



KNOWLEDGE, ATTITUDES, AND ASSOCIATED FACTORS REGARDING ORGAN DONATION AMONG COLLEGE STUDENTS IN AIZAWL, MIZORAM

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ABSTRACT

Organ donation is a life-saving medical process that gives patients with end-stage organ failure hope, a worldwide organ shortage remains a serious public health issue. Inadequate knowledge and negative attitudes toward organ donation are the primary causes of India's poor organ donation rates. The current study was carried out to evaluate college students' attitudes and understanding about organ donation in Aizawl, Mizoram, and to ascertain the relationship between these factors and certain sociodemographic characteristics. Convenience sampling was used to choose 20 undergraduate students from Government Hrangbana College in Aizawl for the quantitative descriptive study design. A 5-point Likert scale for attitude and a self-structured questionnaire for knowledge and sociodemographic factors were used to gather data. The tools were found to be very reliable (knowledge = 0.993; attitude = 0.998). As per the results, 30% of students had intermediate understanding about organ donation and 70% had adequate knowledge. Nonetheless, none of the pupils displayed a good attitude, whereas 75% had a negative attitude and 25% had a neutral attitude. Knowledge and attitude did not statistically significantly correlate ($p = 1.00$). Although attitude did not substantially relate with certain sociodemographic characteristics, knowledge was strongly correlated with gender ($p = 0.042$) and semester of study ($p = 0.009$). The study comes to the conclusion that, despite having sufficient information about organ donation, students' opinions were largely unfavourable, suggesting a disconnect between knowledge and attitude. This emphasises the necessity of targeted education and awareness campaigns to change people's perceptions on organ donation.

Keywords: Organ donation, knowledge, attitude, college students, awareness, Mizoram.

INTRODUCTION

Organ donation is the voluntary act of donating organs or tissues for transplantation to replace damaged or failing organs, providing a life-saving treatment option for patients with end-stage organ failure. Advances in surgical techniques, immunosuppressive therapy, and transplant medicine have significantly improved transplantation outcomes and survival rates worldwide ^[1]. However, the demand for transplantable organs continues to exceed their availability, resulting in a persistent global shortage of donor organs ^[2].

In India, organ donation and transplantation are regulated under the Transplantation of Human Organs and Tissues Act (THOTA), 1994, which aims to promote ethical organ donation and prevent organ trafficking^[3]. Despite various national and state-level initiatives to increase organ donation awareness, the country's organ donation rate remains low compared with many developed nations^[4]. Insufficient knowledge, misconceptions regarding brain death, cultural and religious beliefs, and concerns about organ misuse have been identified as major barriers to organ donation^[5].

Knowledge and attitude are key determinants influencing an individual's willingness to donate organs. Previous studies have shown that greater awareness is associated with more positive attitudes toward organ donation and increased willingness to become donors^[6]. College students constitute an important target group for awareness programs because they can influence community perceptions and future donation practices. Although Mizoram has a high literacy rate and strong community participation, limited evidence exists regarding college students' knowledge and attitudes toward organ donation. Therefore, this study aimed to assess the knowledge and attitudes of college students in Aizawl, Mizoram, regarding organ donation and to identify areas requiring educational intervention.

OBJECTIVES OF THE STUDY

1. To assess Aizawl, Mizoram, college students' understanding about organ donation.
2. To find out what college students in Aizawl, Mizoram, think about organ donation.
3. To evaluate the relationship between Aizawl, Mizoram college students' knowledge and attitudes about organ donation.
4. To investigate the relationship between certain sociodemographic characteristics and students' understanding of organ donation.
5. To determine the relationship between certain sociodemographic characteristics and students' opinions toward organ donation

MATERIAL AND METHODS:

A quantitative descriptive research design was adopted to assess the knowledge and attitudes regarding organ donation among college students in Aizawl, Mizoram. The study was conducted at Government Hrangbana College, Aizawl. The study population comprised undergraduate college students, and a sample of 20 participants was selected using a convenience sampling technique.

Data were collected using a structured instrument consisting of three sections: a socio-demographic questionnaire, a self-structured knowledge questionnaire on organ donation, and a 5-point Likert scale to assess attitudes toward organ donation. The reliability of the instruments was established using Cronbach's alpha, yielding coefficients of 0.993 for the knowledge questionnaire and 0.998 for the attitude scale.

Prior to data collection, permission was obtained from the concerned college authorities. Participants were informed about the purpose of the study, and informed consent was obtained. Confidentiality and anonymity of the participants were ensured throughout the study. The questionnaires were administered to the participants, and each respondent required approximately 20–30 minutes to complete the survey.

