

A Quasi-Experimental Study to Assess the Effectiveness of a Structured Awareness Programme on Knowledge and Attitude Regarding Organ Donation Among Adults in a Selected Community Area of Gurugram, Haryana

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ABSTRACT

Introduction : Organ donation is a critical public health intervention that has the potential to save thousands of lives each year. Advancements in medical science have made organ transplantation a feasible and often essential treatment for end-stage organ failure. Despite these medical advancements, the availability of organs remains far below the global and national demand. This shortfall creates a persistent gap between those requiring transplantation and the number of organs available, resulting in significant morbidity, mortality, and decreased quality of life for patients awaiting transplantation.

Material & Methods: The present study adopted a quasi-experimental, two-group pre-test post-test design to assess the effectiveness of a structured awareness programme on knowledge and Attitude regarding organ donation among adults in selected villages of Gurugram, Haryana. A total of 100 adults were selected using a non-probability purposive sampling technique. Data were collected using a self-structured questionnaire and Likert-based attitude scale to assess knowledge and Attitude levels. The study tool was validated by experts and found reliable through test-retest method. Data analysis was planned using descriptive and inferential statistics, including frequency, percentage, mean, standard deviation, chi-square test, and t-test. Ethical principles, informed consent, and confidentiality were strictly maintained throughout the study.

Result: The findings of the study revealed that in the pretest, a majority of adults had inadequate knowledge and unfavourable Attitude regarding organ donation, with 44% showing poor knowledge and 42% exhibiting negative Attitude. The mean pretest knowledge score was 11.20 ± 3.85 and the mean Attitude score was 26.40 ± 5.60 , indicating low baseline awareness and attitude. In contrast, the posttest results demonstrated a marked improvement, with 70% of participants attaining good knowledge and 70% showing positive Attitude after the structured awareness programme. The mean posttest knowledge score increased to 19.30 ± 3.10 , while the mean Attitude score rose to 39.10 ± 4.80 . The intervention was found to be highly effective, with statistically significant improvements in both knowledge and Attitude ($p < 0.001$).

Conclusion: The study concluded that the structured awareness programme on organ donation was highly effective in improving the knowledge and Attitude of adults in selected villages of Gurugram, Haryana. After the intervention, a clear shift was observed from poor to good knowledge and from negative to positive Attitude regarding organ donation. The majority of participants demonstrated good knowledge and showed positive Attitude in the posttest. There was a marked improvement in both knowledge and Attitude scores following the intervention, which was statistically highly significant. The study also found significant associations between posttest knowledge and selected demographic variables such as age, education, and access to information sources.

INTRODUCTION

Organ donation is a critical public health intervention that has the potential to save thousands of lives each year. Advancements in medical science have made organ transplantation a feasible and often essential treatment for end-stage organ failure. Despite these medical advancements, the availability of organs remains far below the global and national demand. This shortfall creates a persistent gap between those requiring transplantation and the number of organs available, resulting in significant morbidity, mortality, and decreased quality of life for patients awaiting transplantation. India, being one of the most populous countries in the world, faces a particularly alarming situation. The need for organs—especially kidneys, liver, heart, and corneas—is far greater than the number of donations that actually occur. While the country has made notable strides in improving transplantation infrastructure and establishing legal frameworks through the Transplantation of Human Organs Act

(THOA) and related amendments, public participation continues to be insufficient.

This gap between potential donors and actual donors underscores the importance of community-based awareness and educational interventions. Understanding the need for such interventions requires an analysis of epidemiological data, sociocultural barriers, psychological factors, and existing limitations in knowledge. The present study aims to assess the effectiveness of a structured awareness program on knowledge and behaviour regarding organ donation among adults in a selected community area of Gurugram—a region that presents unique demographic, social, and cultural characteristics reflective of broader trends in India.

Public trust in the healthcare system is an important determinant of organ donation behaviour. Concerns about fair

organ allocation, suspicions regarding manipulation by wealthy recipients, and fears stemming from historical cases of organ trafficking create barriers to donation. Although strict legislation has been implemented to regulate organ transplantation, many individuals remain unaware of these safeguards or continue to distrust the system. Misinformation through social media or anecdotal stories further erodes trust. By addressing transparent processes, explaining brain death criteria, and highlighting ethical safeguards, community-level education can significantly improve trust in healthcare institutions and professionals.

