

*Review Article***Nursing students' knowledge and related factors towards organ donation: A systematic review**Tara Alizadeh <sup>a</sup>  | Poorya Takasi <sup>a\*</sup> 

a. Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran

\*Corresponding author(s): Poorya Takasi (MSc), Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Guilan University of Medical Sciences, Rasht, Iran.

Email: [pooryapin380@gmail.com](mailto:pooryapin380@gmail.com)

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**Abstract**

This systematic review investigated the level of knowledge among nursing students regarding organ donation and the factors influencing their knowledge. We conducted a comprehensive and systematic search across various international electronic databases, including Scopus, PubMed, Web of Science, as well as Persian databases such as Iranmedex and Scientific Information Database. We utilized keywords derived from Medical Subject Headings such as "knowledge", "nursing students", and "organ donation". The search spanned from the earliest available records to August 1, 2023. To assess the quality of the studies included in this systematic review, we employed the Appraisal tool for Cross-Sectional Studies. In total, 2,408 nursing students were in twelve cross-sectional studies. The average knowledge of nursing students in 10 studies regarding organ donation was 40.48 out of 100, which shows their low level of knowledge. The knowledge of nursing students regarding organ donation had a significant positive relationship with the attitude (n=3). Also, nursing students' knowledge had a significant negative relationship with unfavorable attitudes (n=1). Furthermore, the results showed that there is a significant relationship between the knowledge of nursing students and gender, and there is also a relationship between the knowledge of nursing students and their age (n=1). Therefore, policymakers and health managers can improve the knowledge of organ donation in nursing students by paying more attention to the factors related to organ donation knowledge such as age, gender, and attitude.

**Keywords:** Knowledge, Nursing Students, Nursing, Organ Donation, Systematic Review.

**1 | Introduction**

Recently, the field of organ donation is expanding rapidly. Care after organ transplantation should be done in a specialized way so that it can increase life expectancy and high quality of life [1]. This treatment method is the only way to save for some chronic and incurable diseases [2]. Despite significant advancements in organ donation and transplantation, there remains a shortage of organ donors in comparison to the number of patients awaiting transplants [3].

Organs can be obtained from two sources: deceased and living donors. In both scenarios, organ donation is a voluntary choice. A deceased donor is an individual who has been medically determined as deceased, and upon confirming this, their cells, tissues, and organs can be utilized, similar to those from

living donors [4, 5]. On the other hand, there are common beliefs among people that prevent organ donation. These beliefs are rooted in the cultures of people in different countries, that's why there are more in some cultures and less in others. For instance, Hispanic Americans may exhibit a lower inclination towards organ donation compared to their white counterparts due to factors such as fear, lack of information, and religious biases [6]. Consequently, given the existence of these obstacles to organ donation, the role of healthcare professionals becomes paramount. They bear a significant responsibility in educating the public, facilitating a better comprehension of concepts like brain death and organ donation, and highlighting their significance [7, 8]. It is essential for healthcare professionals to exhibit a positive attitude towards organ donation and possess a solid knowledge base in this

domain to effectively encourage organ donation [9, 10]. Moreover, it's worth noting that today's students, including those pursuing nursing, are the future healthcare professionals. Therefore, it is crucial for them to acquire knowledge and cultivate a positive attitude towards organ donation during their educational years [11]. Research has revealed that nursing students in Turkey possess a moderate level of knowledge regarding organ donation [12], while a study conducted in Mexico indicated that nursing students there have an inadequate level of knowledge concerning organ donation [11].

Given the significance of organ donation, coupled with the existing gap in knowledge among nursing students in this area and the absence of a comprehensive review study, the present review was undertaken to examine the knowledge of nursing students regarding organ donation and the factors associated with it.

## **2 | Methods**

### **2.1 | Study registration and reporting**

This systematic review followed the guidelines outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist [13]. It's important to note that this review was not registered in the international prospective register of systematic reviews (PROSPERO).

