

Assess Knowledge and Attitude Regarding Organ Donation among Adolescents of Higher Secondary Students – A Literature Review.

*Abhay D.Pattan¹, *Praful S. Damor^{2*}, *MilanKumar J. Chuhan³,
*Anant H.Patel⁴, *Shivangiben S. Patel⁵

¹Associate Professor, Parul Institute of Nursing, Parul University Vadodara, Gujarat.

^{2*}Assistant Professor, Parul Institute of Nursing, Parul University Vadodara, Gujarat.

³Assistant Professor, Parul Institute of Nursing, Parul University Vadodara, Gujarat.

⁴Assistant Professor, Parul Institute of Nursing, Parul University Vadodara, Gujarat.

⁵Final Year M.Sc Nursing Parul Institute of Nursing, Parul University, Vadodara, Gujarat.

Email: ¹abhay.pattan@gmail.com, ³chauhanmilan196@gmail.com

⁴anantkumar.patel20986@paruluniversity.ac.in, ⁵patelshivangi722@gmail.com

Corresponding Email: ^{2*}prafuldamor777@gmail.com

Abstract: According to a survey, India, where 500,000 people a year die from a lack of organs, has a sizable gap between demand and donation. Healthcare experts are encouraging organ donation by educating the public and persuading donors. The lifesaving efforts of others can be considerably aided by the organ donor. The donor's organ may be given to a patient who is in urgent need of an organ transplant. The objective of this study was simple to retrieve the literature reviews and it is relevant to the topic of the study and will be useful for my future research. Quantitative research approach and Cross-Sectional design was adopted. The convenience sample technique was used to choose the 385 total participants. A face-to-face survey was used to evaluate the responders. Questions about knowledge and attitudes toward organ donation were included in the survey. According to the study's findings, 77.5% of the population was between the ages of 18 and 27. Students and women made up more than half of the responses (51.1% and 55%), respectively. Our findings show that the general public (25.8%) lacked sufficient understanding. Regarding organ donation, there was a favourable view (75.2%). A common source of information was television (27%). 29.90% of those surveyed were aware that "kidney" can be given. 43.80% of the respondents were oblivious to the allowance of organ donation in their religion. More than half (57.2%) were in favor of the promotion of organ donation.

Keywords: Knowledge, Attitude, Organ Donation and Transplantation.

1. Introduction

One of the biggest achievements in modern science and a fresh source of hope is organ donation. Organ donation has not yet become more popular in India. The lack of education and ignorance are the main causes of the organ scarcity in India. Today, social media and numerous other occasions can be used to spread the word about the benefits of organ donation and how doing so would save the lives of countless others. The State Organ and Tissue Transplant Organization (SOTTO), which is the nodal agency that facilitates cadaver organ donations, recorded 70 cadaveric donations in 2021. In India, organ donation after brain stem death is rare. India currently has a cadaver organ donation rate of 0.08 per million, while Spain has the highest rate at 35 per million. According to WHO only about 0.01 percent of people in India donate their organs after death as compared to western countries, where around 70-80 percent of people pledge their organs. NOTTO 2020 reports that in India, 5486 kidneys, 1780 livers, 89 hearts, 67 lungs, 14 pancreases and 7 small bowels have been donated. According to HRSA (human resources and service administration): 40,000+ transplants were performed in 2021. Every 9 minutes another person is added to the transplant waiting list.

Index terms: Knowledge, Attitude, Organ donation, Adolescent.

Design: A Literature Review

2. Material and Method

PubMed, Google Scholar, MEDLINE database were used to search the literature, studies were included only if the data on organ donation were available.

Objectives

The objective of this study was to systematically review literature to:

1. It would be simple to retrieve the literature reviews
2. It is relevant to the topic of the study and will be useful for my future research.

Inclusive and Exclusive Criteria

Inclusive

- Review's after 2015 have been selected in review.
- Studies selected from PubMed, MEDLINE, Google scholar.
- Full article related to organ donation.

Exclusive

- The brief article has been taken down.
- Articles that were duplicates were removed.