METHODOLOGY

The research methodology adopted to evaluate the effectiveness of a structured awareness programme on knowledge and attitude regarding organ donation among adults in selected villages of Gurugram, Haryana. A quantitative research approach with a quasi-experimental

pre-test and post-test control group design was used. The study included 100 adults selected through non-probability purposive sampling from three villages. Data were collected using a self-structured questionnaire consisting of demographic details, a knowledge questionnaire, and a five-point Likert attitude scale. The tool was validated by eight nursing experts and demonstrated high reliability (Cronbach's alpha = 0.82). Ethical approval and informed consent were obtained before data collection. A pilot study confirmed the feasibility and clarity of the research tools. The intervention consisted of a structured awareness programme delivered through lectures and PowerPoint presentations. Collected data were analysed using descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential statistics (Chi-square and t-test) to determine programme effectiveness.

RESULTS

Table 1: Frequency and Percentage Distribution of Adults According to Demographic Variables(n = 100)

S. No.	Demographic Variables	Category	Experimental Group f (%)	Control Group f (%)
1	Age (Years)	18-30	18 (36%)	16 (32%)
		31-40	12 (24%)	12 (24%)
		41-50	11 (22%)	11 (22%)
		>50	9 (18%)	11 (22%)
2	Gender	Male	19 (38%)	19 (38%)
		Female	31 (62%)	31 (62%)
3	Education Level	No Formal Education	4 (8%)	4 (8%)
		Primary	11 (22%)	10 (20%)
		Secondary	17 (34%)	16 (32%)
		Graduate	13 (26%)	15 (30%)
		Postgraduate	5 (10%)	5 (10%)
4	Occupation	Farmer/Homemaker	15 (30%)	15 (30%)
		Private Employee	20 (40%)	20 (40%)
		Govt. Employee	9 (18%)	9 (18%)
		Others	6 (12%)	6 (12%)
5	Religion	Hindu	50 (100%)	50 (100%)
		Muslim	0 (0%)	0 (0%)
		Sikh	0 (0%)	0 (0%)
		Christian	0 (0%)	0 (0%)
6	Marital Status	Single	11 (22%)	11 (22%)
		Married	33 (66%)	32 (64%)
		Widowed	4 (8%)	4 (8%)
		Divorced	2 (4%)	3 (6%)
7	Registered as Organ Donor	Yes	5 (10%)	5 (10%)
		No	45 (90%)	45 (90%)
8	Family Member Donated/Received Organ	Yes	9 (18%)	9 (18%)
		No	41 (82%)	41 (82%)
9	Access to Smartphone/Internet	Yes	41 (82%)	41 (82%)
		No	9 (18%)	9 (18%)
10	Source of Health Information	TV/Radio	14 (28%)	14 (28%)
		Social Media	18 (36%)	18 (36%)
		Healthcare Provider	12 (24%)	12 (24%)
		Friends & Family	6 (12%)	6 (12%)

Table 1 presents the frequency and percentage distribution of adults according to selected demographic variables in the experimental group (n=50) and control group (n=50).

With regard to age, the majority of participants in the experimental group 18 (36%) and control group 16 (32%) belonged to the age group of 18-30 years. Participants aged 31-

40 years constituted 12 (24%) in both groups. Those aged 41-50 years were 11 (22%) in each group, while participants above 50 years were 9 (18%) in the experimental group and 11 (22%) in the control group.

Regarding gender, most participants were females, accounting for 31 (62%) in both experimental and control groups, whereas males constituted 19 (38%) in each group.

In relation to education level, the highest proportion of participants had secondary education, comprising 17 (34%) in the experimental group and 16 (32%) in the control group. Graduates accounted for 13 (26%) and 15 (30%) respectively, while postgraduates constituted 5 (10%) in both groups.

With respect to occupation, the majority were private employees, representing 20 (40%) participants in both groups. Farmer/homemakers accounted for 15 (30%), government employees 9 (18%), and others 6 (12%) in each group.

Concerning religion, all participants belonged to the Hindu religion, representing 50 (100%) in both groups.

