

**ORIGINAL RESEARCH ARTICLE****KNOWLEDGE AND ATTITUDE OF NURSING STUDENTS REGARDING ORGAN TRANSPLANTATION**S Karki<sup>1</sup>, S Thapa<sup>1\*</sup>, S Poudyal<sup>1</sup><sup>1</sup> College of Nursing, Chitwan Medical College, Nepal

\*Correspondence to: Ms. Sara Thapa, Lecturer, College of Nursing, Chitwan Medical College, Affiliated to Tribhuvan University, Nepal.

Email: [sarathapamagar@gmail.com](mailto:sarathapamagar@gmail.com)**ABSTRACT**

Organ transplantation is the standard therapy of several end-stage diseases. Organ donation is the major component for transplant programs; however, the rate of organ donation is relatively low in Asia. In Nepal an estimated 2.8 million people have some sort of kidney ailments, while 3,000 kidney failures are reported every year. Therefore, the current study aims to identify the attitude and knowledge regarding organ transplantation. Descriptive research design was conducted using self administered questionnaire and five points Likert scale to collect information among the nursing students. The study was carried out among B.Sc. Nursing and BNS first year students at College of Nursing of Chitwan Medical College. Proportional stratified random sampling method was used to select the study sample i.e. 50 students (23 B.Sc. Nursing and 27 BN Nursing 1st year students). The data was edited, coded and analyzed using the Statistical Package of Social Sciences (SPSS) program version 17. A total of 50 nursing students, 54% were BN 1st year students and 46% were B.Sc. Nursing 1st year students. The mean age of the students was  $21.98 \pm 3.384$  years. The mean score obtained by students on introduction of organ transplantation was  $8.54 \pm 2.39$ , knowledge regarding eye transplantation was  $2.72 \pm 1.17$  and knowledge regarding kidney transplantation was  $3.58 \pm 1.44$ . Majority (82%) of respondents had medium level of knowledge and 94% of them had positive attitude regarding organ transplantation. This study illustrated that students had positive attitude towards organ transplantation however, low knowledge regarding organ transplantation was noted in the current study. ; so educational activities should be provided for the improvement of knowledge among nursing students.

**Key words:** Attitude, Knowledge, Organ transplantation.**DOI:** <http://dx.doi.org/10.3126/jcmc.v5i3.16528>**INTRODUCTION**

Transplanting solid organs has been considered a promising option only a few decades ago. Advances in understanding the immunologic pathways and improvements in surgical techniques have transformed the hopes for success into realities. Today, transplanting solid organs is a common therapeutic strategy for patients with end-stage organ failure with promising effects for survival and quality of life. One of the most problematic issues surrounding the transplantation process is organ donation and allocation <sup>1</sup>. According to National Health Service (NHS), Organ transplantation is an operation moving an organ from one person (the donor) to another (the recipient). The person receive organs for transplantation involves the removal of organs from the bodies of deceased

persons.<sup>2</sup> Organs for donation are received from both living donors as well as cadavers. In South-East Asia, and Pakistan, however, almost all organ donations come from living donors.<sup>3</sup>

Organ donation is the major issue for transplant programs; however, the rate of organ donation is relatively low in Asia.<sup>4</sup> According to the estimates of a prominent kidney transplants centre of Pakistan, Sindh Institute of Urology and Transplantation (SIUT), among 160 million people approximately 15,000 patients in Pakistan suffer from kidney failure every year.<sup>5</sup>

In Nepal, an estimated figure shows that about 3000 people develop kidney failure every year where as an incidence of liver failure is 1,000 every year. Similarly the estimated diabetic population who might be benefited from pancreas transplantation in Nepal is 30% of the diabetics<sup>6</sup>. Nepal performed its first successful kidney transplant in 2008 at the Tribhuvan University Teaching Hospital.<sup>7</sup>

## **MATERIALS AND METHODS**

Descriptive research design was conducted using self-administered questionnaire and five points Likert scale to collect information among the nursing students. The study was carried out among B.Sc. Nursing and BNS first year students at College of Nursing, Chitwan Medical College. Proportional stratified random sampling method was used to select the study sample i.e. 50 students (23 B.Sc. Nursing

and 27 BN Nursing 1<sup>st</sup> year students). Verbal informed consent was obtained prior to data collection. The privacy, anonymity and confidentiality of the respondents was maintained. The reliability of the research instrument was maintained by pre testing instrument in 10% of total sample (i.e. 5 students from Narayani Polytechnic Institute of Nursing). The reliability of the instrument was calculated by using split-half reliability for knowledge and Cronbach's alpha reliability coefficient for attitude. Split-half reliability for knowledge was 0.83 and Cronbach's alpha reliability coefficient for attitude was 0.80. The data was edited, coded and analyzed using the Statistical Package of Social Sciences (SPSS) program version 17.

