abolishes kidney market and ushers in a new era of ethical transplantation. *International Journal of Organ Transplantation Medicine*. 2010;1(4):193. PMID: 25013586; PMCID: PMC4089237.
16. Sulania A, Sachdeva S, Jha D, Kaur G, Sachdeva R. Organ donation and transplantation: An updated overview. *MAMC Journal of Medical Sciences*. 2016 Jan 1;2(1): 18-27. DOI: 10.4103/2394-7438.174832
17. Nallusamy S. Organ donation—current indian scenario. *Journal of the Practice of Cardiovascular Sciences*. 2018 Sep 1;4(3):177-9. DOI: 10.4103/jpcs.jpcs_59_18
18. Tamuli RP, Sarmah S, Saikia B. Organ donation—“attitude and awareness among undergraduates and postgraduates of North-East India”. *Journal of family medicine and primary care*. 2019 Jan 1;8(1):130-6. DOI: 10.4103/jfmpe.jfmpe_206_18
19. Kute V, Ramesh V, Shroff S, Guleria S, Prakash J. Deceased-donor organ transplantation in India: current status, challenges, and solutions. *Exp Clin Transplant*. 2020 Jul 1;18(Suppl 2):31-42. DOI: 10.6002/etc.rlgnsymp2020.L6
20. Salim A, Berry C, Ley EJ, Liou DZ, Schulman D, Navarro S, Zheng L, Chan LS. Increasing intent to donate in Hispanic American high school students: results of a prospective observational study. In *Transplantation proceedings 2013 Jan 1* (Vol. 45, No. 1, pp. 13-19). Elsevier. doi: 10.1016/j.transproceed.2012.08.009
21. Demirkiran O, Bozbay S, Elmaagac M, Agkoç M. Religious and cultural aspects of organ donation in the Turkish population. In *Transplantation proceedings 2019 Sep 1* (Vol. 51, No. 7, pp. 2158-2162). Elsevier. https://doi.org/10.1016/j.transproceed.2019.01.159
22. Khalid F, Khalid AB, Muneeb D, Shabir A, Fayyaz D, Khan M. Level of knowledge and attitude regarding organ donation: a community-based study from Karachi, Pakistan. *BMC research notes*. 2019 Dec;12(1):1-5. https://doi.org/10.1186/s13104-019-4345-6

23. Zirpe KG, Suryawanshi P, Gurav S, Deshmukh A, Pote P, Tungenwar A, Malhotra R. Increase in cadaver organ donation rate at a tertiary care hospital: 23 years of experience. *Indian Journal of Critical Care Medicine: Peer-reviewed, Official Publication of Indian Society of Critical Care Medicine*. 2020 Sep;24(9):804. doi: 10.5005/jp-journals-10071-23578
24. Deshmukh CD, Baheti AM. Need, process and importance of organ transplantation. *Asian Journal of Pharmacy and Pharmacology*.2020;6(2):126-31.DOI: <https://doi.org/10.31024/ajpp.2020.6.2.6>
25. Ullah K, Dogar AW, Ochani S, Shoaib A, Shah HH, Rehman ME. Obstacles to the deceased donor transplantation in Pakistan. *BMJ Open Gastroenterology*. 2023 May 1;10(1):e001101. doi:10.1136/ bmjgast-2022-001101.

Authors Contribution

SAF: Conceptualization of Project

RF: Data Collection

LM: Literature Search

MA: Statistical Analysis

DK: Drafting, Revision

LZ: Writing of Manuscript