

Impact of an Educational Intervention on Increasing the Knowledge and Changing the Attitude and Beliefs towards Organ Donation among Medical Students

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ABSTRACT

Introduction: Organ transplantation saves thousands of lives worldwide. Organ transplantation is a boon to the medical profession, as it helps in saving the lives of many diseased people. Globally, the prevalence of knowledge on organ donation was found to range from 60% to 85%, on using different knowledge variables. Knowledge, attitude and actions are interrelated and previous studies have shown that culture and religion were important external influences which affected the decision making process. So, students require further information on the organ donation process and they need opportunities to examine their own beliefs and attitudes, which can be addressed through educational interventions.

Objective: Purpose of the study was to investigate the knowledge, attitude and belief on/towards organ donation and the impact of an educational intervention on them.

Methods: An educational interventional study with pre structured questions being administered to study subjects.

Results: In the present study, a total of 70 students consented to participate and all the 70 attended the pre-test and post-test

after the classroom teaching. Among the 70 participants, 35(50%) were males and 35(50%) were females. A majority of the subjects were Hindus 64(91.4%) and only 3(4.30%) were Muslims. Sixty seven (95.7%) of the students had heard of the term, 'organ donation'. Most common reason given by the participants for organ donation was that it was done to save someone's life [61 (87.11%)]. Among the 70 study subjects, only 19(27.10%) knew about the organs that could be donated, whose number increased to 56(80%) after providing the educational intervention. The difference which was observed in their knowledge before and after providing the educational intervention was found to be statistically significant ($t= 39.315$, $p< 0.0000$). The awareness of the legislation regarding organ donation was poor. Thirty one (44.3%) subjects were unaware about the existence of laws which were related to organ donation and its process.

Conclusion: The study emphasizes the need of an intervention which incorporates the knowledge, motivational messages, facts and figures, to bring necessary changes in the perceptions and intentions of the students regarding organ donations.

Keywords: Organ donation, Knowledge and attitude, Medical students

INTRODUCTION

Organ transplantation saves thousands of lives worldwide. Organ transplantation is a boon to the medical profession, as it helps in saving the lives of many diseased people [1]. Organ donation is the process of giving an organ or a part of an organ for the purpose of its transplantation into another person. It can be related to a deceased donor or a living donor. It has been legalized in India, under the "Transplantation of Organ Act, 1994". Globally, the prevalence of knowledge on organ donation was found to range from 60% to 85%, on using different knowledge variables [2]. Medical students have different opinions which are governed by socio cultural factors such as traditional customs, the practice of preservation of intact body after death, uneasiness in discussing death related issues and family objections. As future doctors, medical students have to take up the role of promoting organ donations. However, many lack relevant basic knowledge and are influenced by personal attitudes and biases which are held by the general public, which impinge on health care professionalism. There is also a discrepancy between their attitudes and actions. While a majority of healthcare professionals support organ donations, only a small proportion make actual commitments through signing of organ donor cards or registering to become organ donors. Knowledge, attitude and actions are interrelated and previous studies have shown that culture and religion were important external influences which affected the decision making process [3]. So, students require further information

on the organ donation process and they need opportunities to examine their own beliefs and attitudes, which can be addressed through educational interventions.

Available data support the need of increased and substantial organ and tissue donations. Each person's knowledge, attitude and perception on/towards organ donation affect donor rates. Thus, the purpose of this study was to investigate the knowledge, attitude and belief on/towards organ donation and the impact of an educational intervention on them.

METHODOLOGY

An educational interventional study was conducted at S. Nijalingappa Medical College, Bagalkot, Karnataka, India. All 1st year medical students of S. Nijalingappa Medical College were included in the study. Out of 100 students, 70 consented to undergo the study.

All the students were asked to answer a pre-structured questions to test their knowledge, attitude and beliefs regarding organ donations. This was followed by an educational intervention, with interactive sessions being held on organ donation. The educational part included material which highlighted the statistics of organ donations, types of organ donations, legal issues and motivational messages which inspired public to volunteer for organ donations. Immediately after this session, the same pre-structured questions was asked to the students. The difference between the two scores was analyzed statistically. An intended questionnaire was prepared from

available pretested proforma [3,4], which included two parts; Part 1 addressed the socio-demographic information of the participants and part 2 addressed information regarding knowledge, attitude and beliefs on/towards the participants towards organ donations.