## RESULTS

**Table 1: Respondents' Socio-demographic Characteristics (n = 50)**

| Variables                                       | Freq. | %    |
|---|-------|------|
| <b>Age group ( years)</b>                       |       |      |
| <20   | 17    | 34.0 |
| 20-25   | 29    | 58.0 |
| 25-30   | 3     | 6.00 |
| ≥30   | 1     | 2.00 |
| Mean ± SD: 21.98 ± 3.384    Range of age: 18-35 |       |      |
| <b>Education level</b>                          |       |      |
| BN  | 27    | 54.0 |
| B.Sc. Nursing                                   | 23    | 46.0 |
| <b>Clinical exposure (years)</b>                |       |      |
| 1-5   | 23    | 46.0 |
| 5-10  | 25    | 50.0 |
| ≥10   | 2     | 4.00 |
| <b>Marital status</b>                           |       |      |
| Married   | 12    | 24.0 |
| Unmarried                                       | 38    | 76.0 |
| <b>Ethnic group</b>                             |       |      |
| Brahmin/Chettri                                 | 37    | 74.0 |
| Newar   | 5     | 10.0 |
| Gurung/Magar/Tamang                             | 5     | 10.0 |
| Rai/Limbu/Sherpa                                | 1     | 2.00 |
| Chaudhary                                       | 1     | 2.00 |
| Kumal   | 1     | 2.00 |
| <b>Religion</b>                                 |       |      |
| Hindu   | 48    | 96.0 |
| Buddhist  | 2     | 4.00 |

Socio-demographic data (table 1 ) reveal that the majority of the respondents were 20-25(58%) years

of age group, 27 (54%) respondents were Bachelor of nursing in which 25 ( 50%) respondents had 5-10 years of Clinical exposure, 38(76%) respondents were unmarried, majority 37( 74%) of the respondents were Brahmin/Chettri and most of the respondents 48( 96%) were Hindu.

**Table 2: Respondents' Level of Knowledge regarding Organ Transplantation (n=50)**

| Level of knowledge | Frequency | Percentage |
|--------------------|-----------|------------|
| Low                | 4         | 8.00       |
| Medium             | 41        | 82.0       |
| High               | 5         | 10.0       |

Mean=14.84, SD= 3.73 Min=7, Max=22

About 41 (82%) respondents had average level of knowledge, 5 (10%) respondents had high level and 4 (8%) respondents had low level of knowledge regarding organ transplantation.

**Table 3: Association between Respondents' Level of Knowledge and Socio-demographic Variables (n = 50)**

| Variables                                     | Level of Knowledge |          | p value |
|---|--------------------|----------|---------|
|   | Low (%)            | High (%) |         |
| <b>Age of the group(years)<sup>f</sup></b>    |                    |          |         |
| <20   | 2(11.8)            | 15(88.2) | 0.597   |
| ≥20   | 2(6.10)            | 31(93.9) |         |
| <b>Education level<sup>f</sup></b>            |                    |          |         |
| BN 1 <sup>st</sup> year                       | 1(3.70)            | 26(96.3) | 0.322   |
| B.Sc. Nursing 1 <sup>st</sup> year            | 3(13.0)            | 20(87.0) |         |
| <b>Clinical Experience(years)<sup>f</sup></b> |                    |          |         |
| <5  | 3(13.0)            | 20(87.0) | 0.322   |
| ≥5  | 1(3.70)            | 26(96.3) |         |

Significance level at 0.05 <sup>f</sup>=Fisher exact test

## $\chi^2$ is computed for p-value

Table 4 shows that the level of knowledge regarding organ transplantation is statistically not significant with age ( $p=0.597$ ), education type ( $p=0.322$ ), clinical experience ( $p=0.322$ ), marital status ( $p=0.322$ ) and ethnic group ( $p=1.00$ ).