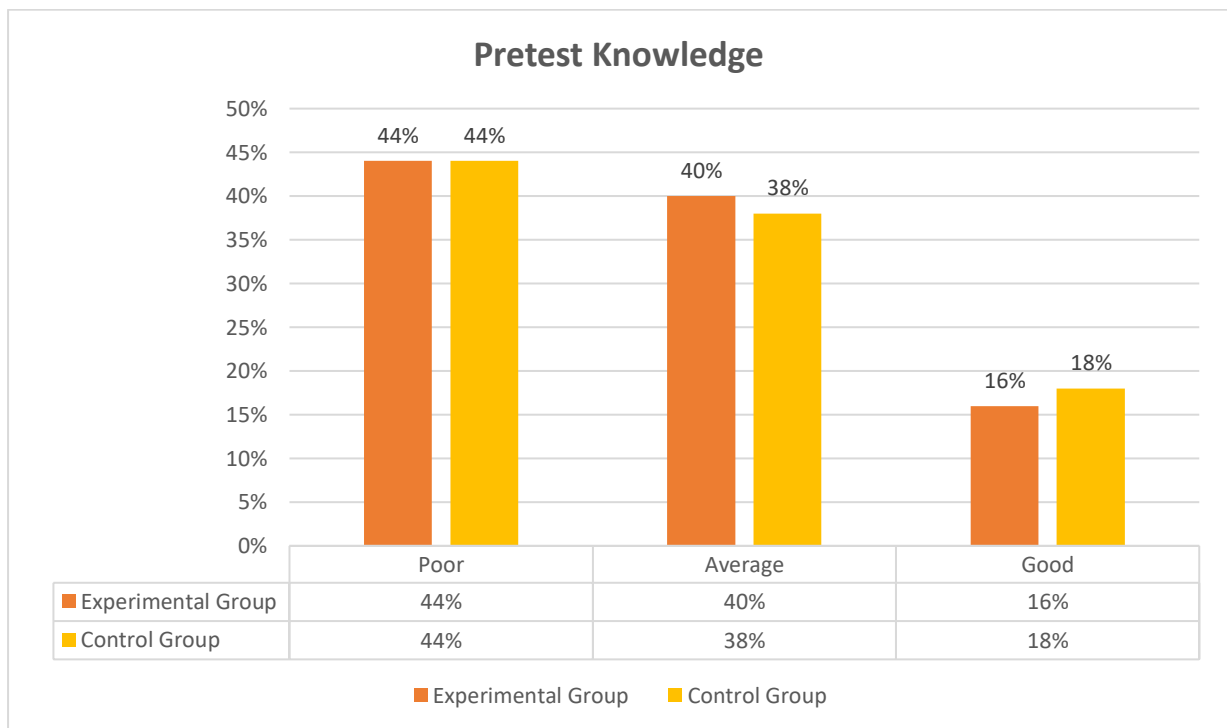
Regarding marital status, most participants were married, comprising 33 (66%) in the experimental group and 32 (64%) in the control group. Single participants accounted for 11 (22%) in both groups.

In relation to registration as organ donors, only 5 (10%) participants in each group were registered organ donors, while 45 (90%) were not registered.

Regarding family history of organ donation or transplantation, 9 (18%) participants in both groups reported that a family member had donated or received an organ, whereas 41 (82%) reported no such history.

With regard to smartphone/internet access, the majority of participants had access, accounting for 41 (82%) in both groups, while 9 (18%) did not have access.

