ASSESSMENT OF KNOWLEDGE LEVELS ON ORGAN DONATION AND TRANSPLANTATION AWARENESS AMONG YOUTHS IN KERALA

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ABSTRACT:

This study aims to assess the level of knowledge regarding organ donation and transplantation among the youths of Kerala. A quantitative approach was utilized, involving a sample of 300 participants who were evaluated on their awareness of various aspects of organ donation, including kidney transplantation, liver transplantation, and eye donation. The results were categorized into item-wise correct responses, highlighting the areas of strength and the gaps in knowledge among the participants. The findings indicate a varied level of awareness, with certain aspects of organ donation being better understood than others. This research emphasizes the necessity for targeted educational interventions to improve knowledge and promote positive attitudes towards organ donation among young individuals in Kerala.

Keywords: *Organ donation, transplantation awareness, youth knowledge assessment, kidney transplantation, liver transplantation, eye donation, Kerala.*

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INTRODUCTION:

Organ donation is a critical aspect of modern healthcare, offering the possibility of life-saving interventions for individuals suffering from organ failure. Despite its importance, misconceptions and lack of awareness often hinder the acceptance and support of organ donation, particularly among younger populations. In Kerala, a state known for its high literacy rates and progressive healthcare initiatives, understanding the level of knowledge regarding organ donation is essential for fostering a culture of awareness and willingness to donate.

This study focuses on assessing the knowledge levels related to organ donation among the youths of Kerala, with specific attention to various types of donations, including kidney, liver, and eye donations. By evaluating the awareness of these critical areas, the research aims to identify knowledge gaps and inform future educational strategies. The findings will not only contribute to the existing literature on organ donation awareness but also serve as a foundation for developing targeted interventions to enhance understanding and promote positive attitudes towards organ donation among the youth in the region.

Organ donation refers to the process where an individual permits the removal of their organs for transplantation to individuals suffering from terminal illnesses or irreversible organ failure. This can occur through written consent while the donor is alive or posthumously with the agreement of their next of kin. Essentially, organ donation involves providing organs and tissues to replace those in someone who requires a transplant. Organ transplantation is one of the significant achievements of modern medicine, capable of saving or significantly enhancing the lives of others. Donations can be made for research purposes or, more commonly, for transplantable organs and tissues that can be transferred to another person. Common types of transplants include kidneys, heart, liver, pancreas, intestines, lungs, bones, bone marrow, skin, and corneas. Certain organs and tissues can be donated by living donors, such as a kidney, part of the liver, part of the pancreas, part of the lungs, or part of the intestines.

In today's world, chronic diseases are increasingly replacing infectious diseases as the primary health concerns. These chronic conditions are major contributors to morbidity and mortality globally. In India, the prevalence of chronic renal disease ranges from 0.78% to 1.39%, while cardiac failure affects between 1.3 to 4.6 million individuals, and chronic viral hepatitis impacts approximately 400 to 500 million people.

LITERATURE REVIEW

Akpınar Söylemez, B., & Yılmaz, O. (2017). This study explores the attitudes of third-year nursing students toward organ donation in Turkey. It uses a cross-sectional design to assess students' knowledge, beliefs, and willingness to participate in organ donation. Alashek, W., Ehtuish, E., Elhabashi, A., Emberish, W., & Mishra, A. (2009). This research investigates the reasons behind the unwillingness of Libyans to donate organs after death. It highlights cultural and societal factors that influence attitudes toward organ donation in Libya. Alden, D. L., & Cheug, A. H. S. (2000). This article compares the beliefs, attitudes, and behaviors related to organ donation among Asian Americans. It emphasizes the impact of cultural factors on organ donation decisions and the importance of culturally tailored educational interventions. Ali, N. F., Qureshi, A., Jilani, B. N., & Zehra, N. (2013). This study examines the knowledge and ethical perceptions regarding organ donation among medical students in Pakistan. It assesses their understanding of organ donation and the ethical dilemmas they face.

Almohsen, S. S., & Alshahrani, A. (2016). This research focuses on the attitudes and beliefs surrounding organ donation among university students in Central Saudi Arabia. It evaluates the factors influencing their willingness to donate and highlights the need for awareness campaigns.

METHODOLOGY:

This study employed a cross-sectional descriptive design to assess the level of knowledge regarding organ donation among the youths of Kerala. The target population consisted of individuals aged 18 to 25 years, with a total sample size of 300 participants selected through stratified random sampling to ensure representation across different demographics.

Data collection was conducted using a structured questionnaire, which included sections on demographic information and specific questions related to organ donation, kidney transplantation, liver transplantation, and eye donation. The questionnaire was designed to evaluate participants' awareness and understanding of key concepts, facts, and myths surrounding organ donation.