### **2.2 | Search strategy**

We conducted a thorough and systematic search across various international electronic databases, including Scopus, PubMed, and Web of Science, as well as Persian databases like Iranmedex and the Scientific Information Database. We used keywords derived from Medical Subject Headings, such as "knowledge", "nursing student", and "organ donation", spanning from the earliest records up to August 12, 2023. For instance, our search strategy in the PubMed/MEDLINE database involved combining phrases like (("knowledge") OR ("nursing student knowledge")) AND (("organ donation") OR ("organ transplantation")) AND (("nursing") OR ("nurses")). To consolidate search results, we employed Boolean operators "OR" and "AND." The search process was conducted independently by two researchers. It's important to note that this systematic review did not include gray literature, which encompasses expert commentaries, conference presentations, theses, research and committee reports, and ongoing research. Gray literature refers to written material that has not received formal approval for commercial publication, whether in print or electronic form [14].

### **2.3 | Inclusion and exclusion criteria**

In this systematic review, we focused on cross-sectional studies concerning nursing students' knowledge of organ donation. We considered studies published in either English or Persian. Notably, our review excluded experimental studies, reviews, case studies, conference proceedings, letters to the editor, and qualitative research employing qualitative research designs.

### **2.4 | Study selection**

For this systematic review, we utilized EndNote X8 as the data management software. Following our inclusion and exclusion criteria, two researchers independently evaluated the titles, abstracts, and complete texts of the publications. Duplicate studies were removed through both manual and electronic processes. In cases where disagreements arose during the study selection, a third researcher was consulted to reach a consensus. To ensure comprehensive coverage, we meticulously scrutinized the references to prevent any data omissions.

### **2.5 | Data extraction and quality assessment**

The researchers collected various information for this review, including the primary author's name, publication year, location, sample size, male-to-female ratio, age distribution, marital status, whether participants received education on organ donation, the type of questionnaire used, and the key findings. To assess the quality of the included studies, the Appraisal tool for Cross-Sectional Studies (AXIS tool) was employed. This tool comprises 20 items evaluated on a two-point Likert scale, with "yes" scoring 1 point and "no" scoring 0 points. AXIS assesses study quality in three domains: report quality (7 items), study design quality (7 items), and the potential for bias introduction (6 items). Subsequently, AXIS categorizes study quality into three levels: high (70 to 100%), fair (60 to 69.9%), and low (0 to 59.9%) [15]. The evaluation of data quality was carried out independently by two researchers, ensuring a rigorous and reliable assessment process.

## **3 | Results**

### **3.1 | Study selection**

As shown in Figure 1, following an extensive search of electronic resources, a total of 2,284 studies were initially identified. Among these, 438 duplicate items were removed. After this process, there were 1,846 remaining papers. Out of the total pool of studies considered, 116 were disqualified from inclusion in this systematic review as they did not meet the criteria for cross-sectional studies. Furthermore, 1,691 articles were excluded from the study due to a misalignment with its objectives. Additionally, fifteen studies

were set aside due to methodological insufficiencies or inadequacy in reporting results. Furthermore, seven studies were removed from consideration due to an absence of pertinent data following a comprehensive assessment of their full-text publications. Consequently, the systematic review ultimately included twelve carefully selected studies [11, 12, 16-25].

### 3.2 | Study characteristics

As mentioned in Table 1, in total, 2,408 nursing students were in twelve cross-sectional studies [11, 12, 16-25]. Of the participants, 87.77% were female. The studies included in this systematic review were conducted in India (n=5) [16, 18, 22-24], South Korea (n=3) [19-21], Hong Kong (n=1) [25], Italy (n=1) [17], Mexico (n=1) [11], and Turkey (n=1) [12].

### 3.3 | Methodological quality assessment of eligible studies

As shown in Figure 2, all studies [11, 12, 16-25] had a high quality. In addition, six studies [11, 18, 19, 21, 22, 24] did not report

the research limitations and nine studies [11, 16, 17, 19-23, 25] did not report funding sources or conflicts of interest.