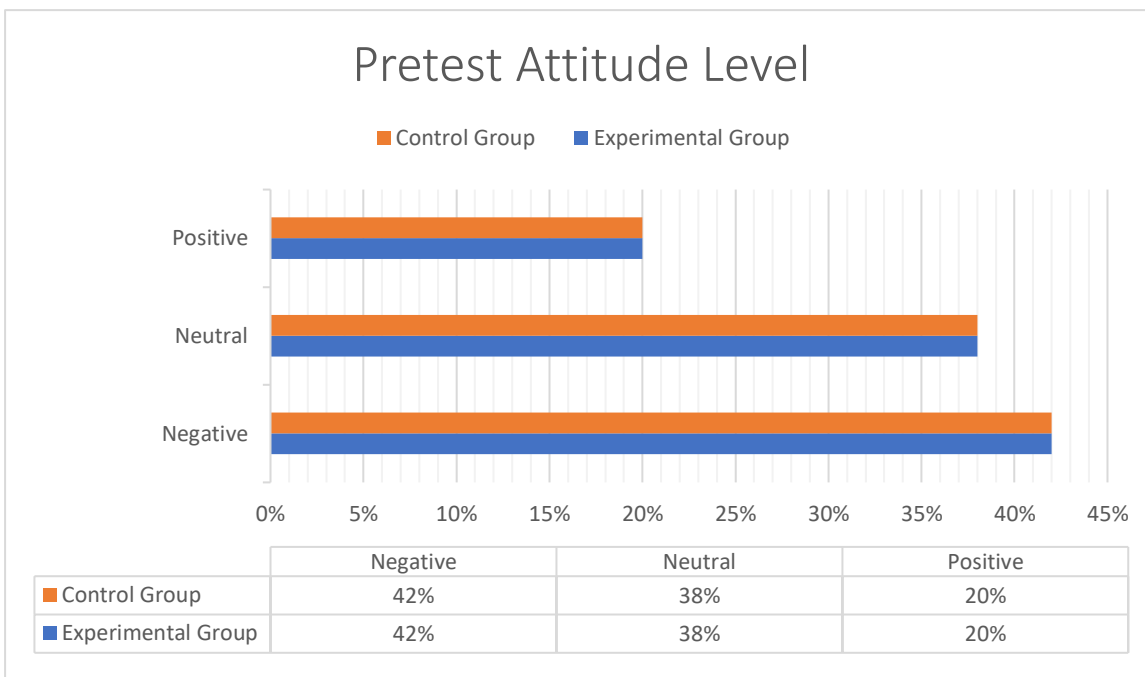
Concerning the source of health information, social media was the most common source among participants, reported by 18 (36%) in both groups, followed by TV/Radio 14 (28%), healthcare providers 12 (24%), and friends and family 6 (12%).



The pretest knowledge levels regarding organ donation among adults in the experimental and control groups before implementation of the structured awareness program.

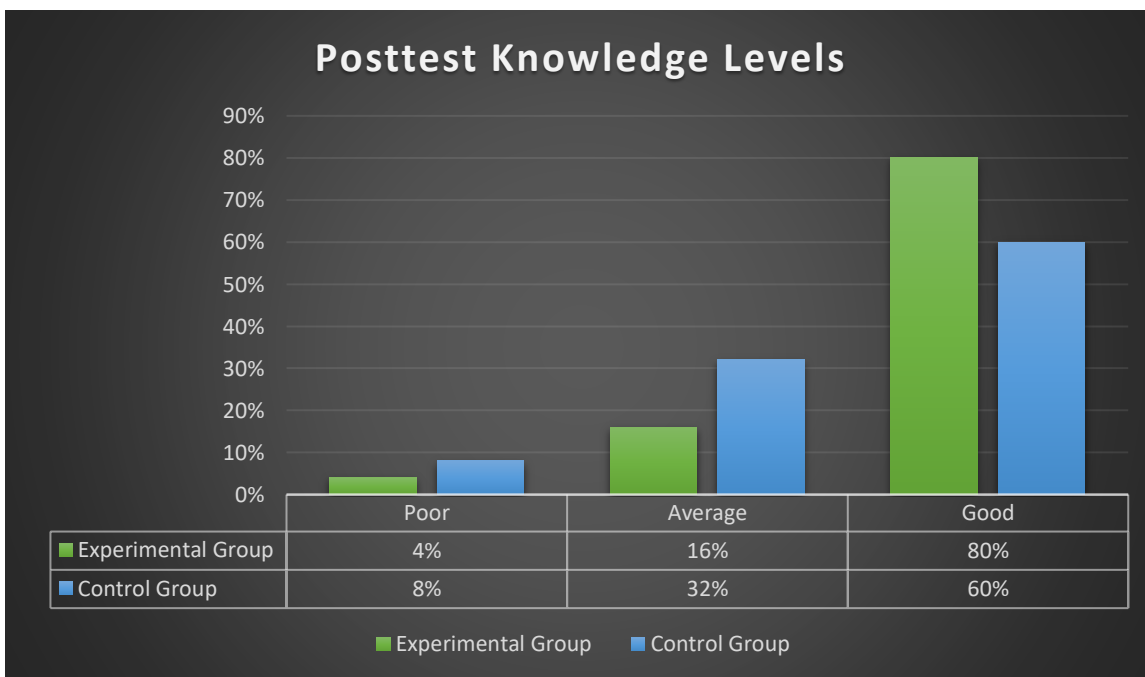
In the experimental group, 44% of participants had poor knowledge, 40% had average knowledge, and only 16%

demonstrated good knowledge regarding organ donation. Similarly, in the control group, 44% of participants had poor knowledge, 38% had average knowledge, and 18% had good knowledge.



