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RESEARCH ARTICLE

ROLE OF NURSES IN ORGAN DONATION AND TRANSPLANTATION: A LITERATURE REVIEW

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ABSTRACT

Nurses need to be prepared to play multidisciplinary roles before and during the process of organ donation. Trained organ donation Nurse could benefit the consent rates for organ donation by educating and guiding the families. Trained nurses play an important role in organ donation and transplantation by discussing medical criteria for assessment of donor, the determination of brain death, approaching families for consent and co coordinating with the transplant team. Medical floor Nurses, ICU/Emergency Department (ED) Nurses, Transplantation Nurses, Procurement Nurses should be involved in establishment of a successful transplantation program.

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INTRODUCTION

Organ donation is the process when a person (the organ donor) allows an organ of his or her own to be removed and transplanted to another person, (the recipient) legally. So the organ or tissue is surgically removed from a person and placed it into another person's body. When the recipient's organ has failed or has been damaged by disease or injury, transplantation is necessary. One of the great advances in modern medicine is organ transplantation. Unfortunately, the need for organ donors is much greater than the number of people who actually donate.¹ For the patients with end-stage organ failure, organ transplantation has achieved a state of preferred therapeutic option. In a developing country like India, lack of facilities in hospitals, high costs involved, non-availability of a suitable donor from the family and lack of well-developed cadaver programme are some of the reasons for slow growth of organ transplantation. Since the Indian parliament in 1994 passed the THO (Transplantation of Human Organ) Act, cadaver organ transplants have been performed so far, with acceptable results. It is estimated that every year about, 3500 kidney transplants are being performed in our country, out of which about 2% are from cadaver donors

with sporadic reports of transplantation of other organs. There will not be a need to undertake living organ donation, if a large pool of cadaver donors that are available in our country are mobilized.² In India the organ donation ratio is estimated to be a meagre 0.6 per million population. According to Organ Retrieval Banking Organisation (ORBO) of All India Institute of Medical Sciences (AIIMS), while there are no exact figures, there is a need of about 1.5 to 2 lakh kidney transplants a year, while only about 8,000 transplants take place. Also, as against 40,000-50,000 liver transplants required a year, about 1,700-1,800 take place each year. About 15,000 heart transplants are required a year but only about 250 heart transplants are done every year. In India, due to lack of an organ donor, approximately, 5 lakh people die annually with less than one per million people opting to donate, the rate of organ donation India is the lowest in the world.³ The transplant statistics demonstrate a continued need for patient advocacy, education, and support. We need to understand that a single organ donor can save up to 8 lives. Nurses and other healthcare personnel must be knowledgeable about organ donation. For a successful organ donation, it is vital for a Nurse to identify a potential organ donor early and collaborate with the transplant coordinator. The transplant donor and recipient care is complex and requires teamwork and collaboration with the transplant team.⁴

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Nurses attitude towards organ donation and transplantation: In a study conducted at a regional hospital in southern part of Thailand, 50 Thai nurses had responded to two questionnaires: Questionnaire on the Values and Beliefs of Organ Donation-Nurse and Questionnaire on the Nurses' Roles in Promoting Decision of Potential Organ Donors' Family. Data was analysed using Descriptive statistics as well as independent t-test. Above one-fourth (28%) nurse participants had made requests for organ donation 1-2 times. Regarding personal values and beliefs, the nurses had attributed highest importance on conformity and least importance on the power. For professional values and beliefs, they had rated justice as highest importance and activism as the least importance. Nurses rated the highest score to the role in providing care after organ donation. Nurses who worked in the critical care units and neurological units had scores of professional values and beliefs, personal values and beliefs, and the nurses' roles significantly higher than those who worked in the medical and surgical units. The findings thus indicate that nurses need to be prepared to play more roles before and during the process.⁵ Haley Hoy, et al, in their study stated that Nurses are not uniformly educated regarding transplantation and organ donation though they are the largest group of health-care professionals.

The future of transplantation depends on education of this group. Before meaningful studies can be conducted, an instrument to measure attitudes and commitment to organ transplantation is necessary. The study purpose was to examine content / construct validity and internal reliability of an instrument to measure nurses' attitudes and commitment to organ transplantation. Following components has revealed by exploratory factor analysis i.e. desire to work in transplantation, organ donation advocacy, confidence in transplantation advocacy, and procurement. For the revised instrument internal consistency was established ($\alpha = .94$). Researchers stated that the Transplant-Registered Nurse instrument is can be used to measure attitudes and knowledge of Nurses about organ donation and transplantation.⁶ This important step is necessary before educational interventions can be assessed accurately.