### 3.4 | Nursing students' knowledge towards organ donation

As mentioned in Table 1, the average knowledge of nursing students in 10 studies [11, 12, 17-21, 23-25] regarding organ donation was 40.48 out of 100, which shows their low level of knowledge.

### 3.4 | Factors related to the nursing students' knowledge towards organ donation

As mentioned in Table 1, the knowledge of nursing students regarding organ donation had a significant positive relationship with the attitude (n=3) [19, 21, 23]. Also, nursing students' knowledge had a significant negative relationship with unfavorable attitudes (n=1) [11]. Furthermore, the results showed that there is a significant relationship between the knowledge of nursing students and gender, and there is also a relationship between the knowledge of nursing students and their age (n=1) [16].

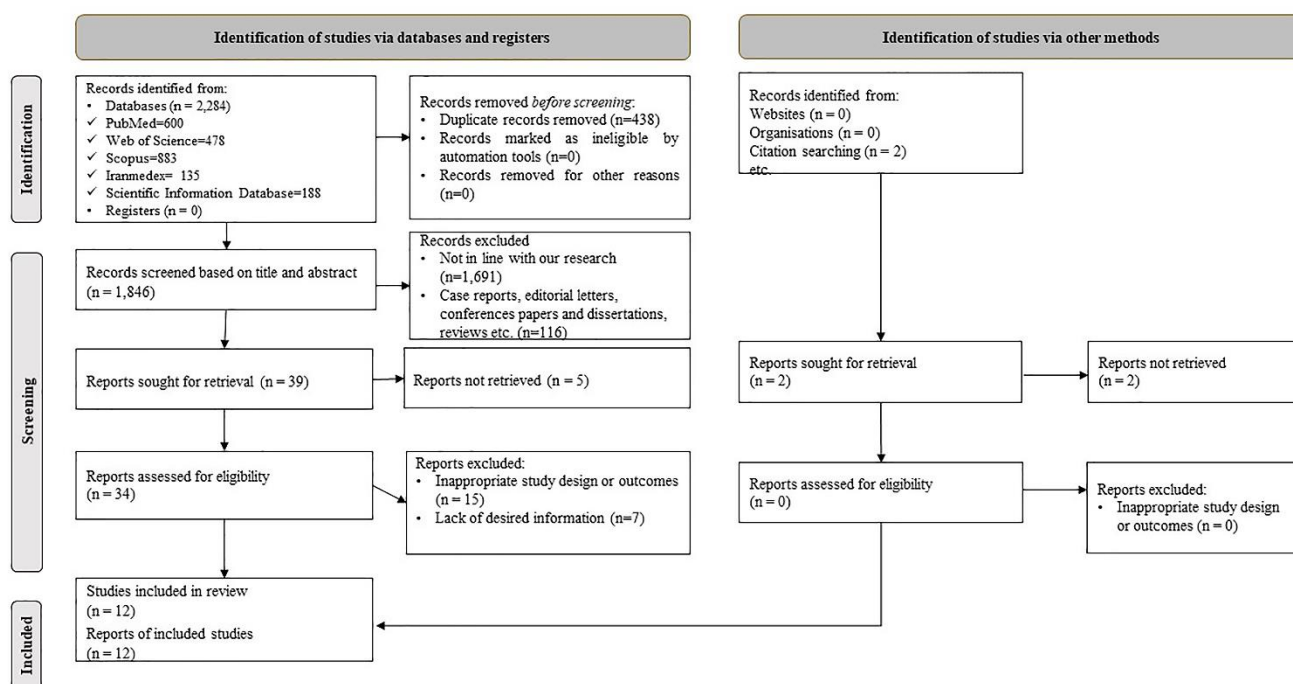


Figure 1. Flow diagram of the study selection process.