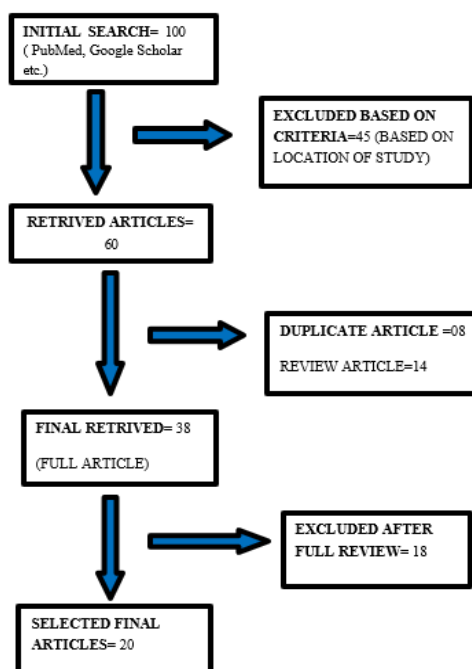
Method

Data and Source Data

Literature search

A literature review search was carried out in the following electronic bibliographic databanks: PubMed, Google scholar and the MEDLINE, included all publications up to March 2022. Search words knowledge and attitude regarding Organ Donation.

FIGURE: 1 FLOW CHART
Study Selection Progress:



Study no	Author detail with year of publication	Region of study	Study design	Study sample	Period	Gender	Major findings
1.	Farah Khalid, Abdullah Bin Khalid, Danish Muneeb et al (2019)	Karachi, Pakistan.	cross-sectional study	420 people were approached.	December 2015 to December 2016	More than half of the respondents happened to be students and female respectively.	According to the study's findings, 77.5% of the population was between the ages of 18 and 27. Students and women made up more than half of the responses (51.1% and 55%), respectively. Our findings show that the general public (25.8%) lacked sufficient understanding. Regarding organ donation, there was a favourable view (75.2%). A common source of information was television (27%). 29.90% of those surveyed were aware that "kidney" can be given. 43.80% of the survey participants were unaware that their religion permitted organ donation. More than half (57.2%) supported encouraging organ donation. ⁸
2.	KL Balajee, N Ramachandran, L Subitha (2016)	Selected Rural village of Puducherry,	community based cross sectional study	360 people living in 4 villages of Puducherry.	12 Jan 2017	360 people	The outcome of this research was The majority of the 317 participants, 91% (290/317), agreed that all healthy persons are entitled to donate their organs, and 87% (275/317) agreed that financial rewards could not be taken in exchange for organ donation. 70% (223/317) of the individuals were willing to give their organs after passing away. Family rejection was the most

							frequent excuse given by participants who chose not to donate their organs, accounting for 57% (25/44) of them. ⁹
3.	Puneet mishra, sumit malhotra, nitika Sharma et al (2021)	Selected rural area of Faridabad, Haryana.	community based cross-sectional study	1050 adults in a rural area of district Faridabad	27 August 2017 to 2021	1050 adults	According to the study's findings, 80% of study participants were aware of organ donation. About 40% of them had heard about brain death. 71.5 percent of study participants said they would be willing to give an organ in any situation. In all, 94.6% of participants agreed that organ donors and their families should have access to special facilities. Men and people with education levels above the primary level showed much higher levels of awareness. ¹⁰
4	<u>Hania Hasan, Arham a Zehra, Lubna Riaz, et al (2019)</u>	universities of Karachi, Pakistan.	cross-sectional study	undergraduate medical and non-medical students from various universities of Karachi	29 August 2019	450 students were sent online	According to the study's findings, 88.7% of students knew about organ donation, but only 34.6% of them were willing to do so, and just 0.6% had actually donated an organ. Higher knowledge scores were related to female gender and attending a medical university. The majority of students stated that "to save lives" (51.7%) is what would drive them to give an organ, while "religion" (27.6%) was chosen as what would demotivate them. ¹¹
5.	<u>Mahteme Bekele, Wubsh et Jote, Tigist</u>	Tertiary Hopsital in Ethiopia	cross-sectional study	414 patient companion participated	March 1 st to Mat 31 st 2019	252 were males.	¹⁷ The study's findings were The study included 414 patient companions in all. The respondents' average age was 35 years and