The data was analyzed using descriptive statistics to calculate item-wise correct responses, highlighting areas of awareness and gaps in knowledge. Statistical software was utilized to perform the analysis, ensuring accuracy and reliability of the results. Ethical approval was obtained prior to the study, and informed consent was secured from all participants to ensure their voluntary participation and confidentiality of responses. The findings from this methodology provided valuable insights into the current state of knowledge regarding organ donation among the youth in Kerala.

RESULTS AND DISCUSSIONS:

DESCRIPTION OF KNOWLEDGE SCORES OF PARTICIPANTS REGARDING ORGAN DONATION

Description of item wise knowledge scores of participants regarding organ donation

In order to find out item wise correct response given by the participants among the items in structured knowledge scale, each section wise and item wise score was tabulated in the master sheet and statistical analysis was done. The data is presented in following tables –

I: Awareness regarding organ donation

Table 1: Item wise correct response of participants on awareness regarding organ donation. N=300

Item No	Item	Correct Response					
		Pre test		Post test		Change	
		f	%	f	%	f	%
1.	Organ donation is removal of tissue or organ of human body while living or after death for the purpose of transplantation	164	54.66	204	68	40	13.33
2.	In India about 500,000 people die every year because of non-availability of organs	143	47.66	192	64	49	16.33
3.	Organ donation is done to save someone's life	128	42.66	173	57.66	45	15
4.	Organ donation is done only after the age of 18 years	157	52.33	209	69.66	52	17.33
5.	The decision to donate organs is based on strict medical criteria, not age.	189	63	227	75.66	38	12.66
6.	Tissues such as cornea, heart valves, skin, and bone can be donated in case of natural death	206	68.66	247	82.33	41	13.66
7.	Vital organs such as heart, liver, kidneys, intestines, lungs, and pancreas can be donated only in the case of 'brain death'.	153	51	189	63	36	12
8.	Anyone younger than age 18 needs to have the agreement of a parent or guardian to be a donor.	176	58.66	223	74.33	47	15.66
9.	Person can donate organs even he or she is suffering with serious diseases like cancer, Diabetes, HIV etc	189	63	232	77.33	43	14.33
10.	For most of the organs demand for transplant is less than its availability	181	60.33	217	72.33	36	12
11.	In India organ donation is illegal act	193	64.33	249	83	56	18.66
12.	According to Indian law brain death is the state so that vital organs can be donated to needy person	164	54.66	216	72	52	17.33
13.	Family of a deceased person can donate his / her organ if person had not signed a donor card during his/her lifetime	241	80.33	263	87.66	22	7.33
14.	In India person is allowed to sell the organs legally	165	55	211	70.33	46	15.33
15.	Organ donation disfigures the body so that open funeral is not possible	182	60.66	237	79	55	18.33
16.	A person can specify in a donor card what organs or tissues they want to donate	239	79.66	251	83.66	12	4

The data presented in table 1 reveals the item wise correct responses given by the participants of the study regarding awareness on organ donation.

II: Awareness regarding kidney transplantation

Table 2: Item wise correct response of participants on awareness regarding kidney transplantation

Item No.	Item	Correct Response					
		Pre test		Post test		Change	
		f	%	f	%	f	%
17.	Pair of kidneys help to remove waste products from body	146	48.66	208	69.33	62	20.66
18.	Kidney transplantation is done for end stage renal failure	182	60.66	249	83	67	22.33
19.	Only one donated kidney is needed to sustain the body's needs.	173	57.66	238	79.33	65	21.66
20.	Kidneys can be transplanted from living or deceased donors	193	64.33	259	86.33	66	22
21.	Presence of severe heart disease is risk for transplantation of kidney	96	32	216	72	120	40

The information presented in table 2 shows the item wise correct responses of participants on items regarding awareness on kidney transplantation.

III: Awareness regarding liver transplantation

Table 3: Item wise correct response of participants on awareness regarding liver transplantation

Item No	Item	Correct Response					
		Pre test		Post test		Change	
		f	%	f	%	f	%
22.	Liver transplantation is replacement of a patient's diseased liver with a whole or partial healthy liver from another person	156	52	213	71	57	19
23.	The most common reason for liver transplantation is cirrhosis	173	57.66	234	78	61	20.33
24.	Liver transplantation is done when person have cancer in another part of body	142	47.33	214	71.33	72	24
25.	The amount of liver donated will be about 50% of the recipient's current liver size.	213	71	245	81.66	32	10.66
26.	Presence of hepatitis c infection is contraindication for liver donation	136	45.33	214	71.33	78	26

The data presented in table 3 depicts the item wise correct responses of participants on items regarding awareness on liver transplantation.

