



Original Research Article

A study of religious beliefs affecting organ donation & influence of educational intervention in western Maharashtra

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ABSTRACT

Background: In India, many lives that could easily be saved are lost due to a paucity of donated organs. This trend could easily be reversed by educating the general public. Religious beliefs and religious leaders play an important role in the society. With a concept to educate the religious leaders, to strengthen the message of increased organ donation, a study was conceptualized to test the efficacy of such an intervention.

Aims: To study religious beliefs and organ donation among the heterogenous population of Maval Taluka.

Study Design: A cross-sectional study carried out in the Department of Biochemistry, MIMER Medical College, Talegaon Dabhade, Pune.

Materials and Methods: An educational interventional study was carried out on four basic major religious groups namely Hindu, Muslim, Sikh and Christian. Data was collected from 328 participants by visiting respective religious places. A ten-item self-structured validated questionnaire was designed to assess the knowledge and beliefs regarding organ donation. Pre-test was carried out to assess the basic knowledge on organ donation. Educational intervention regarding the benefits of organ-donation was done, followed by a post-test.

Statistical Analysis: The data was statistically analysed by ANOVA in SPSS software.

Results: The overall awareness on organ donation was increased by 22% after the planned educational intervention.

Conclusion: These results of the study showed a high degree of acceptance amongst all the groups & willingness for organ donation. Hence, such awareness programmes should be conducted at regular intervals on a large scale so that the problem of shortage of donated organs can be minimized.

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1. Introduction

Organ donation in our country has the potential to save thousands of lives of people presently living with diseased or dysfunctional organs.^{1,2} In general, different religious beliefs support the concept of organ donation, but still the frequency of donation remains low. This problem could be overcome by educating the general population as well as religious leaders³. Educational interventions will help to instill the right knowledge in the society. With this idea in mind, an educational interventional study was planned to

promote organ donation amongst four basic major religious groups namely Hindu, Muslim, Sikh and Christian in Western Maharashtra.

Thus, the purpose of this study was to assess the knowledge, attitude and belief towards organ donation and to assess the impact of an educational intervention on a heterogenous population of different religions.

2. Materials and Methods

Prior to conducting the study, approval was obtained from the Institutional Ethics Committee. An educational interventional study was conducted on four major religious

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groups. A total of 501 participants were present, out of which 328 consented to be part this study. The religious believers included Hindu (n = 55), Muslim (n=50), Sikh (n =51) and Christian (n=172). A cross-section of heterogenous adult population of both the sexes visiting religious places (Temple, Dargah, Gurudwara and Church), who consented to participate in the educational interventional study were enrolled as participants and educational intervention was given to all participants. Unwilling and participants with reported intellectual disability were excluded.

Prior permission, from the religious head of each of these institutions, was taken to address groups of minimum 50 people at a time. A ten-item semi-structured validated questionnaire was designed to assess the knowledge, attitude and beliefs regarding organ donation. The questionnaire was translated into local languages Hindi, Marathi and English. All sets of questionnaires were field tested for both face value and content validation was done. All the participants were asked to answer a pre-structured questionnaire (pre-test) to evaluate their background knowledge regarding organ donation. This was followed by an educational intervention, with interactive question and answer sessions being held on organ donation. The respective religious leaders were encouraged to attend the training sessions. This had a dual effect – not only were the religious heads getting the right information about organ donation; but their presence strengthened the belief that the information being shared by the trainer was in accordance with the religious teachings as well. The location of the training was specially chosen as the respective religious place of worship itself, because it again strengthens the ideals that organ donation is a desirable and altruistic action across all religions. The intervention incorporated a MS Powerpoint™ presentation that include material that highlighted the statistics of organs donation, types of organs donation, legal issues and beliefs about the religion, motivational messages, facts and figures, to bring about necessary modification in the perceptions and intentions of the participants regarding organ donation. Immediately after the session, the same was administered as a post-test to the same participants. This helped us to analyse the percentage change in the study population following the educational intervention.

2.1. Statistical analysis

The difference between pre-test and post-test scores was analyzed by ANOVA in SPSS software (version 17).

3. Results

In the present study pre-test and post-test responses were taken from 328 participants who belong to these basic four religions. Distribution of age and sex of the study

participants are shown in the Figure 1. The mean age of the study participants (in years) were 38.5, 36.4, 37.1 and 40.5 respectively in Hindu, Muslim, Sikh and Christian religion (Figure 1). Out of these, 55 participants were Hindu (29 male and 26 female) 50 participants were Muslim (28 male and 22 female), 51 participants were from Sikh religion (31 male, 20 were female) and 172 participants belonged to Christian faith (94 male and 78 female) (Figure 1). Overall when education levels were assessed, it was found that majority (43%, n=141) of participants cleared 10th class. 34% (n=111) participants were graduates, 12% (n=39) participants were post-graduates and 11% (n=36) of them were illiterate.

