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Effectiveness of Planned Teaching on Knowledge Regarding Cadverdonation among Adults in Rural Area

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Original Research Article

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ABSTRACT

Introduction: The donation of organs from a brain dead or dead person is known as Cadaver donation. Many adults are unaware of cadaver donation in the rural areas; hence the researcher had to impart awareness about cadaver donation among the adult population so that their attitude will gradually diversify in the future.

Aims: The study aims to evaluate the effectiveness of planned teaching regarding cadaver donation among adult in the rural area and find out the association of knowledge score with selected demographic variables.

Materials and Methods: In this Evaluatory approach was used. Pre-test and post test design was used. The study held among adults between the age group of 19years to 30years and the data was collected in the rural area of Seloo taluka at Wardha district from 2nd January to 28th January 2019. The researcher collected one sample from an individual family. Non- probability convenience sampling technique used in this study. The total sample size was 60 samples.

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Results: In the study, 50% of sample belonged to the age group of (19 to 21 years) 51.6% of sample were males, 40% of samples were graduate 5% of the sample had knowledge about cadaver donation out of which 15% of samples had knowledge from newspaper and mass media. The mean post-test knowledge scores 13.53 were higher than mean pre-test knowledge score 4.15 and the obtained mean difference of 9.38 was found to be statistically significant. **Conclusion:** It is concluded that there was an evidence to increase the knowledge score after administration of the planned teaching. The actual gain score was significantly higher, improving in the knowledge regarding cadaver donation among adults in the rural area. Thus the planned teaching was effective.

Keywords: Effectiveness; cadverdonation; planned teaching; knowledge; adults.

1. INTRODUCTION

Cadaver donation meaning donation of organs i.e. to take organs such as heart, eves, kidney, pancreas, etc. from the brain dead patient, also tissue donation which is to take tissues such as skin, corneas, etc from the brain deceased and heart deceases patient. This process is beyond the extent of the pathologist; therefore, it is done by surgeons in the operation theatre. In a wider range, the pathologist plays an important role in the cadaveric tissue donating process, as well as collecting tissues from a cadaver for analysis procedures within the framework of the autopsy i.e.; (fluid, organs, tissues samples) and to collect material for study and training students and pithily residents [1].

A dead human body is known as a cadaver, who is used by the students of medical, scientists, and medical researchers to analyze anatomy. identify disease sites, determine the cause of death, and give tissue to heal a flaw in a living human being. Medical school students use cadaver to study and dissect, as a part of their education. Other people who study cadavers include archaeologists and artists [2]. In the rural area, the young adult does not have any idea about cadaver donation, therefore the researcher takes initiative to fulfill the need of the society by spreading the awareness about the topic among the young adult, it will help people in the society adopt positively in future and accept. So that this will help to many people who require organ and to strengthen the cadaver donation through a health care professional [3].

Farah Khalid was conducted one the study in Karachi, Total sample 395 participants the study result shows that the knowledge score was about 25.8% participants had knowledge about organ donation [4]. Alghanim SA. Conducted one study in 2010 respondents in rural areas reported

having less information about organ donation than their counterparts in urban areas (P< 0.0001) the rural population had less knowledge about organ donation than the urban population [5]. In a rural community, most of the people have discrepancy about brain death because of less knowledge, misconception, false beliefs, religious myths, and fear about commercial usage of organ donation by doctors and searcher [6]. A study took place in Konkan Region, Maharashtra and the finding shows that participants had good awareness about eve and kidney donation but they had poor awareness range between 21% and 40% about body donation. There are lack of understanding regarding the concept of brain-death, so needs to further awareness [7].

A study was conducted in the Vidharbha region in 2019 According to their findings the authors recommended that there is a need to create awareness of organ donation among voung Motivational communication adults. and educational tools such as lectures planned teaching advertisements, and exhibitions can improve the awareness and attitude about organ donation among young adults [8]. Therefore, the present study was done to provide knowledge through planned teaching regarding cadaver donation and evaluate their knowledge regarding cadaver donation of adults from a rural area.

2. MATERIALS AND METHODS

The researcher used quantitative design in this study. The study was conducted in a rural area of the Wardha district and the data was collected from the rural area of Seloo taluka, Wardha. The research was conducted during six months. The data was collected from 22nd January to 28th January 2019. The investigator structured questionnaire was used to collect the data. The tool was validated by nine subject experts for more clarity and reliability to conduct the study

which was in English and Marathi. The questionnaire was prepared based on published research articles reviews and books; a questionnaire based on general and specific information about cadaver donation from PUBMED, CINAHL, and Google Scholar, etc.