	<u>Workneh</u> , et al (2021)						13 months, and 252 of them—or 60.9%— were men. Of the study's participants, 44 (10.6%) had solid knowledge of organ donation. (AOR=2.127 95% CI: 1.036, 4.368) The male gender was strongly related with improved knowledge. 219 (52.9%) of the survey participants had a positive attitude regarding donation. AOR =0.498, 95% CI: 0.290, 0.857) showed that participants with a secondary education were more likely to have a negative attitude about organ donation. ¹²
6.	<u>Raktim Pratim Tamuli</u> , <u>Smriti mala Sarmah</u> , and <u>Bishwajeet Saikia</u> (2019)	premiere educational institutes at Guwahati.N orth-East India	cross-sectional study	360 individual,un dergraduates and postgraduates	January 2019	180 participants were undergraduate students and 180 participants were faculties having postgraduate degree	Only three families out of all participants have donated an organ in the previous five years, according to the statistics, which show that 79.17% (285) of participants knew about organ donation. 12 individuals, or 3.33%, have opted to donate their organs. 12.5% of those who participated in the study had the opinion that some religious convictions may restrict some segments of the local population from receiving or donating organs. More over half of the study participants—186— (51.67%)—believed that one of the factors contributing to the low rates of organ donation is a lack of public awareness. ¹³

7	<u>Naina Sam, R Ganesh, V Indrapriyadars hini, et al (2018)</u>	Thiruvallur and Chennai City, India.	cross-sectional study	486 undergraduate students belonging to medical, dental, engineering, and arts and science.	2017 to March 2018	183 were males and 303 were females.	The study's findings showed The study involved 486 students in total, of whom 183 (37.3%) were men and 303 (62.3%) women. 455 (94%) of the participants in the survey were familiar with the term "OD," while 31 (6.4%) were not. A total of 261 pupils (54%) knew about the "organ transplantation act," while 225 (46%) did not. A total of 240 students (49.4%) were aware of the hazards associated with OD. A total of 329 students (68%) believed that legislation were necessary to control the OD process. 169 (35% of the sample population) pupils were found to be aware of the human donor card. Three hundred eight (63.4%) individuals expressed a desire to join any OD group. ¹⁴
8.	F.K.Janahi, A.Al Rais, M.Al Rukhaimi et al (2018)	UAE residents	cross sectional survey	900 UAE residents		293 were women and 202 were men	The average knowledge score was 4.42 (SD: 1.54). Less than 198 (40%) of those who were aware of organ donation and transplantation had accurate information in this area. The derived mean belief score was 56.56 (SD = 6.39) in total. Organ donation and transplantation attitudes among participants received a score of 14.7. ¹⁵
9.	<u>K. Chakradhar,* D. Doshi, B. Srikanth</u>	Panineeya Institute of Dental Sciences	cross-sectional study	298 undergraduate dental students	2014 to Feb 2016		Results of the research were In comparison to men, women reported higher mean- standard deviation scores for knowledge (8.221.51) and practice (0.910.8); males

	Reddy, et al (2016)	and Hospital, Hyderabad, India.					reported higher mean-standard deviation scores for attitude (8.551.56) (p0.001). While third-year students significantly outperformed second-year students in terms of mean attitude score (1.731.17) (p=0.02), second-year dental students outperformed third-year students in terms of knowledge (8.551.56) and practice (1.020.44). Hindus and Muslims performed much worse than Christians, Jains, and Atheists in terms of knowledge, attitude, and practice habits (p 0.001). The relationship between mean knowledge, attitude, and practice habits was favorable. ¹⁶
10.	<u>Shohreh Kolagari, Java d Bayei, Vahid Asoodeh et al (2022)</u>	Golestan University of Medical Sciences, Gorgan, Iran,	cross-sectional study	1078 undergraduate students.	January to June 2019	1078 undergraduate students.	The study's findings were Students' average ages were 22.24 5.16 years. The results showed that students' knowledge of and attitudes on organ donation and transplantation were on the average 8.481.71 and 48.558.11, respectively. Additionally, the mean score of students who were female, married, and/or possessed an organ donor card was considerably higher (P0.001), P=0.001, and P0.001, respectively. Organ donation and transplantation were topics that almost all of the students had heard of (98.3% and 98.4%, respectively). The majority of respondents indicated that