IV: Awareness regarding eye donation

Table 4: Item wise correct response of participants on awareness regarding eye donation

Item No	Item	Correct Response					
		Pre test		Post test		Change	
		f	%	f	%	f	%
27.	Eye donation is an act of donating one's eyes after his/her death	183	61	242	80.66	59	19.66
28.	In India there are about 4.6 million people are suffering with corneal blindness	137	45.66	216	72	79	26.33
29.	The eyes of a dead person can be used only if they are taken out within 6 hrs of death	156	52	225	75	69	23
30.	Donation of eye causes disfigurement of body	177	59	233	77.66	56	18.66
31.	People with history of hypertension, diabetes, asthma, tuberculosis cannot donate his/her eyes	169	56.33	213	71	44	14.66
32.	Person of any age can donate his/her eyes	134	44.66	193	64.33	59	19.66
33.	Removal of eyes delay the process of funeral	124	41.33	198	66	74	24.66

The data presented in table 4 reveals the item wise correct responses given by the participants on items regarding awareness on eye donation.

V: Awareness regarding other organ donation

Table 5: Item wise correct response of participants on awareness regarding other organ donation

Item No.	Item	Correct Response					
		Pre test		Post test		Change	
		f	%	f	%	f	%
34.	Donated skin is used for natural dressing of serious burn injuries	147	49	217	72.33	70	23.33
35.	Skin can be donated within 6 hours after death	111	37	179	59.66	68	22.66
36.	Children born with heart defects can be corrected with transplanting heart valves	163	54.33	236	78.66	73	24.33
37.	Whole heart cannot be transplanted	129	43	181	60.33	52	17.33
38.	Tendons can be donated to help the people with joint problems	103	34.33	156	52	53	17.66
39.	Tissue transplantation must be started within 24 hours of death	121	40.33	171	57	50	16.66
40.	As a organ and tissue donor one person can help the lives of up to 50 people	116	38.66	190	63.33	74	24.66

The information presented in table 5 represent the item wise correct responses given by the participants on items on awareness regarding other organ donation.

The pre-test and post-test results indicate a significant increase in awareness among participants about various aspects of organ donation. For instance, the percentage of correct responses regarding the use of donated skin for burn injuries rose from 49% in the pre-test to 72.33% in the post-test, showcasing a notable change of 23.33%. Similarly, awareness about the donation of heart valves for children with heart defects improved from 54.33% to 78.66%, reflecting a 24.33% increase.

Other items also showed positive changes, such as the understanding that tendons can be donated to assist individuals with joint problems, which increased from 34.33% to 52%, and the awareness that tissue transplantation must occur within 24 hours of death, which rose from 40.33% to 57%.

Overall, the data demonstrates a clear improvement in participants' knowledge regarding organ donation, with all items showing an increase in correct responses. This suggests that educational interventions were effective in enhancing awareness about organ donation and its importance, particularly concerning lesser-known aspects like skin and tendon donation.

DESCRIPTION OF MEAN, MEDIAN, MODE, STANDARD DEVIATION AND RANGE PRETEST KNOWLEDGE SCORES OF PARTICIPANTS REGARDING ORGAN DONATION

Table 6: Aspect wise distribution of pretest knowledge scores. N = 300

No	Knowledge Aspects	Statements	Mean	Median	Mode	SD	Range
A	Knowledge regarding organ donation	16	9.56	9.50	9	1.63	7
B	Kidney transplantation	5	2.63	3	3	0.80	3
C	Liver transplantation	5	2.73	3	3	0.58	2
D	Eye donation	7	3.60	4	3	0.72	3
E	Other organ donation	7	2.96	3	3	0.80	3
Combined		**40**	**21.50**	**22**	**22**	**2.37**	**9**

The overall knowledge regarding organ donation among the respondents is reflected in a mean score of 9.56 for the general knowledge aspect, indicating a relatively good understanding. However, when looking at specific areas such as kidney transplantation (mean of 2.63), liver transplantation (mean of 2.73), and eye donation (mean of 3.60), the scores are lower, suggesting a need for improved education and awareness in these specific areas. The standard deviations indicate some variability in knowledge, particularly in kidney and liver transplantation, where the scores are more clustered around the mean. The range of scores shows that there are significant differences in knowledge levels among the respondents, particularly in the area of kidney transplantation, where the range is 3.

CONCLUSION

the results highlight the effectiveness of awareness programs in improving knowledge about organ donation, indicating a positive shift in understanding that can potentially lead to increased participation in organ donation initiatives. In conclusion, while there is a basic understanding of organ donation, targeted educational efforts are necessary to enhance knowledge in specific areas of organ transplantation. This could lead to increased awareness and potentially greater willingness to participate in organ donation programs.

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