		Kim et al., 2006	KIM et al., 2012	Tamal, 2012	Ponnayyan & Visekshi, 2015	Arpuhamakar & Lazarus, 2015	Poreddi et al., 2016	Fontana et al., 2017	Jena et al., 2017	Ju et al., 2018	Marván et al., 2020	Saha et al., 2020	SAYIN & DAĞCI, 2022
Introduction	Clear aims	*	*	*	*	*	*	*	*	*	*	*	*
	Appropriate design	*	*	*	*	*	*	*	*	*	*	*	*
Methods	Sample size justified	*	*	*	*	*	*	*	*	*	*	*	*
	Population defined	*	*	*	*	*	*	*	*	*	*	*	*
	Sample representative of population	*	*	*	*	*	*	*	*	*	*	*	*
	Selection process representative	*	*	*	*	*	*	*	*	*	*	*	*
	Measures to address non-responders	-	-	-	-	-	-	-	-	-	-	-	-
	Appropriate outcome variables	*	*	*	*	*	*	*	*	*	*	*	*
	Valid measures	*	*	*	*	*	*	*	*	*	*	*	*
	Defined statistical significance	-	*	*	*	*	*	*	-	*	*	*	*
	Methods described	*	*	*	*	*	*	*	*	*	*	*	*
	Results	Results data described	*	*	*	*	*	*	*	*	*	*	*
Concerns about non-response bias		-	-	-	-	-	-	-	-	-	-	-	-
Non-responder information described		-	-	-	-	-	-	-	-	-	-	-	-
Results internally consistent		*	*	*	*	*	*	*	*	*	*	*	*
Results presented for analyses	*	*	*	*	*	*	*	*	*	*	*	*	
Discussion	Conclusions justified	*	*	*	*	*	*	*	*	*	*	*	*
	Limitations identified	-	*	*	-	*	*	*	-	-	-	-	*
Others	Funding sources or conflicts of interests	-	-	-	-	-	-	-	*	-	-	*	*
	Ethical approval/consent attained	*	*	*	*	*	*	*	*	*	*	*	*

Figure 2. Assessment of the quality of the included articles.

#### 4 | Discussion

The findings of this study, encompassing 2,408 nursing students across 12 cross-sectional investigations, indicate that nursing students possess a limited level of knowledge when it comes to organ donation. Furthermore, the study reveals that factors such as gender, age, and attitude are associated with the knowledge levels of nursing students in this regard.

Organ donation plays a crucial role in the treatment of patients facing organ failure [26]. Given that healthcare professionals are often the individuals closest to patients and their families, they bear a significant responsibility in educating them about organ donation. This pivotal role hinges on healthcare professionals possessing adequate and comprehensive knowledge in this area. Moreover, it's important to recognize that today's nursing students represent the future healthcare workforce, underscoring the significance of their understanding of organ donation [19]. However, the results of this systematic review have revealed a deficiency in the knowledge levels of nursing students in this regard. Furthermore, previous systematic reviews have also highlighted insufficient and unsatisfactory levels of knowledge among nurses regarding organ donation [27]. Additionally, another systematic review conducted in Iran indicated a lack of knowledge among nurses regarding organ donation [28]. Consequently, it is

imperative for nursing schools' administrators and healthcare policymakers to implement programs aimed at enhancing the knowledge of nursing students in the field of organ donation.

As highlighted in this study, age emerges as a factor connected to organ donation [16]. In this context, research conducted in Iran has demonstrated a direct correlation between age and the knowledge of nurses in intensive care units, suggesting that older nurses tend to possess more knowledge about organ donation [29]. Furthermore, the current study identifies gender as another factor linked to the knowledge of nursing students [16]. However, research conducted in Malaysia reported that, despite men scoring higher than women in terms of knowledge about organ donation, this gender-based difference was not statistically significant [30]. In addition to age and gender, attitude has been identified as another factor associated with knowledge regarding organ donation [11, 19, 21-23]. This observation is consistent with a study conducted in Saudi Arabia, which underscores the importance of attitude in this context [31]. Hence, healthcare managers and policymakers have an opportunity to enhance the knowledge levels of nursing students regarding organ donation by taking into account these factors that influence their knowledge.