Institutional ethical committee gave permission to conduct the study. Data which was collected was analyzed by using proportions and paired t-test was used to find the significance of changes which were observed before and after providing intervention.

RESULTS

In the present study, a total of 70 students consented to participate and all the 70 attended the pre test and post test after the classroom teaching. Among the 70 participants, 35(50%) were males and 35(50%) were females. A majority of the subjects were Hindus 64(91.4%) and only 3(4.30%) were Muslims. The sources of information regarding organ donations were news papers [for 37 students (52.7%)], television [for 27 students (38.6%)], doctors [for 21 students (30%)] and internet/ online searches [for 17 students (24.3%)]. Among the 70 study subjects, only 19(27.10%) knew about the organs that could be donated, whose number increased to 56(80%) after providing the educational intervention. The difference which was observed in their knowledge before and after providing the educational intervention was statistically significant ($t= 39.315$, $p < 0.0000$).

Regarding the knowledge on risks which were involved in the process of organ donation, 46(65.7%) opined that there was a risk to the donor, but a change in this concept was observed in the post test attended by the participants, where all of them were of the opinion that organ donations involved minimal risk. [Table/Fig-1] shows that infection was the major risk which was stated by the students, both in pre and post-test. A significant change in attitude towards organ donation was noted after the intervention. Sixty-five (92.90%) students had expressed their willingness in promoting organ donations in the post test questioner, whose number had increased by 7% as compared to the number which was seen in pretest.

SI No.	Knowledge of students	Pretest		Post test	
		Number	Percentage	Number	Percentage
1	Have you heard of the term organ donation	67	95.70	70	100
2	The term organ donation means				
	Removal of tissue of human body from cadaver	69	98.6	1	1.4
	Removal of tissue of human body for the purpose of transplantation	1	1.4	43	61.4
3	Why is organ donation done				
	To save someone's life	61	87.1	60	85.7
	Out of compassion	1	1.4	1	1.4
	For money	2	2.9	1	1.4
	As a responsibility	3	4.3	4	5.7
	Others	3	4.3	4	5.7
4	Does organ donation involve any risk				
	Yes	58	82.8	47	67.10
5	Most important risk of organ donation				
	Infection	11	15.7	9	12.9
	Bodily weakness	6	8.6	3	4.3
	Pain	3	4.3	2	2.9
	Others	26	36.1	27	38.6
6	Awareness of legislation regards to organ donation				
	Local	9	12.9	70	100
	International	6	8.6	70	100
	Both	11	15.7	70	100

[Table/Fig-1]: Knowledge of students

In the pretest, 43(61.40%) participants had expressed their willingness to donate their organs to someone and 13(18.60%) had expressed their willingness to donate their organs to their family members, but in the post test, 54(77.20%) agreed to donate their organs to someone who was in need. The change in the attitude which was observed, was statistically significant $t= 6.007$, $p < 0.05$ [Table/Fig-2].

DISCUSSION

The results of the present study demonstrated several characteristics of the respondents. In general, the knowledge and attitude of the newly admitted medical students were comparable to those of general population. These results demonstrated that the level of knowledge on organ donation was not optimal, which indicated the necessity of an increase in the awareness regarding organ donations.

Our study identified that for the principle respondents, source of information on organ donations was television, followed by