Our study revealed an interesting set of findings. There was a significant increase in the knowledge from 58% to 80% in pre-test to post-test (Table 1, Figure 2). This meant that after the education intervention overall awareness was improved by 22% in these groups irrespective of their age, educational background and residential area.

Initially 79% participants were aware about organ donation and 59% knew about organ donation after death. While post-test this was improved to 96% and 89% respectively. A rise in awareness was seen from 50% to 86% regarding live organ donation. Belief that the body should be kept intact after death was 78% initially, while post-test this was reduced to 73% which showed a better acceptability of the organ donation process. There was no gender difference in the willingness to donate organs (Table 1).

Prior to the test only 67% participants were familiar with the consent needed for organ donation, which was increased to 89% post-intervention. Before education intervention, 58% participants express a desire to donate their organs, while post-intervention this was improved to 80% (Table 1).

From the participant's religious point of view, in pre-test 69%, 6%, 57%, 70% respectively in Hindu, Muslim, Sikh and Christian mention that organ donation were not against their belief. However post educational intervention this percentage was increased to about 90%, 20%, 75% and 90% in the Hindu, Muslim, Sikh and Christian religions respectively. In the pre-test overall 51% participants felt that organ donation was permissible in their religion, while this was improved to 69% in the post-test. Highest awareness was observed in Hindu and Christian religion, while lowest was seen in the Muslim community (Tables 1 and 2).

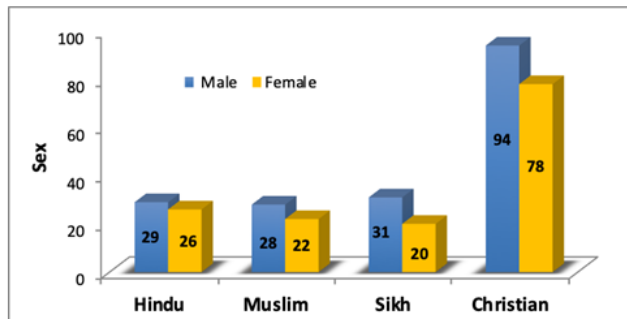
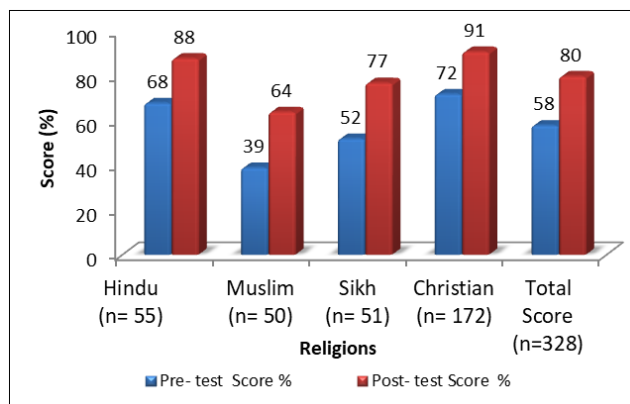
In the pre-test 47% participants had sufficient knowledge about legislation of organ donation; this was raised to 87% post intervention. 50% participants initially felt that their families would support organ donation, and this increased to 60% post-intervention. An encouraging finding was that members from all four religions were interested to know more about organ donation (Table 1).

Table 1: Response to questionnaire

No	Religion	Hindu (n=55)		Muslim (n=50)		Sikh (n=51)		Christian (n=172)		P value	F value
		Pre - test	Post - test	Pre - test	Post -test	Pre - test	Post - test	Pre - test	Post - test		
1	Response to Questionnaire to Educational Intervention (%) (n=328)										
1	Do you know about organ donation?	78	98	64	96	88	94	85	97	0.0012 #	11.71
2	Do you think that organs donation can be done only after death?	77	96	46	82	37	82	76	94	0.562 ns	0.78
3	Do you think that living person can donate organs?	55	92	42	78	33	80	69	92	0.330 ns	1.37
4	Do have belief that body should be kept intact after death?	53	47	96	92	84	78	78	75	<0.0001#	169.6
5	Does consent is required for body donation?	64	94	56	80	65	90	81	92	0.751 ns	0.41
6	Is organ donation permissible in your religion?	69	90	6	20	57	75	70	90	0.0021**	10.01
7	Is organ/ body donation is legally allowed?	67	94	24	82	35	75	60	95	0.4261 ns	1.13
8	Would you like to donate your organs/ body after death	68	88	39	64	52	77	72	91	0.0005***	15.48
9	Do you think that your family will support your decision of organs donation?	76	89	10	18	39	51	73	83	<0.0001#	30.3
10	Are you interested to know more about the organ donation	62	93	42	88	45	94	57	95	0.341 ns	1.34
	Improvement in Knowledge (%)	68	88	39	64	52	77	72	91		