**Table 1.** Basic characteristics of the included studies in this systematic review.

First Author/ year	Location	Sample size	M/F ratio (%)	Age (mean±SD)	Questionnaire	Key results	AXIS Score
Kim <i>et al.</i> , 2006 [20]	South Korea	296	0/100	N/A	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 33.78.	High
KIM <i>et al.</i> , 2012 [21]	South Korea	108	10.19/ 89.81	N/S	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 11.05 There was a significant positive relationship between knowledge and attitude ( $r = 0.19$ ; $P < 0.044$ ).	High
Tam <i>et al.</i> , 2012 [25]	Hong Kong	362	30.11/ 69.89	22.60 (SD= 4.00)	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 23.70 (SD=2.90).	High
Ponnayyan & Visalakshi, 2015 [22]	India	100	19/81	N/A	Researcher made questionnaire	Level of knowledge: <ul style="list-style-type: none"> <li>89.00% of students had average knowledge.</li> <li>9.00% of students had good knowledge.</li> <li>2.00% of students had poor knowledge.</li> </ul> There was a positive relationship between knowledge and attitude ( $r=0.042$ ; $P=0.05$ ).	High
Arputhamal ar & Lazarus, 2015 [16]	India	150	9.33/9 0.67	N/A	Researcher made questionnaire	Level of knowledge: <ul style="list-style-type: none"> <li>10.67% of students had average knowledge.</li> <li>34.67% of students had good knowledge.</li> <li>53.33% of students had satisfactory knowledge.</li> <li>1.33% of students had excellent knowledge.</li> </ul> There was a significant relationship between sex and knowledge ( $P=0,001$ ). Also, there was a significant relationship between age and knowledge ( $P=0,001$ ).	High
Poreddi <i>et al.</i> , 2016 [23]	India	267	0.75/9 9.25	19.20 (SD= 1.23)	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 7.34 (SD=1.61). There was a significant positive relationship between knowledge and attitude ( $r=0.265$ ; $P < 0.001$ ).	High
Fontana <i>et al.</i> , 2017 [17]	Italy	343	25.07/ 74.93	22.48 (SD= 3.49)	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 16.11.	High
Jena <i>et al.</i> , 2017 [18]	India	140	N/A	N/A	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 12.30.	High
Ju <i>et al.</i> , 2018 [19]	South Korea	215	7.44/9 2.56	N/A	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 7.91 (SD=1.74). There was a significant positive relationship between knowledge and attitude ( $r=0.138$ ; $P=0.046$ ).	High
Marván <i>et al.</i> , 2020 [11]	Mexico	179	26.23/ 73.74	N/A	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 51.51. There was a significant negative relationship between knowledge and unfavorable attitudes ( $r= -0.269$ ; $P=0.0001$ ).	High
Saha <i>et al.</i> , 2020 [24]	India	45	0/100	N/A	Researcher made questionnaire	The mean score of students' knowledge about organ donation was 33.56.	High
Sayin & DAĞCI, 2022 [12]	Turkey	203	6.40/9 3.60	20.88 (SD= 1.77)	Organ Donation Knowledge Questionnaire.	The mean score of students' knowledge about organ donation was 9.95 (SD=2.14).	High

#### 4.1 | Limitations

This systematic review encountered several limitations during its course. The diversity among the included studies made it

impractical to perform a meta-analysis. Nevertheless, it's worth highlighting that the systematic approach used for collecting, organizing, and analyzing data was methodologically sound. While

we made extensive efforts in our search, there remains a possibility that some pertinent studies in this area were not included in our systematic review. Additionally, our review was limited to studies published in English and Persian languages, which could have excluded relevant research in other languages from our analysis.

#### 4.2 | Implications for nursing managers and policy-makers

Given the critical role of organ donation in treating patients with organ failure and the close proximity of nurses to these patients, it's important to recognize that today's nursing students will become tomorrow's nurses. In light of this, administrators of nursing faculties and healthcare policymakers can enhance knowledge about organ donation among nursing students by placing greater emphasis on the factors that influence their understanding of this topic.