The pretest attitude levels regarding organ donation among adults in the experimental and control groups before implementation of the structured awareness program. In the experimental group, 42% of participants exhibited negative attitude towards organ donation, 38% demonstrated

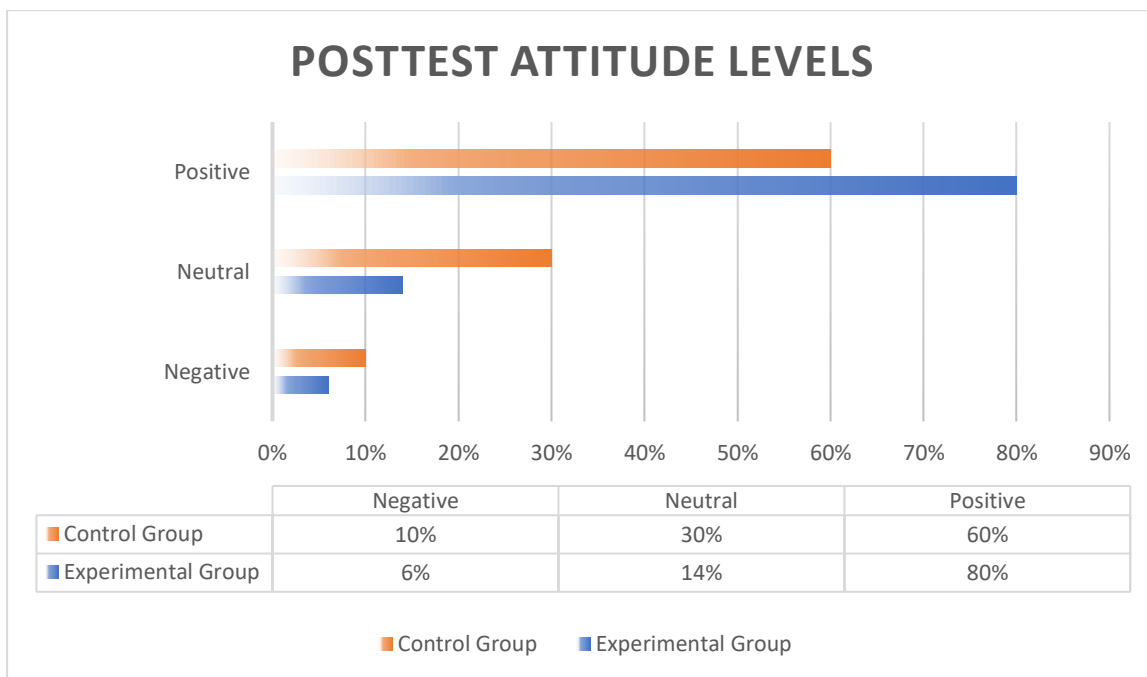
neutral attitude, and only 20% showed positive attitude. Similarly, in the control group, 42% of participants exhibited negative attitude, 38% demonstrated neutral attitude, and 20% showed positive attitude regarding organ donation.



The posttest knowledge levels regarding organ donation among adults in the experimental and control groups after implementation of the structured awareness program.

In the experimental group, only 4% of participants remained in the poor knowledge category, while 16% had average knowledge. A substantial majority of participants (80%) attained good knowledge scores, indicating a marked improvement following

the intervention. In the control group, 8% of participants had poor knowledge, 32% had average knowledge, and 60% demonstrated good knowledge.



The posttest attitude levels regarding organ donation among adults in the experimental and control groups after implementation of the structured awareness program. In the experimental group, only 6% of participants exhibited negative attitude, while 14% demonstrated neutral attitude. A

substantial majority of participants (80%) showed positive attitude towards organ donation after receiving the structured awareness program. In the control group, 10% of participants exhibited negative attitude, 30% demonstrated neutral attitude, and 60% showed positive attitude regarding organ donation.

Effectiveness of Structured Awareness Program on Knowledge and Attitude Regarding Organ Donation Among Adults

Variable	Group	Mean	SD	Mean Difference	t-value	p-value	Significance
Knowledge	Experimental Group	20.80	2.90	3.00	4.96	<0.001	S*
	Control Group	17.80	3.20				
Attitude	Experimental Group	41.20	4.10	5.80	6.43	<0.001	S*
	Control Group	35.40	4.90				

*Significant at p < 0.05 level

The effectiveness of the structured awareness program on knowledge and attitude regarding organ donation among adults by comparing the posttest mean scores of the experimental and control groups.