The collected data were coded, tabulated, and analyzed using descriptive and inferential statistics. Frequencies and percentages were used to describe the socio-demographic characteristics, knowledge, and attitude levels of the participants. The association between knowledge, attitude, and selected socio-demographic variables was analyzed using appropriate statistical tests. A p-value of <0.05 was considered statistically significant.

RESULT AND DISCUSSION

Table 1: Frequency and Percentage Distribution of College Students According to Age, Gender, Semester, Religion, Family Type, and Residence
n=20

Sociodemographic Characteristic	Frequency (f)	Percentage (%)
Age		
18-20	11	55
21-22	6	30
23-24	3	15
Gender		
Male	12	60
Female	8	40
Semester		
2 nd Sem	7	35
4 th Sem	7	35
6 th Sem	6	30
Religion		
Christianity	20	100
Family Type		
Nuclear	4	20
Joint	6	30
Single Parent	10	50
Residence		
Rural	6	30
Urban	14	70

The participants' sociodemographic profile is shown in Table 1. The majority were male (60%) and between the ages of 18 and 20 (55%), distributed pretty evenly over the semesters. Every participant claimed to be a Christian. The majority of participants (70%) lived in cities, and half (50%) came from single-parent households. In general, young, male, urban students from a variety of familial origins made up the majority of the sample.

Figure 1: Distribution of level of knowledge regarding organ donation among college students under study
n=20

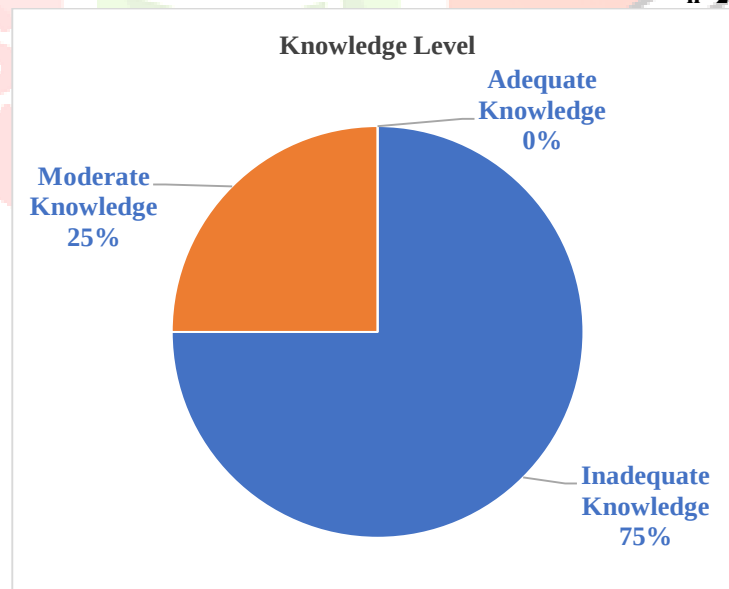


Figure 1, demonstrates that the majority of participants (75%) had a sufficient comprehension of organ donation, suggesting that public awareness and knowledge of this subject are comparatively high. None of the participants were categorised as having insufficient knowledge, but a lower percentage (25%) showed moderate knowledge. This implies that most people may have been taught about organ donation through educational efforts or information.

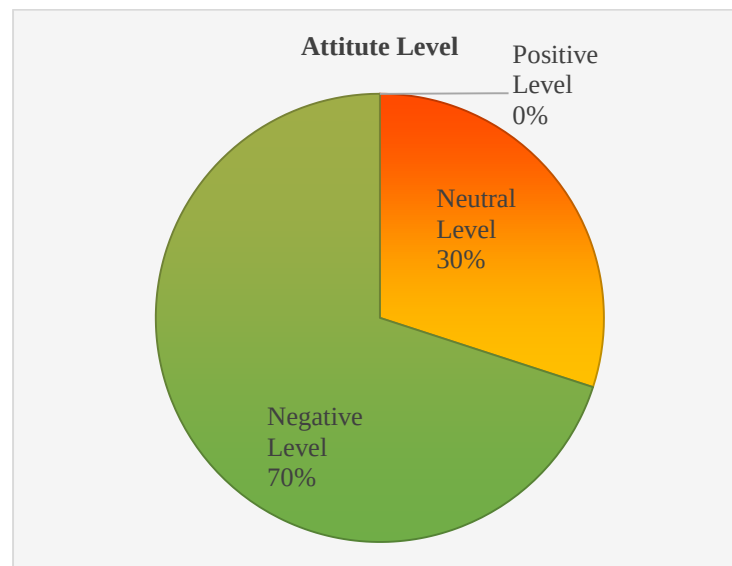
Figure 2: Distribution of level of attitude regarding organ donation among college students under study**n=20**

Figure 2, shows that the majority of participants (70%) had a negative opinion regarding organ donation, whereas 30% had a neutral view, despite the high level of information. There was not a single individual who had a pleasant attitude. This is a glaring disconnect between attitude and information, implying that awareness of organ donation facts does not always translate into acceptance or readiness to donate. The necessity for treatments that emphasise attitude modification in addition to knowledge transmission is highlighted by the possibility that cultural ideas, personal anxieties, or misconceptions might be major obstacles.

