

# Assessing the Effectiveness of an Educational Intervention on Organ Donation Awareness Among Undergraduate Students

Ashly T. John\*

## Abstract

*Organ donation continues to be critically low in India despite a growing demand for transplantable organs. Limited awareness, misconceptions, and negative perceptions contribute significantly to this gap. This study was conducted to evaluate the impact of an informational booklet on enhancing knowledge and shaping perceptions about organ donation among undergraduate students. A pre-experimental design with a one-group pretest–posttest approach was used, including 60 students selected through convenience sampling. Initially, participants' baseline knowledge and perceptions were assessed using a structured questionnaire. Following this, an educational booklet on organ donation was provided as an intervention. A post-intervention assessment was then carried out to measure any changes. The results demonstrated a notable increase in knowledge levels, with mean scores rising from 50.39% before the intervention to 68.11% afterward. This improvement was found to be statistically significant ( $t = 7.85$ ,  $p < 0.05$ ), indicating the effectiveness of the booklet. Furthermore, a strong positive correlation ( $r = 0.83$ ) was identified between knowledge and perception, suggesting that as students' understanding improved, their attitudes toward organ donation became more positive. In conclusion, the informational booklet proved to be an effective educational tool for enhancing both awareness and perception regarding organ donation among undergraduate students. Such structured educational strategies can significantly contribute to increasing awareness, encouraging positive attitudes, and potentially improving organ donation rates in the community.*

**Keywords:** Organ donation, knowledge, perception, information booklet, undergraduate students

## INTRODUCTION

Organ donation is a legally regulated process that involves the retrieval of human organs or tissues for transplantation into individuals suffering from end-stage organ failure. It is a vital medical procedure that not only saves lives but also greatly enhances the overall well-being of those who receive it. However, despite advancements in medical science and the presence of legal frameworks supporting organ donation, India continues to face a substantial shortage of donors. This disparity between demand and availability is influenced by multiple factors, including a lack of awareness, cultural beliefs, misconceptions, and inadequate dissemination of accurate information [1].

### \*Author for Correspondence

Ashly T. John  
E-mail: [ashlyt.john@gmail.com](mailto:ashlyt.john@gmail.com)

Lecturer, Department of Nursing, T.M.M College of Nursing,  
Thiruvalla, Kerala, India

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Young adults, particularly undergraduate students, represent a crucial segment of the population in organ donation awareness initiatives. As educated and socially active individuals, they have the potential to adopt positive attitudes and influence their families and communities. Therefore, targeting this group through structured educational interventions can be an effective strategy to bridge the knowledge gap and foster favorable perceptions toward organ donation [2].

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## MATERIALS AND METHODS

A quantitative research method was used to determine the impact of an educational intervention on organ donation. This study followed a pre-experimental, one-group pretest–post-test design, enabling the comparison of participants' knowledge and perceptions before and after the intervention. This approach is especially suitable for evaluating the immediate effects of educational programs when the inclusion of a control group is impractical. The research was conducted among 60 undergraduate students selected through convenience sampling. Participants were included based on their availability and willingness to participate, which ensured that the study could be completed within the available time. Clear inclusion criteria were established to confirm that the participants were capable of understanding the educational content and providing appropriate responses to the assessment instruments.

Data were collected using a structured questionnaire and perception scale. The questionnaire consisted of 17 items designed to assess participants' knowledge of various aspects of organ donation, such as eligibility, legal considerations, types of organ donation, and common myths. Each correct response contributed to the overall knowledge score, providing a quantitative measure of the understanding [3].

In addition to knowledge evaluation, participants' perceptions were measured using a five-point Likert scale. This scale includes statements related to attitudes, beliefs, and willingness to donate organs, with response options ranging from strongly disagree to strongly agree. The perception scale enabled the researcher to capture subjective viewpoints and measure attitudinal changes following the intervention [4].

The intervention consisted of an information booklet specifically designed to provide clear, concise, and evidence-based information on organ donation. The booklet covered key topics such as the importance of organ donation, procedures involved, legal guidelines in India, myths and misconceptions, and the societal impact of donations. Care was taken to ensure that the language was simple and easily understandable, making it accessible to undergraduates from diverse academic backgrounds.

The procedure involved administering a pretest to assess baseline knowledge and perception levels. Following this, an information booklet was distributed to all participants, allowing them sufficient time to read and understand the content. Following a fixed interval, a posttest was administered using the same instruments to assess any changes in participants' knowledge and perceptions. The collected data were analyzed using descriptive and inferential statistical techniques. Descriptive measures, including frequency, percentage, mean, and standard deviation, were used to present demographic details and baseline results. Inferential statistics were employed to evaluate the effectiveness of the intervention. A paired t-test was used to compare pretest and posttest knowledge scores and determine the significance of the observed differences. The chi-square test was conducted to identify any associations between selected demographic variables and knowledge or perception levels.