The structured questioner used for data collection was divided into two sections: Section A based on demographic data about participants and section B knowledge-based 20 MCQ questions related to cadaver donation. In the questions, information related to meaning, concept, laws criteria, and procedure of cadaver donation are included.

The Spearman-Brown prophecy formula was used for reliability. The reliability coefficient was calculated. The reliability coefficient 'r' of the questionnaires was 0.837, which is more than 0.8. Hence the questionnaire was found reliable.

2.1 The formula for a sample calculation

The sample consists of the units which comprise the population. Sixty (60) adults were selected using the calculated formula to suit the study.

 $N = (4*p*q)/L^2$

= 54.54 = 60 subjects needed in the study. In the study, all the 60 samples were present during the pretest, planned teaching, and posttest, no sample dropped out of the study.

The population of the study was adults who were fulfilling the inclusion criteria. In the inclusion criteria of the study are adults who were willing to participate in the study, available at the time of data collection, those who were in the age group of 19 to 30 years. The researcher collected one sample from an individual family if more than one sample eligible for the study on that situation selection of sample by chit, one sample collected for individual family.

We excluded the adults those who were having severe disease condition like kidney disease, heart disease, and blood disease, who were physically handicapped, or having congenital anomalies.

The Gram panchayat hall obtained from prior permission of the Gram Sarpanch. The Investigator collected all the participants in Gram Panchayat hall at Seloo it was nearby their homes. The investigator administered pre-test questionnaires in the Marathi language and gave instruction. Once the necessarv pre-test completed. questionnaire the investigator collected it back within 30minutes after which planned teaching was delivered in the Marathi language about cadaver donation to all participants. On the 7th days of planned teaching the post-test was administered, after 30minuts the post-test was collected and data collection process was over, the investigator thanked all the study samples as well as authorities for their cooperation.

2.2 Scoring

- Score 1 was given for the correct answer.
- Score 0 was given for the wrong answer.
- Knowledge was graded from poor knowledge to excellent based on scores.

Each knowledge question was given a weighted score and the total knowledge score was calculated. The score was divided into four groups, lowest score indicated poor, average, good and Higher score indicated excellent knowledge about cadaver donation, the maximum possible score was 20 all the data were entered into Micro Worksheet and were analyzed using the Statistical Package for the Social Science software (SPSS Inc. Chicago IL, USA) Version 21.0).

The collected data were coded, tabulated and analyzed by using descriptive statistics (mean percentage, standard deviation) of Knowledge regarding cadaver donation and inferential statistics was used for significant difference between pre and post-test used by paired "t"test. Associations of knowledge with demographic variables were done by one way ANOVA and unpaired "t" test.

3. RESULTS

The analysis and interpretation of the data are organized under three sections as per the objectives of the study.

This table shows the comparison of pre-test and post-test knowledge scores of adults concerning knowledge of cadaver donation. Mean, standard deviation, and mean difference values are compared and students paired 't' test is applied at a 5% level of significance. The tabulated value for n=60-1 i.e.

59 degrees of freedom 2.00. The calculated 't' value is much higher than the tabulated value at a 5% level of significance for the overall knowledge score of adults which is the statistically acceptable level of significance.

Hence it is statistically interpreted that the planned teaching on overall knowledge regarding cadaver donation was effective. Thus, H1 is acceptable.

Table 1. Percentage-wise distribution of subjects according to their demographic variables n=60

Demographic variables	Frequency	Percentage (%)			
Age (years)					
19 to 21 years	30	50%			
22to 24 years	10	16.6%			
25 to 27 years	13	21.6%			
28 to 30 years	7	11.6%			
	Gender				
Male	31	51.6%			
Female	29	48.3%			
	Marital status				
Unmarried	40	66.6%			
Married	20	33.3%			
	Religion				
Hindu	49	81.6%			
Muslim	6	10%			
Christian	2	3.3%			
Other	3	5%			
	Education				
Primary	8	13.3%			
Secondary	22	36.6%			
Graduation	24	40%			
Post graduation	6	10%			
	Type of family				
Nuclear	16	26.6%			
Joint family	38	63.3%			
Extended family	6	10%			