#### 4.3 | Recommendations for future research

A recommendation is made to undertake additional interventional and comparative research endeavors to investigate the impact of age, gender, and attitude on the knowledge of organ donation in nursing students.

### 5 | Conclusions

In summary, the findings from this systematic review, which encompassed 2,408 nursing students across twelve cross-sectional studies, indicate that nursing students generally possess a limited level of knowledge regarding organ donation. Consequently, policymakers and healthcare administrators have an opportunity to enhance organ donation knowledge among nursing students by giving due consideration to factors such as age, gender, and attitude that are linked to this knowledge deficit.

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#### Authors' contributions

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work: TA, PT; Drafting the work or revising it critically for important intellectual content: TA, PT; Final approval of the version to be published: TA, PT; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved: TA, PT.

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#### Competing interests

We do not have potential conflicts of interest with respect to the research, authorship, and publication of this article.

#### Availability of data and materials

The datasets used during the current study are available from the corresponding author on request.

#### Using artificial intelligent chatbots

None.

### References

1. Bialek K. Why do we agree to organ donation? Factors of transplantation decision making. *Nurs Public Health*. 2016;6(2):159-164.
2. Kobus G, Reszec P, Malyszko JS, Małyszko J. Opinions and Attitudes of University Students Concerning Organ Transplantation. *Transplant Proc*. 2016;48(5):1360-1364.
3. Findlater C, Thomson EM. Organ donation and management of the potential organ donor. *Anaesth Intensive Care Med*. 2015;16(7):315-320.
4. Dominguez-Gil B. International figures on donation and transplantation 2018. 2019. Available from: [https://www.europarl.europa.eu/EPRS/Newsletter\\_Transplant\\_2019.pdf](https://www.europarl.europa.eu/EPRS/Newsletter_Transplant_2019.pdf).
5. Gutiérrez Virrueta LA. Difusión sobre los procesos donación de órganos y tejidos con fines de trasplante en la Delegación Sur del Valle de la Ciudad de México. 2019. Available from: <https://repositorio.xoc.uam.mx/jspui/handle/123456789/25014>.
6. Breitkopf CR. Attitudes, beliefs and behaviors surrounding organ donation among Hispanic women. *Curr Opin Organ Transplant*. 2009;14(2):191-195.
7. Lomero MM, Rasero MJ, Fuentes L, Jaume M. Knowledge and Attitude of Health Personnel at the Garraf Health Consortium Regarding Donation and Transplantation. *Transplant Proc*. 2015;47(8):2318-2321.
8. Uzuntarla Y. Knowledge and Attitudes of Health Personnel About Organ Donation: A Tertiary Hospital Example, Turkey. *Transplant Proc*. 2018;50(10):2953-2960.
9. Bharambe VK, Arole VU, Puranam V, Kulkarni PP, Kulkarni PB. Knowledge and attitude toward organ donation among people in Lanja: A rural town in India. *Saudi J Kidney Dis Transpl*. 2018;29(1):160-166.