Pearson's correlation analysis was used to examine the relationship between the knowledge and perception scores. Ethical principles were strictly adhered to throughout the research process. Participants were informed about the study's objectives, and informed consent was obtained prior to data collection. Privacy and confidentiality were ensured, and the participants were reassured that their responses would be used exclusively for research purposes. This methodological approach provided a structured and dependable way to evaluate the effectiveness of the informational booklet in improving knowledge and influencing perceptions related to organ donation among undergraduate students [5–7].

## RESULTS

The analysis of pretest and posttest findings demonstrated a marked improvement in the knowledge levels of undergraduate students following the educational intervention. The mean pretest knowledge score was 50.39%, indicating a moderate level of baseline awareness of organ donation.

**Table 1.** Comparison of pretest and posttest knowledge scores (N = 60).

Variable	Mean score (%)	Enhancement (%)
Pretest knowledge	50.39	—
Posttest knowledge	68.11	17.72

**Table 2.** Distribution of perception levels regarding organ donation (n = 60).

Perception level	Frequency (%)
Positive	43%
Neutral	55%
Negative	2%

After the information booklet was administered, the mean posttest score increased to 68.11%, reflecting a substantial gain in knowledge. The overall enhancement in knowledge was 17.72%, suggesting that the intervention was effective in improving participants' understanding.

In addition to knowledge, perceptions of organ donation were also assessed. The findings revealed that 43% of the participants exhibited a positive perception, while the majority (55%) maintained a neutral stance. Only 2% of the participants demonstrated a negative perception. These results indicate that, although a considerable proportion of students developed favorable attitudes, there remains a need to further strengthen positive perceptions through sustained educational efforts.

Furthermore, an analysis of the association between selected demographic variables and knowledge and perception levels was conducted. A statistically significant association was found between the number of family members and participants' knowledge and perception of organ donation ( $\chi^2 = 24.8$ ,  $p < 0.05$ ). This suggests that the family environment and interpersonal interactions may influence awareness of and attitudes toward organ donation.

The detailed distribution of pretest and posttest knowledge scores is presented in Table 1.

As shown in Table 1, there was a clear increase in the mean knowledge score following the intervention, indicating the effectiveness of the information booklet.

The distribution of perception levels among participants is illustrated in Table 2.

Table 2 highlights that most participants held a neutral perception, while a significant proportion demonstrated a positive outlook toward organ donation.

## DISCUSSION

The findings of the present study clearly indicate that structured educational interventions, such as information booklets, play a vital role in enhancing knowledge and shaping perceptions of organ donation among undergraduate students. The notable increase in knowledge scores from pretest to posttest reflected the effectiveness of providing organized and accessible information. This improvement can be attributed to the clarity, relevance, and comprehensiveness of the booklet's content. [8].

Perception analysis further supports the intervention's positive impact. Although a large proportion of participants remained neutral, the percentage of individuals with positive perceptions was encouraging. This suggests that while knowledge can be improved relatively quickly through educational materials, changing attitudes and beliefs may require more sustained and multifaceted interventions, such as discussions, campaigns, and peer influence [9–11].

The significant association found between the number of family members and knowledge/perception levels highlights the influence of the social and familial context. Individuals from larger families may

have more opportunities for discussion and exposure to diverse viewpoints, contributing to a better understanding and acceptance of organ donation.

These findings are consistent with previous studies that emphasize the importance of awareness programmes in improving knowledge and fostering positive attitudes toward organ donation. Educational interventions have been widely recognized as effective tools for addressing misconceptions and encouraging informed decision-making [12, 13].

## CONCLUSION

The study concluded that the information booklet was an effective educational tool in significantly improving knowledge and positively influencing perceptions of organ donation among undergraduate students. The observed enhancement in knowledge and shift toward more favorable perceptions underscore the importance of incorporating structured awareness programs in educational settings.

However, the persistence of neutral perceptions among most participants indicates the need for continuous and more interactive educational strategies. Integrating seminars, workshops, and peer-led discussions with informational materials may further strengthen positive attitudes and encourage proactive participation in organ donation initiatives.

## Recommendations

- Include organ donation education in the undergraduate curriculum.
- Conduct regular awareness programmes.
- Undertake larger randomized studies.

## Limitations

- Small sample size
- Non-probability sampling
- Short follow-up duration

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