ROLE OF NURSES IN ORGAN DONATION AND TRANSPLANTATION: A study was conducted to determine the role of intensive care Nurses on guiding the families or relatives of brain-death patients to organ donation. In this descriptive study, the population of the study were 1710 Nurses working in the intensive care units of public, private and university hospitals in the city of Istanbul, in which the sample consisted of 353 intensive care Nurses selected with stratified random sampling method from the probability sampling methods from this population. The results stated that 74.5% of the ICU Nurses supported the relatives of the patient with possible brain death or suffering from brain death to express their emotion and thoughts clearly and listened them carefully; when the family/relatives of those patients hospitalized in the ICU wanted to get information about organ donation, 20.7% of the Nurses made the preliminary explanation themselves and then guided the patient to an organ transplant coordinator for detailed information and 3.1% of the Nurses generally gave this information themselves. It was found that 63.7% of the ICU Nurses participating in the study did not have any training about brain death or organ donation and the knowledge of the ICU Nurses about brain death and organ donation was partially adequate and mostly the

physician was doing the function of guiding the relatives of brain-death patients to organ donation.⁷ Jennifer Tocher, Barbara Neades, Graeme D Smith, Daniel Kelly, in their study stated that organ donation and transplantation rates vary extensively around the world. However, there is a universal shortage of deceased donors, giving rise to different approaches so as to increase transplantation rates. Specialist Nurse in Organ Donation undertakes the major role in identifying the potential donor by confirming the deemed (presumed) consent status of the donor and supporting the bereaved relatives. The paper clarifies current and future potential of the Nurses working with the bereaved families when requesting authorization for organ donation. The implications for nursing found by the author stated that current scope and future potential of Donor Transplant Co-coordinator and Specialist Nurse in Organ Donation roles need a better recognition. Little empirical data exists about key role that these Nurses play in organ donation process, especially in relation to gaining the authorization to proceed to organ donation.⁸ Author concluded that there is a need to clarify role of the Specialist Nurse in Organ Donation and its impact on improving rates of organ donation.

Marloes Witjes et al. in their study stated that one of the most important bottlenecks in organ donation process worldwide is high family refusal rate. The main aim of the study was to identify the family consent rate for the organ donation is increased, if family guidance is given by trained donation practitioners. The study design was prospective intervention study. Intensive and coronary care Nurses were trained in communication regarding donation (trained donation practitioners) in two hospitals. These trained donation practitioners were then appointed to guide families of patients with poor medical prognosis. When patient became a potential donor, these trained donation practitioners were there to guide the family in making a well-considered decision regarding donation. The family consent rate for donation were compared with and without the guidance of trained donation practitioner. The results were as follows; The consent rates for donation with guidance by trained donation practitioner were 58.8% (20/34), while the consent rates without guidance by trained donation practitioner were 41.4% (41/99, $P = 0.110$) in those patients where the family had to decide on an organ donation. Hence it was concluded that, family guidance by a trained donation practitioner could benefit the consent rates for organ donation. Trained Nurses play an important role in supporting and guiding the families of potential donors through the decision-making process after organ donation request.⁹

Karina Dal Sasso et al stated that in Brazil, more than 30,000 patients await organ transplantation. The complexity of this therapy requires specialized training and a constant involvement of health care providers involved in the care of these patients. In day to day practice, Nurses are thus challenged to provide high-quality care to patients and their families. In view towards the need to define nurse's role in donation and transplantation process and importance of disclosure in this field, the authors have elaborated the present narrative review to discuss role and responsibilities of Nurses working in organ and tissue transplantation program. It was concluded that the Nurse needs knowledge regarding the principles of good practices and must have resources available for assessing the merits, risks and the social issues related to organ transplantation.

The final considerations were; Organ and tissue transplant Nurses need a comprehensive scientific knowledge. The clinical competences that are needed go beyond those that are learned in the undergraduate Nursing programs. They include evaluation and management of the deceased donors, transplant recipients, potential or live donors, teaching and counseling of the transplant recipients and the live donors in relation to self-care management, a healthy life and peaceful death when this is imminent. Competency development for responding to the physiological, pathophysiological and the psychosocial needs of the patients, family members and the communities is essential and it includes ageing and end-of-life support skills. Hence, preparation is fundamental, particularly evaluation, which will represent the framework for the transplant Nurses' practice. An example is the professionals' skills to assess the rejection or infection in the transplant recipients. Besides preparation for the nursing care decision making, the Nurses' activities should be multi-professional and multidisciplinary. Nurses do play a crucial role in establishment of a successful transplantation program. They are vital to the team that works towards delivering care to patients and relatives, by the use of technology, logistics and human resources, for coordination, care, education and for research on organ and tissue donation and transplantation.¹⁰ Hence, Nurses need to have knowledge regarding good ethical principles and should have resources available for assessing the merit, risks and social issues in relation to transplants.

