**OKHALDHUNGA : ओखलढुङ्गा**
[Yearly Peer Reviewed Journal]
ISSN: 3021-9965
Vol. 4, Feb 2026
Published by Okhaldhunga Campus

# Nurses' Knowledge regarding Transfer of Critically Ill Patient at Kathmandu Nepal

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*Article History : Submitted 2 Dec. 2025; Reviewed 13 Jan. 2026; Accepted 6 Feb. 2026*
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*DOI: https://doi.org/10.3126/oj.v3i4.91082*

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## Abstract

*A critically ill patient is a person who has a very serious health problem that could be life-threatening. Transferring critically ill patients from the intensive care unit to other departments for procedures or tests must be well organized and efficient. Nurses are the responsible individuals in the transportation of patients, a person in the transport of a patients with proper knowledge, will help to reduce the risk during transfer. The objective of this study is to assess knowledge regarding the transfer of critically ill patients among nurses working in Kathmandu Model Hospital, Kathmandu Nepal. A descriptive cross-sectional study design was used. The non-probability purposive sampling technique was used to recruit 98 nurses. A semi structured self-administered questionnaire was developed which consisted of two parts. A questionnaire was distributed to the participants in their feasible time and 25 to 30-minutes time was given to fill up the questionnaire. The filled questionnaires were collected immediately after the completion.*

*The data were analyzed through descriptive statistics (frequency, percentage) and inferential statistics (Chi-square). This study found that 22.4% of respondents had a higher knowledge*

*however 46.9 % had a moderate level of knowledge and 30.6% of the respondents had a low level of knowledge. There was no statistically significant association between knowledge level and demographic variables. The study concludes that only one-third of the participants had good knowledge regarding the transfer of critically ill patients. Ongoing in-service education, regular training, and practical skill development programs were recommended to enhance nurses' competency in the safe transfer of critically ill patients.*

***Key Words :*** Knowledge, nurses, transfer of critically ill patient

## Introduction

A critically ill patient is a patient who is admitted to the hospital because of life threatening or potential life threatening physiological alternations requiring intense and vigilant medical care (Hu et al., 2021; Mayr et al., 2006; Robertson et al., 2013).

Intra-hospital transport refers to the transfer of patients within the hospital for diagnostic or therapeutic purposes, or to specialized units within the hospital. This usually involves transferring the patient from one area of the hospital to another, such as the intensive care unit (ICU), the emergency department (ED), or the operating theatre department, where patients may not receive the same level of intensive care (Alamanou & Brokalaki, 2014; Kulshrestha & Singh, 2016).

Although intra-hospital transports are a routine procedure in modern hospitals, they have been also described as high□risk procedures. Specifically, they have been associated with increased incidence of complications and subsequent increased morbidity and mortality, because they expose patients to many risks such as airway and respiratory complications, hemodynamic instability and neurological deterioration (Chalfin et al., 2007; Mselle et al., 2018). These risks may occur due to incorrect handling during the transfer of patients, changes in the position of the patients, changes in ambient temperature, interruption of therapy (oxygen, intravenous therapy, etc.), or improper monitoring (Alamanou et al., 2013). These challenges highlight that nurses' knowledge, skills, and experience are key determinants of safe intra-hospital transfer (Rosenberg et al., 2018; Alizadeh Sharafi et al., 2021). As frontline caregivers, nurses' ability to recognize potential risks and implement preventive measures is essential for ensuring continuity of care during transport. Pre-transfer assessment and optimization to physiological normality before definitive care should be the ideal for all transfers, to ensure the best outcomes (Dunn et al., 2007). Preparation for transfer and packaging should be thorough and complete before transfer (Bourn et al., 2018; Runcie et al., 1992). Intra-hospital transfers are complex cultural phenomena involving multiple professions and include effective communication and coordination (Rosenberg et al., 2018).Transferring patients from one department to another to carry out diagnostic and therapeutic examinations and procedures is one of the essential components of care. Likewise, regarding the purpose of intra hospital transport, a prospective cohort study was conducted in Intensive Care Unit of a private philanthropic general hospital in 2015 in which 57.3% of the transportations had a diagnostic purpose and 42.7% were therapeutic, 50.3% for imaging tests, 30.8% for central surgical procedures, 15.4% for hemodynamic laboratory

interventions, 2.1% for video exams, and 1.4% for procedures in the gastroenterology room (Gimenez et al., 2017).

According to Rijal et al., 2020, transferring from the intensive care unit to the general ward is a major source of anxiety for patients in Nepal. Uncertainty about one's illness, coping, and nurses' support were identified as psychosocial factors associated with ICU transfer anxiety. A descriptive co-relational cross-sectional survey carried out among open heart patients transferred from the ICU to the general ward in a cardiac center in Kathmandu City, Nepal among 95 open heart surgery patients using a self-reported questionnaire that reveals 54.7% patients a had high level of transfer anxiety (Rijal et al., 2020)

Nurses, as the primary members of the transport team, are present at all stages of the transport process. Because they provide continuous care and are in close proximity to the patient, they can detect potential life-threatening risks that arise during patient transport based on their knowledge, skills, and experience. The transfer should be through an intensive care policy such as communication, personnel, equipment and monitoring. Therefore, pre-transfer co-ordination and organization are so vital. The transferring unit should provide the receiving unit with all the information needed concerning the patients' health situation and all physicians as well as ancillary services should be notified first. If any help is needed, the patient's condition has to be documented (Alizadeh Sharafi et al., 2021).