SI No.	Attitude of the students	Pretest		Post test	
		Number	Percentage	Number	Percentage
1	Your attitude towards the possibility of your own organ being used for donation				
	Never consider	5	7.1	5	7.1
	Will think about it	20	28.6	7	10
	Donate under special circumstances	24	34.3	17	24.3
	Definitely want to	21	30	41	58.5
2	Danger that organ donated may be misused or abused				
	Never	7	10	18	25
	Sometimes	43	61.4	38	54.3
	Often	5	7.1	5	7.1
	Most of the time	11	15.7	5	7.1
	All the time	1	1.4	1	1.4
	Don't know	3	4.3	3	4.3
3	Whom would you like to donate your organs				
	Family member	17	24.3	12	17.1
	Stranger	1	1.4	0	0
	Friend	4	5.7	4	5.7
	Can be anyone	43	61.40	54	77.2
	Young persons (<= 30 years)	37	52.9	35	50
	Middle aged(31-50 years)	7	10	9	12.9
	Elderly person	1	1.4	3	4.3
	Don't know	20	28.6	0	0
	Age irrespective	5	7.1	23	32.8
	Mentally retarded	8	11.4	15	21.4
	Mentally sound	27	38.6	28	40
	Do not know	23	32.9	00	00
	Irrespective of mental health status	12	17.1	27	48.6
	Person of the same religion	2	2.9	3	4.3
	Person of different religion	14	20	22	31.4
	Do not know	41	58.6	00	00
	Irrespective of religion	13	18.6	45	64.3
4	Factors holding greatest importance near you while donating an organ				
	Relation to recipient	9	12.9	8	11.4
	Age of recipient	6	8.6	5	7.1
	Health status of recipient	24	34.3	24	34.3
	Assurance of respectful treatment of the organ	21	30	33	47.2
	None of the above	10	14.2	00	00

[Table/Fig-2]: Attitude of the students

newspaper. In a broader sense, mass media plays an important role in creating awareness on this aspect. Utilization of such key factors is the need of the day, so that behavioural changes can be brought among these young ones, without difficulty [5].

It was observed that a majority of the participants did not know about the organs that could be donated and the risks which were associated with the procedure of organ donation. This gap in knowledge reflects the lack of information among budding medical professionals [5-9].

It was noticed that 44.3% of the respondents were unaware about the legislation with regards to organ donation. Only 9 (12.90%) knew about the local laws and only 8.6% knew about international laws. Similar observations were made by different authors. This deficiency which was observed among general public, students, and health professionals may be due to the lack of information and difficulty in understanding the legal terminologies. As was observed, mass media could be the best choice to convey the message, so that individuals could understand their roles and responsibilities with regards to organ donations [1,2,10-12].

It was shocking to know that about 7% of the respondents had opined that they would never consider organ donations. In the present scenario, where there is a great need for organs and where the list of people who are waiting for organ donations is increasing, this attitude indicates the dangerous picture of the future. It also points out that we must intervene and try to modify their attitudes at this receptive period of life [12-15].

In our study, only 4.3% of the students said that their religions would allow organ donations, whose number decreased to about 3% after the class lecture, where it was highlighted that every religion considered organ donation as pious. It was observed that only 1% of the students changed their opinions with regards to their religions not allowing organ donations. This revealed the impact of the religious beliefs which were associated with every individual and the difficulty which was faced in changing those blind beliefs [16-18].

As per the results of the present study, we can say that the limited knowledge of medical students on organ donation was likely to be a result of paucity in teaching on the subject of organ donation in the school curriculum. It was also observed by different authors that even the senior students of medical college had limited knowledge, because this concept was not stressed in medical curriculum too [19, 20].

With limited teaching being done on organ donation in the undergraduate medical curriculum, designing and testing an educational intervention for medical students, on how to approach organ donation, may be useful. Without such teaching, it is unclear as to where future physicians will acquire this knowledge from. It should be noted that physicians' knowledge on the subject of organ donation is just one of many requirements which maximize organ donation rates.

Classroom teaching is a very feasible method which educates adolescents about organ donations. Prior studies have shown that classroom interventions could increase knowledge and influence the intentions of students to donate their organs [19,20]. The goal which was set here, was to test such an intervention among the newly admitted medical students, who are the future promoters of organ donations.

In the present study, an attempt was made to demonstrate the shortcoming in knowledge on organ donation among the medical students and the fact that education interventions which were made in class rooms by using different methods could increase their knowledge and also result in changing the attitudes of the students. Thus, it is necessary for every teacher to include concept of organ donation in his/her lecture, wherever it is needed, not only in first year of medical college, but also in the teachings of other years. The study emphasizes the need of an intervention which incorporates knowledge, motivational messages, facts and figures, to bring necessary changes in the perceptions and intentions of the students regarding organ donations.

LIMITATION

The limitation of the present study was that the survey was distributed only to students who were within the medical college, which puts reservations in way of generalizing the findings.

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