10. Shahsavarinia K, Tagizadieh A, Pouraghaei M, Soleimanpour H, Kakaie F, Sanaie S, et al. Assessment of Attitude and Knowledge of Personnel in the Intensive Care Unit of Tabriz University of Medical Sciences Hospitals Toward Organ Donation. *Transplant Proc.* 2016;48(8):2577-2581.
11. Marván ML, Orihuela-Cortés F, Río AÁd. General knowledge and attitudes toward organ donation in a sample of Mexican Medical and Nursing Students. *Rev Cienc de la Salud.* 2020;18(2):9-28.
12. Sayin Y, DAĞCI M. Attitude, knowledge and donor card volunteering of nursing students regarding organ donation. *Bezmialem Sci.* 2022;10(4):512-517.
13. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ.* 2021;372:n71.
14. Corlett RT. Trouble with the gray literature. *Biotropica.* 2011;43(1):3-5.
15. Downes MJ, Brennan ML, Williams HC, Dean RS. Development of a critical appraisal tool to assess the quality of cross-sectional studies (AXIS). *BMJ Open.* 2016;6(12):e011458.
16. Arputhamalar MA, Lazarus E. A study to assess the awareness, knowledge, attitude and belief regarding organ donation among nursing students. 2015.
17. Fontana F, Massari M, Giovannini L, Alfano G, Cappelli G. Knowledge and Attitudes Toward Organ Donation in Health Care Undergraduate Students in Italy. *Transplant Proc.* 2017;49(9):1982-1987.
18. Jena P, Jena D, Kar M, Jena P, Nayak R. A study on knowledge regarding eye donation among first year nursing students of a nursing school and college of Berhampur, Odisha. *Int J Res Med Sci.* 2017;5(11):4942-4945.
19. Ju MK, Sim MK, Son SY. A Study on Nursing Students' Knowledge, Attitude, and Educational Needs for Brain-Death Organ Transplantation and Donation and Intent to Donate Organs. *Transplant Proc.* 2018;50(4):1187-1191.
20. Kim JR, Fisher MJ, Elliott D. Undergraduate nursing students' knowledge and attitudes towards organ donation in Korea: Implications for education. *Nurse Educ Today.* 2006;26(6):465-474.
21. Kim M, Joo SJ, Choi JH, Kim KS, Yoo M, Kim HJ. Knowledge, attitude, and will for organ donation of nursing students and non-nursing students toward the brain death organ donation. *Korean J Med Ethics.* 2012;15(2):231-243.
22. Ponnayyan H, Visalakshi K. Knowledge and Attitude regarding organ donation among Nursing Students. *Int J Sci Res.* 2015;4(12):1478-1480.
23. Poreddi V, Katyayani BV, Gandhi S, Thimmaiah R, Badamath S. Attitudes, knowledge, and willingness to donate organs among Indian nursing students. *Saudi J Kidney Dis Transpl.* 2016;27(6):1129-1138.
24. [24] Saha M, Bandyopadhyay S, Das D, Ray TG. Awareness, knowledge and willingness about eye donation among first year medical and nursing students of a medical and nursing college of north Kolkata, India. *Ameen J Med Sci.* 2020;13(3):210-216.
25. Tam WW, Suen LK, Chan HY. Knowledge, attitudes and commitment toward organ donation among nursing students in Hong Kong. *Transplant Proc.* 2012;44(5):1196-1200.
26. McGlade D, McClenahan C, Pierscionek B. Pro-donation behaviours of nursing students from the four countries of the UK. *PLoS One.* 2014;9(3):e91405.
27. Reena M, Arumugam P, Paul S, Kannan I. Knowledge and Attitude of Nurses in Organ Donation and the Influence of Interventions-A Systematic Review. *J Clin Diagn Res.* 2021;15(5):LE01-LE04.
28. Najafi Z, Manzari ZS. Level of Knowledge and Attitude of ICU Nurses toward Organ Donation and the Related Factors: A Systematic Review. *Rev Clin Med.* 2017;4(4):143-151.
29. Masoumian Hoseini ST, Manzari Z, Khaleghi I. ICU Nurses' Knowledge, Attitude, and Practice Towards their Role in the Organ Donation Process from Brain-Dead Patients and Factors Influencing it in Iran. *Int J Organ Transplant Med.* 2015;6(3):105-113.
30. Foong JW, Ong JS, Oo WL, Hossain MM, Baskaran ND, Haron H, et al. Demographics of healthcare professionals' knowledge and attitude toward deceased organ donation: Survey of critical care areas in a tertiary hospital. *Med J Malaysia.* 2019;74(2):109-115.
31. Elsafi SH, Al-Adwani MM, Al-Jubran KM, Abu Hassan MM, Al Zahrani EM. Factors Influencing the Willingness of Allied Health Students to Donate Organs or Tissues. *Transplant Proc.* 2017;49(6):1215-1220.

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