A poorly planned and hurried patient transfer can significantly contribute to morbidity and mortality. The key elements of safe transfer involve the decision to transfer and communication, pre-transfer stabilization and preparation, choosing the appropriate mode of transfer (i.e., personnel accompanying the patient), equipment and monitoring required during the transfer, and finally, the documentation and handover of the patient at the receiving facility. These key elements should be followed in each transfer to prevent any adverse events that may severely affect the patient's prognosis (Martin, 2021; Warren et al., 2004).

A study conducted at Rwanda Military Hospital (RMH) and Kigali University Teaching Hospital (KUTH) among 124 nurses toward intra-hospital transportation management of critically ill patients revealed that 90.3% of participants had a moderate level of knowledge, 6.5% scored a high level, and 3.2% had a low level of knowledge (Mukabagire, 2019). Similarly, a descriptive cross-sectional study conducted in Khartoum State, Sudan, where 173 nurses were selected through simple random sampling, found that knowledge levels were poor in the majority (63.6%) and good in 36.4% (Mohamed et al.).

Nurses, as a healthcare professional in any health institution, should have highly developed specialized skills, as they play an essential role in every aspect of intra-hospital transfer, as they are the ones who daily do monitoring of the patient, continuity, and holistic treatment to all patients. A nurse's knowledge assessment is important to enhance the safe transfer of patient in this context. This study aims to assess knowledge regarding the transfer of critically ill patients among nurses working in Kathmandu Model Hospital, Kathmandu Nepal.

## Research methodology

A descriptive cross-sectional study was adopted to find out the knowledge of nurses regarding the transfer of critically ill patients. The study was conducted among the nurses working in Kathmandu Model Hospital, Kathmandu, it is a 100-bed tertiary care hospital located in the heart of Kathmandu. The hospital provides emergency, ICU, and high dependency unit services along with other departments where nurses play a central role. The nurses are directly involved in the preparation, coordination, and physical transfer of critically ill patients and are responsible for monitoring patient conditions, maintaining vital signs, and ensuring continuity of care during both intra and inter-hospital transfer of patients. Therefore, all the nurses working in Kathmandu Model Hospital were selected as the study population to assess the knowledge regarding the transfer of critically ill patients**.** The sample size was 98 nurses and the census sampling method was used to ensure complete representation and to avoid sampling bias. The study was conducted at a single institutional site, Kathmandu Model Hospital, constitutes a relatively small and highly definable group. Matrons, Supervisors, and ANMs were excluded. A semi-structured self-administered questionnaire was designed using clear words and unambiguous questions, presented in a logical flow with predefined response options to ensure consistency. It was developed through an extensive review of existing literature and research articles regarding the transfer of critically ill patients and was based on the objectives and variables of the study. The questionnaire was validated by the Research Committee and the Institutional Review Committee (IRC) of PHECT Nepal. A semi-structured self-administered questionnaire was designed using clear words and unambiguous questions, presented in a logical flow with predefined response options to ensure consistency. It was developed through an extensive review of existing literature and research articles regarding the transfer of critically ill patients and was based on the objectives and variables of the study. The questionnaire was validated by the Research Committee and the Institutional Review Committee (IRC) of PHECT Nepal.

Pretesting of the tool was done among 10% of the sample (i.e., 10 nurses working at Kritipur Hospital, Kathmandu) to identify the clarity and understanding of the questions, the time required to complete the tool, and to check for ambiguity. The questionnaire included both closed- and open-ended questions to gather the needed information. The tool was constructed in two parts: Part I: Semi-structured questionnaire related to socio-demographic data of the respondents (age, years of experience, current working area, professional qualification, training received, etc.). Part II: Structured questionnaire related to knowledge regarding the transfer of critically ill patients (guidelines, purposes, equipment, oxygen level, measurements, etc.).

A total of 18 questions, multiple choice and multiple response were included to measure the knowledge of respondents. The scoring system for the knowledge-related questions was one score for the correct answer. Multiple-response questions were denoted by an asterisk (*) sign. Approval was obtained from the nursing administration of Kathmandu Model Hospital prior to data collection. The hospital was purposively selected, and all registered nurses meeting the inclusion criteria were also purposively selected. The aim of the study was explained to each respondent, and autonomy was ensured by obtaining written

informed consent for voluntary participation. Data were collected in their feasible time. The questionnaires were distributed to the participants, and 25–30 minutes were given to fill up the questionnaires. The filled questionnaires were collected immediately after completion. Data collection was carried out from November 9 to December 21, 2022. After ensuring the accuracy and completeness of the collected data, it was entered into Microsoft Excel and then exported to Statistical Package for Social Sciences (SPSS) version 20 for analysis. Descriptive statistics (frequency, percentage, and standard deviation) and inferential statistics (Chi-square test) were used in this study.