With regard to knowledge, the mean posttest knowledge score of the experimental group was 20.80 ± 2.90, whereas the mean posttest knowledge score of the control group was 17.80 ± 3.20. The mean difference between the two groups was 3.00. The calculated t-value was 4.96, which was statistically significant at p < 0.001.

Similarly, with regard to Attitude, the mean posttest attitude score of the experimental group was 41.20 ± 4.10, whereas the mean posttest attitude score of the control group was 35.40 ± 4.90. The mean difference was 5.80. The calculated t-value was 6.43, which was also statistically significant at p < 0.001.

DISCUSSION t-values for both knowledge and attitude were statistically significant, indicating that the structured awareness program effectively improved knowledge and attitude regarding organ donation among adults in the experimental group compared to the control group.

An essential component of any research study is the discussion of findings, as it enables the interpretation of results in relation to the study objectives and existing literature. The present study was undertaken to evaluate the effectiveness of a structured awareness programme on knowledge and attitude regarding organ donation among adults in a selected community area of Gurugram.

With regard to Objective 1, the pretest findings revealed that the majority of participants in both the experimental and control groups had poor to average knowledge regarding organ donation, while only a small proportion possessed good knowledge. Similarly, most participants demonstrated negative or neutral attitudes toward organ donation, with only one-fifth exhibiting a positive attitude. These findings indicate that adults had limited awareness and several misconceptions regarding organ donation before the intervention. The findings are in agreement with the studies conducted by Agarwal et al. and Mani and Thomas, who reported inadequate knowledge and unfavourable attitudes among community adults before educational interventions, highlighting the need for awareness programmes.

Regarding Objective 2, the posttest findings showed a remarkable improvement in both knowledge and attitude among participants in the experimental group. A large majority of participants demonstrated good knowledge and positive attitudes after receiving the structured awareness programme, whereas only minimal improvement was observed in the control group. These findings suggest that educational interventions are effective in enhancing awareness, correcting misconceptions, and promoting favourable attitudes toward organ donation. Similar findings were reported by Kumar et al. and Sharma and Gupta, who concluded that structured educational programmes significantly improved participants' knowledge and attitudes regarding organ donation.

With respect to Objective 3, the effectiveness of the structured awareness programme was confirmed through statistically significant improvements in posttest knowledge and attitude scores among the experimental group. The experimental group achieved significantly higher mean knowledge and attitude scores than the control group, with highly significant *t*-values ($p < 0.001$). These findings clearly demonstrate that the structured awareness programme was successful in increasing participants' understanding and acceptance of organ donation. The results are consistent with the findings of Bapat et al. and Kaur et al., who also reported that structured educational interventions significantly enhanced knowledge and fostered positive attitudes toward organ donation.

Concerning Objective 4, the study identified significant associations between posttest knowledge and attitude scores and selected demographic variables such as age, educational status, smartphone/internet access, and source of health information in the experimental group. However, gender, occupation, marital status, previous organ donor registration, and family history of organ donation showed no significant association. In the control group, none of the demographic variables demonstrated significant associations with posttest knowledge or attitude. These findings are supported by Gupta et al. and Radhakrishnan et al., who reported that educational level and access to health information significantly influence awareness and attitudes toward organ donation.

CONCLUSION

The present study concludes that the structured awareness programme was effective in improving knowledge and attitude regarding organ donation among adults in the selected community area of Gurugram. The findings demonstrated that participants in the experimental group showed considerably higher levels of knowledge and more positive attitude towards organ donation following the intervention when compared with the control group. In the posttest, the majority of participants

in the experimental group exhibited good knowledge and positive Attitude, indicating the effectiveness of the educational programme. The study further revealed that age, educational status, smartphone/internet access, and source of health information had a significant association with posttest knowledge and Attitude scores among participants in the experimental group. However, gender, occupation, marital status, registration as an organ donor, and family history of organ donation or transplantation did not show any significant association with the study outcomes. In the control group, none of the selected demographic variables demonstrated a significant association with posttest knowledge or Attitude. Therefore, the study concludes that a structured awareness programme is an effective educational strategy for enhancing knowledge and fostering positive Attitude regarding organ donation among adults. Community-based awareness programmes can play a vital role in dispelling misconceptions, increasing awareness, and promoting acceptance of organ donation, thereby contributing to improved organ donation practices in society.

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