Table 2: Association between knowledge and attitude about organ donation**n=20**

Knowledge		Attitude			Total	Fishers Exact Test
		Negative	Neutral	Positive		
Average	Count	5	1	0	6	1.00
	% within Knowledge	83.3%	16.7%	0	100.0%	
Good	Count	10	4	0	14	
	% within Knowledge	71.4%	28.6%	0	100.0%	
Total	Count	15	5	0	20	
	% within Knowledge	75.0%	25.0%	0	100.0%	

Table 2 shows the relationship between college students' attitudes and knowledge about organ donation in Aizawl, Mizoram. There is no statistically significant correlation between knowledge level and attitude, according to the Fisher's Exact Test, which yields a result of $p = 1.00$ ($p > 0.05$). Additionally, the chart demonstrates that individuals with both average and strong expertise primarily displayed neutral and negative sentiments; no positive attitudes were noted. This suggests that having more knowledge does not always translate into having a more favourable opinion about organ donation. As a result, as Table 4 illustrates, knowledge and attitude seem to operate as separate factors, and a person's degree of knowledge has little impact on how they feel about organ donation.

Table 3: Association Between Knowledge Toward Organ Donation and Selected Socio-Demographic Variables Among Undergraduate Students**n=20**

Sociodemographic Variables	Knowledge			Fishers exact test (p-value)
	Poor (%)	Average (%)	Good (%)	
Age				
18-20	0	3 (50%)	8 (57.1%)	0.357
21-22	0	1 (16.7%)	5 (35.7%)	
23-24	0	2(33.3%)	1 (7.1%)	
Gender				
Male	0	6 (100%)	6 (42.9%)	0.042*
Female	0	0 (0.0%)	8(57.1%)	
Semester				
2 nd Sem	0	0 (0.0%)	7 (50.0%)	0.009**
4 th Sem	0	5 (83.3%)	2 (14.3%)	
6 th Sem	0	1 (16.7%)	5 (35.7%)	
Religion				
Christianity	-	-	-	-
Family				
Nuclear	0	2 (33.3%)	2 (14.3%)	0.206
Joint	0	1 (16.7%)	5 (35.7%)	
Single Parent	0	3 (50.0%)	7 (50.0%)	
Residence				
Rural	0	2 (33.3%)	4 (28.6%)	0.387
Urban	0	4 (66.7%)	10 (71.4%)	

*p<0.05, **p<0.01

The relationship between students' understanding of organ donation and particular sociodemographic factors is shown in Table 3. Knowledge is substantially correlated with gender ($p = 0.042$, < 0.05) and semester ($p = 0.009$, < 0.05), according to the research, suggesting that female students and those in higher semesters often possess greater organ donation knowledge. However, there was no statistically significant correlation between knowledge and residency ($p = 0.387$, > 0.05), family type ($p = 0.206$, > 0.05), or age ($p = 0.357$, > 0.05). Religion was excluded from the study since every participant was a Christian. Thus, as Table 5 illustrates, the results partially corroborate H_2 , indicating that knowledge about organ donation is highly influenced by gender and academic level, but other sociodemographic factors are unrelated to knowledge.

Table 4: Association Between Attitudes Toward Organ Donation and Selected Socio-Demographic Variables Among College Students

n=20

Sociodemographic Variables	Attitude			Fishers exact test (p-value)
	Positive Attitude%	Neutral (%)	Negative (%)	
Age				
18-20	0	3 (60.0%)	8 (53.3%)	0.120
21-22	0	0 (0.0%)	6 (40.0%)	
23-24	0	2(40.0%)	1(6.7%)	
Gender				
Male	0	3 (60.0%)	9 (60.0%)	1.00
Female	0	2 (40.0%)	6(40.0%)	
Semester				
2 nd Sem	0	2 (40.0%)	5 (33.3%)	0.292
4 th Sem	0	3 (60.0%)	4 (26.7%)	
6 th Sem	0	0 (0.0%)	6 (40.0%)	
Religion				
Christianity	0	-	-	-
Family				
Nuclear	0	0 0.0%	4 26.7%	0.070
Joint	0	0 0.0%	6 40.0%	
Single Parent	0	5 100.0%	5 33.3%	
Residence				
Rural	0	2 40.0%	4 26.7%	0.613
Urban	0	3 60.0%	11 73.3%	

The relationship between several sociodemographic factors and students' opinions toward organ donation is shown in Table 4. Age ($p = 0.120, > 0.05$), gender ($p = 1.00, > 0.05$), semester ($p = 0.292, > 0.05$), family type ($p = 0.070, > 0.05$), and residence ($p = 0.613, > 0.05$) all show no statistically significant correlation with attitude, according to the study. Since every participant was a Christian, the analysis did not take religion into account.