Amritha Santhi and Malarvizhi S. in their review article stated that the need for organs is very high but donation rates are very low. The Nurses have a very important role in the organ donation and transplantation. As legal procedures keep changing the nurse has to update herself about organ donation procedures. In India the rate of organ donation is very less as compared to other countries. It is 0.26 per million in India, 26 per million in the USA and 36 per million in Spain. So the health care personnel have to play an important role in the field of organ donation. Nurses may work with individuals who have already had organ transplants or with patients waiting for transplant. Hospital Nurses who work on regular medical or surgical floors are also sometimes asked about organ donation by patients or their families.¹¹ So it is important for the Nurses to know the details of organ donation and transplantation. The Nurses has to update themselves regularly about organ donation procedures as the legal procedures keep on changing. Continuous nursing education programme need to be arranged at institutional level for updating Nursing personnel regarding their role in organ donation and transplantation.

Role of hospital Nurses: The Nurses of normal medicine wards might never meet patients who donate their organs. In other situations, they will happen to meet a patient or a family of a patient asking about the feasibility of organ donation. In such cases the role of the Nurse is to coordinate with the transplant team in the hospital.¹²

Role of ICU nurses: Nurses in the Emergency department/ICU can play an important role in the organ donation process by recognizing suspected or impending brain death cases and informing the physicians and other health team members in a timely fashion. Prompt and early assessment or even simple bedside observations, such as absence of spontaneous respirations, over ventilator support, an absent gag reflex and fixed and dilated pupils, can help for

proceeding further investigations and consultation for a formal brain death exam. Timely recognition of brain death allows for the consideration of organ donation, it can save significantly on hospital costs by avoiding expensive and unnecessary intensive care and gives time for the healthcare team to engage in educating family regarding meaning of brain death. After clearly explaining and declaring brain death to the family, the Transplant Coordinator, when appropriate begins discussion with family about the possibility of organ donation and counsels the family during their grief. ICU Nurses and doctors must work together after family members' consents to organ donation, to keep the potential donor stable to remove the organs for transplant. Nurses stay with the patient to monitor and maintain the blood pressure, oxygenation and correct any metabolic abnormalities during this time. They interact with the Transplant Coordinator and also with the family and during this difficult period of loss and tragedy. This is often when families come to terms with their loss by realizing that their loved one is a true hero, saving other people's lives and living on in others.¹³

Role of Transplant Nurses: Highly skilled Transplant Nurses being an integral member of an organ transplant team often have the most one-on-one contact with transplant patients. These specialist nurses provide Nursing care to patients who are scheduled to undergo an organ transplant and from the beginning to the end, they are completely involved in the transplant process. Transplant Nurses educate donors and recipients about the transplant process. To confirm an organ match, the transplant nurse will take patients' medical history and assess their health condition before doing an analysis of the lab test results. A transplant Nurse in OT plays an active role in the actual surgery by assisting transplant surgeon.¹⁴ After surgery, the transplant Nurse will monitor patient's vital signs, administer medication, use aseptic technique for prevention of infection, check for any complications or possible organ rejection by the patient's body, and communicate accordingly.

Role of Procurement Nurses: The procurement Nurse should know how to identify the potential donor by making themselves familiar with their organization's criteria. Nurses initiate contact with the family members of the potential donor and support the them throughout the organ donation process. They should explain the family about the condition of the potential donor and organ donation process. The role of the Nurse would continue throughout the organ recovery process by reinforcing the explanation to the family members. The Nurse should also provide information to the family regarding options available for the organ or tissue donation and how this will impact the burial or cremation. Any Nurse, who is working in this respect, should clearly understand the organ retrieval laws of the state and the policies and procedures regarding the process.¹² Acute and critical care Nurses often are the coordinator, play a central role in the organ and tissue procurement process with four primary roles that are identification of potential organ donors, obtaining consent and supporting the family, successful retrieval of the organ, and maintaining current knowledge and skills.¹⁵ In addition of above, the Nurse researcher can do research in the field of organ donation such as the quality of life of the live donors, recipients and their families, recipients, case studies on organ recipients and organ donors. Nurse educator can arrange CNE on organ donation and transplantation and make the nurses to know about the legal aspects involved in the organ donation

process. Nurse administrators must take the initiative to develop guidelines clarifying the role of Nurses in the organ donation and transplantation process to promote organ donation and improve rates.¹¹ Nurses can play an important role in educating people by creating awareness towards organ donation and communicate with relatives regarding the option of donating the organs in case of death in the hospitals, engage in the public talks, can arrange awareness and educational camps in community and can encourage young Nurses for researches and evidenced based practices in this field.

CONCLUSION

Nurses are vital to the process of organ donation and transplantation. Nurses can promote organ donation by educating the public, promoting the concept of brain death and deceased organ donation. Nurses can play a crucial role in establishment of a successful transplantation program. Trained Nurses play an important role in supporting families of patients who became potential donors and to guide them through the decision-making process after organ donation request. Nurses can play multi-professional and multidisciplinary role in organ donation and transplantation. It is necessary to organize comprehensive in-service training program or CNE for Nurses regarding process of brain death diagnosis, tissue or organ donation, organ transplantation and communication skills to establish trusting interpersonal relationship with the family members of patient who is brain death or in case of possible brain death. It is expected that this study will encourage further research on the role of Nurses in organ donation and transplantation in India.

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