Table 2. Effectiveness of pre-test and post-test knowledge score regarding cadaver donation n=60

Level of knowledge Percentage sco		Knowledge score			
score		Pre-test	Post-test		
Poor	0 – 25 %	50 (83.4 %)	0 (0 %)		
Average	26 – 50 %	9 (15%)	7 (11.6%)		
Good	51 – 75 %	1 (1.6%)	38 (63.4%)		
Excellent	76 – 100 %	0(0 %)	15 (25 %)		
Minimum score		0	6		
Maximum score		11	20		
Mean score		4.15±1.938	13.53 ±3.111		
Mean %		20.75 ± 96.9	67.65± 5.185		

Table 3. Effectiveness of planned teaching regarding cadaver donation among adults in ruralarea n=60

Overall	Mean	SD	Mean difference	t-value	p-value
Per-test	4.15	1.93	9.38 ± 3.61	20.11	0.001
Post-test	13.53	3.11			S, p < 0.05

_	Sex	0.217	1.134	0.035	0.192	0.849 ,NS
R I A B	Marital Status	-0.136	1.176	-0.021	0.116	0.908 ,NS
	Religion	-0.664	0.592	-0.164	1.122	0.267 ,NS
	Education	-0.532	0.592	-0.142	0.898	0.374 ,NS
	Type of family	0.486	0.713	0.092	0.682	0.499 ,NS
Ľ	Knowledge about	-1.951	1.291	-0.331	1.511	0.137 ,NS
E	Cadaver donation					
5	lf yes	-0.195	0.440	-0.082	0.444	0.659 ,NS

 Table 4. Regression Analysis of planned teaching knowledge score with demographic variable regarding cadaver donation among adults in rural n=60

By using multiple correlation coefficient no demographic variables were associated with knowledge score of adults (p>0.05).

4. DISCUSSION

In our study the pre-test mean percentage of knowledge regarding cadaver donation was 20.75% and post-test knowledge mean percentage was 67.65%. After given the planned teaching the knowledge about cadaver donation was increased 46.9 % hence the planned teaching effective. A similar community-based study was conducted in Puducherry, 100 samples were used in the rural service area 66% of knowledge was improved regarding organ donation after planned teaching.

A similar community-based study was conducted in Puducherry. The objective of the study was to assess the effectiveness of planned teaching on organ donation among young adults in rural the area. The 100 samples were used in the rural service area. 66% of knowledge was improved regarding organ donation after planned teaching [9].

Another similar study was conducted by R, Alarcon at Spain aim at the effectiveness of an education program regarding organ donation and transplantation in 157 students between 15-36 years at their educational institution in Malaga. The analysis report indicated that the education program was effective to increase in the level of awareness about organ donation and transplantation. Awareness provides positive changes in organ donation and transplantation [10]. In my study, the similarity of adult age 19 to 30yrs and education program also help to increase the level of knowledge regarding cadaver donation.

Shah R has conducted a similar type of study in the participants they have Poor (64.9%) or moderate (35.1%) knowledge about organ donation [11]. A study from Nigeria showed that the willingness to donate an organ was significantly associated with younger age, but not with gender [12]. According to the study of Saad A, 30.5% have heard about brain death and 69.5% have not heard about brain death or cadaver donation [13]. Our study showed a slightly lower prevalence of adequate knowledge (66%) regarding organ donation when compared to 88% who have heard about organ donation in another study [14].

5. CONCLUSION

It is concluded that there was an evidence to increase the knowledge score after administration of the planned teaching. The actual gain score was significantly higher, improving in the knowledge regarding cadaver donation among adults in the rural area. Thus the planned teaching was effective. No association found in knowledge score with demographic variables.

CONSENT AND ETHICAL APPROVAL

The permission was obtained from Institutional Ethical Committee Board, Datta Meghe Institute of Medical Sciences (Deemed to be University), (Ref.No. DMIMS (DU)/IEC/2018-19/7668, Date: 27.12.2018) India. The investigator approached adults under age group and prepared a sampling frame of those who met the inclusion criteria. The researcher approached participants at their home and explained the purpose of the study and how it will be beneficial for them. Investigator enquired about their willingness to participate in the study and obtained written consent from them. The participants were assured about the confidentiality of their information and its applications only for this study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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