**Table 4: Respondents' Level of Attitude regarding Organ Transplantation (n=50)**

| Attitude | Score                    | Freq. | %    |
|----------|--------------------------|-------|------|
| Positive | 66.66-100% ( $\geq 60$ ) | 47    | 94.0 |
| Neutral  | 33.33-66.66% (30-60)     | 3     | 6.00 |
| Negative | 0-33.33% ( $< 30$ )      | 0     | 0.00 |

Mean=69.96, SD= 5.57 Min=57, Max=83

Table 5 shows that 47 (94%) respondents had positive attitude and 3 (6%) respondents had negative attitude regarding the organ transplantation.

**Table 5: Correlation between Knowledge and Attitude Score (n =50)**

| Variables | Karl Pearson Correlation Coefficient (r) | p-value |
|-----------|--|---------|
| Knowledge | 0.316                                    | 0.025   |
| Attitude  |  |         |

Table 6 shows that  $r = 0.316$  and  $p\text{-value} = 0.025$ . So, there is low degree of correlation between knowledge and attitude of the respondents but is statistically significant.

## DISCUSSION

Concerning the demographic characteristics, the study revealed that among the respondents mean age was  $21.98 \pm 3.384$ . This finding is supported by Tam, Sue & Chan, showed that mean age of the undergraduate nursing students was  $21.1 \pm 1.5$ <sup>4</sup> and

is also supported in study conducted by Martinez-Alarcon et al. revealed that the overall age of the students as  $21 \pm 2$  years.<sup>8</sup>

In the current study, regarding the meaning of the organ donation, nearly three quarter (72%) of the respondents demonstrated the knowledge of organ transplantation. The finding is similar to the study conducted by Bagheri, Tanaka, Takahashi & Shoji in the year 2002 academic year at the University of Tsukuba in Japan (medical & non medical students) showed that 66% of the respondents had knowledge on organ donation.<sup>9</sup>

Regarding the eye transplantation, half of the respondents (52%) had knowledge that eye can be donated only from dear body 32% of them knew that the eye should be removed within 6 hours of death. These findings are supported by the study of Kumar, Shukla & Agarwal (2012) in which the study population were nursing and paramedical students of People's University at Bhopal revealed that 47.8% of the students had knowledge that eye can be donated and 39.7% respondents were aware of the fact that the eye should be removed within 6 hours.<sup>10</sup>

Majority (96%) of the respondents agreed the statement "Organ donation provides new life to the recipients". However, conflicting finding was demonstrated in Bagheri, Tanaka & Shoji study where 63% of the respondents (medical & non medical students) agreed that the recipients will

receive another life.<sup>9</sup>

In the study of Martinez-Alarcon, “Do Nursing Students Understand the Meaning of Brain Death?” 84% of the respondents had positive attitude towards organ donation<sup>11</sup>. Similarly Tam, Sue & Cha revealed that more than three quarter (76%) of the respondents had positive attitude.<sup>4</sup> And the study conducted by Bakalis & Theodorakopoulou revealed that 68% of the respondents had positive attitude.<sup>12</sup> But in the present study majority (94%) of the respondents had positive attitude towards the organ transplantation.

Majority (82%) of the respondents had the medium level of knowledge regarding the organ transplantation similar findings is found in Tam, Sue & Chan study where 71.8% students on average could correctly answer regarding their knowledge on organ donation and transplantation<sup>4</sup>. And Bilgel, Sadikoglu & Bilgel’s study found that 44.8% of the respondents had sufficient knowledge about organ donation.<sup>13</sup>

Study conducted by Chung et al. Faculty of Medicine, The University of Hong Kong, Hong Kong (2008), showed that about 85% had a positive attitude<sup>14</sup> whereas in this study 94% respondents had positive attitude regarding organ donation.

## CONCLUSION

About three fourth of the respondents had average level of knowledge, ten percentage of the respondents had high level and eight percentage respondents had

low level of knowledge but Overall responses on the attitude regarding organ transplantation showed that majority respondents had positive attitude regarding organ transplantation.

There is weak correlation between knowledge and attitude score ( $r = 0.316$  and  $p\text{-value} = 0.025$ ) of the respondents but it is statistically significant.

So, researcher strongly recommended for the addition of the educational activities to improve the knowledge of the students.

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