Table 2: Awareness about organ donation & religious belief (Response to Question No. 6)

S. No.	Hindu (n= 55)	Muslim (n= 50)	Sikh (n= 51)	Christian (n= 172)	Overall
Pre- test (%) (n=328)	69	6	57	70	51%
Post- test (%) (n=328)	90	20	75	90	69%
Difference between pre & post test	21%	14%	18%	20%	18%

**Fig. 1:** Distribution of sex Hindu, Muslim, Sikh & Christen religions**Fig. 2:** Religion wise pre & post test score (%)

4. Discussion

Organ donation is the process of giving an organ or a part of an organ for the purpose of its transplantation into another person.³ No country in the world, till date, collects sufficient organs to meet the needs of their citizens.^{4,5} There is an urgent and vital need to increase the availability of human organs.⁶ In the present study, majority of participants had adequate knowledge about that organ donation. Many participants knew that organs can be donated immediately after death, but there was limited knowledge on living organ donation. However, after educational intervention many participants were aware and expressed a desire to donate their organs.

Previous studies have shown that educational intervention could increase knowledge and positively influence the intentions of participants to donate their organs.^{1,6} The views held by influential religious leaders

were important, because these individuals often guide social attitudes and behaviour.⁷

Furthermore religious, cultural or socio-economic beliefs have been cited as barriers in previous literature.^{8,9}

Nearly, all religions support altruism in organ donation as it serves a social and humanistic cause.^{7,10} Those study participants who were described as being more religious may be less likely to support organ donation, believing that their religion oppose organ donation. ‘Daan’ of organs is common practice in Hinduism.¹¹ Both Christianity and Sikh community favours organ donation.^{11,12} In our study high awareness was observed among Hindus and Christians both in the pre and post-test results. Lowest awareness was observed among Muslim religion following the intervention. The Qur’an accepts organ donation, provided that success of the transplantation procedure must be highly probable; the donor or the family should have consented to it and if possible organ donation must be between Muslims only.^{10,13} The perceived reason for the lowest knowledge among Muslims may be, that they may seek the advice of their local imam and ultimately, the advice of this scholar is respected.¹¹ It may be beneficial to specifically aim for better education for the Imam and other religious leaders who can help to change the age old mind-set and remove the perceived barriers to organ donation among the Muslims.¹⁴

Tontus, Karabey and Gurdal stated that a major modifiable factor in dearth of organ donation is the lack of information regarding its legal aspects among health care providers.¹⁵ Organ donation involves numerous ethical considerations. In India, organ donation is regulated under the ‘Transplantation of Organ Act, 1994.’¹⁶ Majority of participants in our study had sufficient knowledge about the legal aspects of organ donation.

An encouraging finding was that, many participants were willing to donate their organs immediately after death; this findings corroborate with Raghuram and Shroff.¹⁷ When asked, would their family support organ donation from an ethical point of view; most of the participants responded yes, since most of the families attended the lecture together. After completion of study, many participants willingly called us to register themselves as organ donors. Hence, educational interventions can be of great benefit and should be encouraged.

Conducting such lectures frequently and at multiple gatherings would be a very feasible method which educates the public about organ donation drives. Our study highlighted the view that if health professionals

tactfully approach the religious leaders and utilize their goodwill and positive support it will result in creating higher awareness and an increased willingness for organ donation. For successful donation, adequate knowledge and clear discussions between treating physicians and patient relatives at the time of death is important and also needs to be encouraged and highlighted among the medical fraternity as well.

The number of patients waiting for organ transplant is rapidly increasing worldwide. Therefore, the existing gap between the demand for available organs and the supply is becoming wider every year. An improvement of perception and knowledge will be useful for the improvement of organ donation followed by transplantation.¹⁸ Indeed, it was clearly demonstrated the beneficial effects of such interventions aimed at improving the perception and attitudes toward organ donation. According to Tontus, when considering the number of patients who died while waiting for transplantation, organ donation awareness projects that are focused on converting knowledge to behavior are believed to be very critical. It is important to provide organ donation-oriented training at every educational level.¹⁹

5. Conclusion

Our present study suggests greater religious acceptance amongst all religious groups following the educational intervention and utilization of the religious leaders to boost the knowledge being shared, which may highlight the pivotal role of information dissemination with a religious backdrop that could not only increase their knowledge, but also change attitude and break down perceived religious barriers. The ultimate benefit would be a substantial increase in the number of organ donations and subsequently more number of lives could be saved.

6. Source of Funding

None

7. Conflicts of Interest

The authors declare that they have no conflicts of interest

8. Ethical Approval

Institutional Ethics Committee approval was taken prior to the study.

9. Manuscript was presented in the Conference

Presented e-poster on Organ Donation & Religious beliefs at BIOETHICON Conference held on 8th to 10th Nov 2019 at SRM Medical College & Hospital Research Centre SRM IST, Chennai.


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