Therefore, as Table 6 illustrates, the results reveal that the chosen sociodemographic factors had little impact on students' opinions toward organ donation. Consequently, there is no support for hypothesis H₃.

DISCUSSION

The present study was conducted to assess the knowledge and attitude regarding organ donation among college students in Aizawl, Mizoram. The findings are discussed and compared with relevant literature. In the present study, 70% of students had adequate knowledge regarding organ donation, 30% had moderate knowledge, and none had inadequate knowledge. This finding is supported by the study conducted by Shrivastav et al., which reported that most students were aware of organ donation, although detailed knowledge, especially regarding brain death, was limited.^[6] Similarly, Tuncer and Gurses found that students had a good level of knowledge about organ donation and brain death concepts.^[7] Videira et al. also reported moderate to good awareness regarding organ donation among participants, although detailed understanding was limited.^[8] These findings indicate that while general awareness is good among students, specific knowledge about organ donation remains insufficient in some areas.

In the present study, the majority of students (75%) had a negative attitude toward organ donation, 25% had a neutral attitude, and none had a positive attitude. This finding is contrary to the studies conducted by Tuncer and Gurses, who reported generally positive attitudes among students toward organ donation.^[7] Similarly, Alwahaibi and Al Wahaibi found that many university students showed favorable attitudes toward organ donation, although some misconceptions still existed.^[10] Bas-Sarmiento et al. also reported

that structured educational interventions significantly improved students' attitudes toward organ donation.^[9] The difference in findings may be due to cultural beliefs, fear of organ misuse, lack of awareness campaigns, and limited exposure to structured educational programmes on organ donation among students in Aizawl.

The present study also found that there was no statistically significant association between knowledge and attitude regarding organ donation ($p = 1.00$). This finding suggests that higher knowledge does not necessarily lead to a positive attitude. Similar observations were reported by Videira et al., who found that despite good awareness, actual willingness to donate organs was low among participants.^[8] This indicates that attitude toward organ donation is influenced not only by knowledge but also by emotional, cultural, and social factors.

In the present study, knowledge was significantly associated with gender ($p = 0.042$) and semester of study ($p = 0.009$). This indicates that female students and students in higher semesters had better knowledge regarding organ donation. This finding may be due to increased exposure to health-related subjects and academic maturity in senior students. Similar findings were reported by Shrivastav et al., who observed that higher educational exposure improves awareness and knowledge regarding organ donation.^[6]

However, no significant association was found between attitude and selected sociodemographic variables such as age, gender, semester, family type, and residence. This suggests that attitude toward organ donation is not strongly influenced by demographic factors but may depend more on personal beliefs, cultural influences, and misconceptions. Similar findings were reported by Alwahaibi and Al Wahaibi, who observed that attitudes were influenced more by awareness and misconceptions than demographic characteristics.^[10]

Overall, the findings of the present study indicate that although students possess adequate knowledge regarding organ donation, their attitudes remain predominantly negative. This demonstrates a clear gap between knowledge and attitude. Therefore, knowledge alone is not sufficient to promote organ donation. The findings highlight the need for targeted educational interventions, awareness programmes, and interactive discussions addressing fears, misconceptions, and cultural concerns regarding organ donation among college students in Aizawl, Mizoram, as emphasized by Bas-Sarmiento et al.^[9] and Alwahaibi and Al Wahaibi.^[10]

IMPLICATION

The findings of the study have several implications for nursing practices, nursing education, nursing administration and nursing research.

RECOMMENDATION

- The study's results can be validated and generalised by replicating it on a big sample.
- The research may be conducted in a variety of locations, particularly urban and rural ones.
- Research can be carried out to evaluate the efficacy of an informational pamphlet on students' attitudes and understanding about organ donation.
- To examine the attitudes and understanding of various student groups on organ donation, comparative studies

CONCLUSION:

The study revealed that college students in Aizawl, Mizoram, possess adequate knowledge about organ donation, especially regarding its definition, eligibility, and legal requirements. However, understanding of technical aspects, such as organ viability, number of lives saved, and special donor eligibility, was limited. Despite high knowledge, most students held negative or neutral attitudes, highlighting a gap between awareness and willingness to participate. Knowledge was significantly higher among females and senior students, while attitudes were independent of socio-demographic factors. These findings underscore the need for targeted educational interventions to address misconceptions and foster more positive attitudes toward organ donation.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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