							television (TV) programmes were their main source of information about organ donation and transplantation (47.1%). Most of the students (73.8%) reported that they agree to donate their organs but most of them (67.5%) did not know how to obtain organ donation card and only 9.6% of them had the organ donor card as a volunteer donor. ¹⁷
11	<u>Maryam Janatolmakan,</u> <u>Ali Soroush, Roghaye Nouri</u> (2020)	Kermanshah , Iran	descriptive-analytical study	185 nurses working in ICU, CCU, and emergency wards	May to July 2019	185 nurses working in ICU, CCU, and emergency wards	According to the study's findings, nurses' average knowledge scored 8.9 1.4 out of 10. The awareness of nurses regarding donation, their religious beliefs, and having an organ donor card were significantly related (P 0.001). The average nursing attitude was 7.8 2.2 out of 8. The variables that were linked to nurses' attitudes on organ donation included "carrying a donation card and marriage." The average nursing performance was 0.4 to 0.7 out of 3. The performance of nurses and holding a donation card were significantly correlated (P 0.001). The biggest predictor of nurses' performance was knowledge (P 0.01). ¹⁸
12	<u>Meena Jain,</u> <u>Nisha Rani Yadav,</u> <u>Ankur Sharma,</u> et al (2019)	institute of dental studies in the National Capital Region of	cross-sectional study	168 participants, including interns, postgraduate students, and	15 th july 2018 to 2019	168 participants, including interns, postgraduate students, and	At the conclusion of the educational session, the study participants' mean knowledge score was 9.6 and their mean attitude score was 3.4, according to the study's findings. When willingness to sign an organ card was

		India (NCR)		faculty members.		faculty members.	compared to age and gender, it was shown that there was no correlation. When the knowledge scores of men and women were compared, a statistically significant difference was discovered ($P = 0.006$), and when the attitude ratings of the education group were compared, $P = 0.0238$. ¹⁹
13.	<u>Ibrahim Altraif</u> , <u>Noura h Altuwaijri</u> , <u>La mia Aldhiban</u> et al (2020)	King Abdulaziz Medical City, Riyadh, Saudi Arabia.	cross-sectional study	376 medical staff and outpatients	Nov 2020	238 heard about SCOT, of whom 124 were males.	Professionals in the medical field showed better attitudes and knowledge on organ donation ($P = 0.05$). The percentage of persons who permitted their family to give their organs decreased from 51.22 to 30.4% between 1996 and 2017, although there was a rise in the number of people who knew that Islam endorses organ donation. ²⁰
14.	<u>Amanuel Girma</u> , <u>Abay Mulu</u> , <u>Alemayehu Shimeka</u> et al (2021)	Gondar, Northwest Ethiopia.	cross-sectional study	382 randomly selected health professionals in Gondar	2020 to March 2021	382 health professionals	According to the study's findings, 79.1% of medical professionals supported organ donation, and 74.6% said they would be willing to do so. The probabilities of having a positive attitude toward organ donation were 3.2 and 11.9 times greater in the professions of laboratory technologists and doctors, respectively, after controlling for confounders. ²¹
15.	<u>Hatan Mortada</u> , <u>Naw al Mashni</u> , <u>Alharbi</u> , Mary	different hospitals all around the Kingdom of	cross-sectional study.	241 participants	2018 to 2020	241 participants, 130 were female. In	Out of the 241 participants in this study, 130 (53.9%) were women. Additionally, 110 of them (45.6%) were medical residents. In addition, 224 (92.9%) of the participants

	a Abdullah Alsuhaihani et al (2020)	Saudi Arabia.				addition, 110 of them were medical residents.	knew what organ donation was. The overall knowledge level is high (55.2%). According to the report, 62.2% of people have exclusively donated organs to their immediate family. ²²
16.	F Fontana , M Massari , L Giovannini et al (2017)	University of Modena and Reggio Emilia, Italy		749 students in which 406 Medical Students and 343 Nursing students	Nov 2017	406 Medical Students and 343 Nursing students	Even though 95% of students supported organ donation, only 21.9% of NS students and 24.9% of MS students had registered as donors, according to the study's findings. One-fourth of the youngsters said their families had fought. MS appeared more assured with the donation staff. Overall, 60% of students were familiar with the phrase "donate after brain death," but only 40% were familiar with the definition. Only 27.1% of NS students and 15.3% of MS students thought they had learned enough in class. ²³
17.	Kaur Ramandeep, Begum Nilavansa S. , Kaur Amritpal (2015)	Selected Colleges of Jalandhar, Punjab.	Quasi experimental design	100 young adults from DAV College and Lyallpur Khalsa College of Jalandhar	Jan to march 2015	100 young adults	Pre-test mean knowledge scores for the experimental group were 12.52 and for the control group were 12.60; post-test mean knowledge scores for the experimental group were 19.14 and for the control group were 13.62. The experimental group's pre- test mean attitude score was 35.88, while the control group's was 35.82. The experimental group's post-test mean attitude score was 42.56, while the control group's was 36.86.

							The mean knowledge and attitude scores in the experimental group significantly outperformed those in the control group, it was discovered. ²⁴
18	Jeremy YC Teoh , Becky SY Lau, Nikki Y Far (2020)	Hong Kong.	cross-sectional study.	1000 Hong Kong Chinese residents		1000 Hong Kong Chinese residents	53.8% of respondents responded. The majority of those who responded were female (68.3%), between the ages of 51 and 60 (24%) or 61 or older (43.6%). 31.3% of respondents said they would be open to donating their organs after passing away, while 25.4% said they would not. Only 34.2% of people who were prepared to donate organs after death had signed up with the Centralized Organ Donor Register (CODR). Among individuals who were eager to give organs after death but had not yet registered on CODR, 52.2% cited lack of motivation as the reason, 47.8% cited busy schedules, 37.8% cited laziness, and 20.4% cited forgetfulness as the reason. ²⁵
19	Samata Srinivasula, Adepu Srilatha, and Suhas Kulkarni (2018)	Hyderabad.		112 dental house surgeon students		112 dental house surgeon students	The study's findings showed From baseline to post-intervention and at follow-up, the respondents' responses to questions about their knowledge revealed significant changes in a number of important areas. More than 50% of research participants were in favour of organ donation. The percentage of subjects who promised or signed up to

							<p>donate an organ increased significantly (before: 14.3%, after intervention: 50%, and at follow-up: 60.7%; P 0.05). Comparing the mean knowledge, attitude, and practise scores at the post-intervention and 2-week follow-up to the baseline levels demonstrated a substantial increase. Hindu- religious subjects and female subjects exhibited good knowledge, a good attitude, and good behaviour.²⁶</p>
20	Nirmala M, Leena J, Reena RCJ et al (2019)	Selected College, Coimbatore.	Quasi experimental, one group pre test post test design	225 young adults		225 young adults	<p>By comparing the pre- and post-test scores, the study's findings showed that STP was successful. With a 't' value of 4.4170 significant at p 0.001, the 't' test revealed a significant difference between the pretest knowledge score (8.472.65) and post test knowledge score (9.893.54). 98.22% of pre-test scores indicated a positive mindset.²⁷</p>

3. Result and Discussion

A total of 395 respondents agreed to participate in the research once all research studies were properly analyzed. Of the 420 people that were reached, 25 declined to take part. About 77.5% of the population, or their mean age, fell between 18 and 27. Students and women made up more than half of the responses (51.1% and 55%), respectively. Our findings show that the general public (25.8%) lacked sufficient understanding. Regarding organ donation, there was a favorable view (75.2%). A common source of information was television (27%). 29.90% of those surveyed were aware that "kidney" can be given. 43.80% of the survey participants were unaware that their religion permitted organ donation. More than half (57.2%) supported encouraging organ donation. It is shocking that 43.8% of people were confused whether their faith would accept a donation. A study revealed no evidence of religious inequality. However, our survey found that while the Christian community was supportive of organ donation, around 74.3% of Muslims believed that Islam forbade the practise. According to studies, donation is prohibited by societal and cultural norms, religious beliefs, feelings toward the dead body, and the reverence for cadavers.

4. Conclusion

According to the literature review, the participants expressed a lack of understanding, ambivalent attitudes toward donation, and a critical need for education; greater awareness could aid in raising the donation rate. There is an urgent need for an integrated curriculum that prioritizes interpersonal conversation and includes practical features because the majority of educational institutions do not specifically address training on organ donation and transplantation for health care students.

Implication To Nursing Practice

Preventive, promotional, curative, and rehabilitative services are all included in nursing care. Nurses are taking a lot of new steps to make people aware. It would increase the donation rate and aid those in need.

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