## Ethical consideration

Ethical approval for the study was obtained from the Institutional Review Committee (IRC) of PHECT Nepal. Permission was also taken from the administration of Kathmandu Model Hospital to carry out the research. Anonymity, confidentiality, human rights, and justice were maintained throughout the study.

## Findings of the Study

Data were collected from 98 respondents and the findings presented in this section were of two parts: sociodemographic characteristics of the respondents and knowledge regarding transfer of critically ill patients.

**Table 1**

*Socio-Demographic Information of Respondents*

n =98

| Variables | Frequency | Percentage (%) |
|---|---|---|
| **Age group in Years** | | |
| 19-28years | 64 | 65.3 |
| 29-38years | 28 | 28.5 |
| 39-48years | 5 | 5.1 |
| 49 and above | 1 | 1.0 |
| **Educational Status** | | |
| PCL Nursing | 50 | 51 |
| Bachelor in Nursing | 48 | 49 |
| **Working Department** | | |
| Emergency Department | 9 | 9.2 |
| Medical Ward | 17 | 17.3 |
| Maternity Ward | 17 | 17.3 |
| Neurosurgery ward | 6 | 6.1 |
| ICU Department | 16 | 16.3 |
| HDU Department | 13 | 13.3 |

| | | |
|---|---|---|
| Pre-operative/Post-Operative Department | 11 | 11.2 |
| Operation Theatre(OT) | 7 | 7.1 |
| Out- patient Department | 2 | 2.0 |
| **Work Experience** | | |
| less than 1 year | 42 | 42.9 |
| 1-3 years | 32 | 32.7 |
| 4-6 years | 9 | 9.2 |
| More than 6 years | 15 | 15.3 |
| **Critical Care Training** | | |
| Yes | 32 | 32.7 |
| No | 66 | 67.3 |

Regarding age, 64 (65.3%) of respondents belonged to the age group of 19-28 years and only 1(1%) belonged to the age group of 49 and above years. In relation to education level, half of the respondents 50(51%) had completed PCL Nursing and nearly half 48(49%) had completed Bachelor in Nursing. In relation to the working department, 16(16.3%) of the respondents were from ICU department and only 2(2%) of them were from the OPD department. Regarding the Work Experience, 42(42.9%) of the respondents had less than 1 year of experience and only 9(9.2%) had 4-6 - years' experience. Furthermore, regarding the critical care training, only 32(32.7%) had received training. (Tables 1).

**Table 2**

*Introduction of Critically Ill Patient*

n=98

| Description | Frequency | Percentage (%) |
|---|---|---|
| **Meaning of Critically Ill Patient** | | |
| Admitted because of life threatening condition | 97 | 99 |
| **Document for Safe Transportation** | | |
| Checklist | 42 | 42.9 |
| **Purposes of Intra-hospital Transportation*** | | |
| From ICU to theatre for surgery | 75 | 76.6 |
| From theatre to ICU postoperatively | 65 | 66.3 |
| From ICU to radiology department for diagnostic procedure | 58 | 59.2 |
| From emergency to theatre | 49 | 50 |
| **Need of Consent** | | |
| Yes | 85 | 86.7 |

*Multiple Response**

In relation to the meaning of critically ill patient almost all 97(99%) of the respondents answered, admitted patients because of life threatening condition which was the correct answer. Likewise, regarding the document for safe transportation of the patient, less than half 42(42.9%) of the respondents answered, checklist which was the right answer. Regarding purposes of intra hospital transportation, 75(76.6%) of the respondents responded, transfer from ICU to theatre for surgery and 49(50%)of the respondents responded, transfer from emergency to theatre. Similarly, regarding the consent needed, 49(50%) of the respondents answered, yes it is needed which was a correct answer. (Table 2)

Table 3

*Knowledge on General Equipment needed, Safety Measures and Patient Care Concept*

n=98

| Description | Frequency | Percentage (%) |
|---|---|---|
| General Equipment* | | |
| Both the trolley and bed of the wheels have to be checked | 71 | 72.4 |
| Portable oxygen cylinder to be checked before transferring | 95 | 96.9 |
| IV stand | 40 | 40,8 |
| Vital sign monitoring tray | 41 | 41.8 |
| Bedside rails of the bed to prevent from falling down | 72 | 73.5 |
| Safety Measure during Transfer* | | |
| Adequate number of person should be available to transfer the patient | 74 | 75.5 |
| Ensure wheels on patient bed are locked if wheels are present | 55 | 56.1 |
| Adjust the furniture and equipment in the room to ensure adequate space for the safe transfer of the patient | 52 | 53.1 |
| Secure the accessory items, such as IV lines and drainage before transferring the patient; ensure the lines remain patent and functioning | 79 | 80.6 |
| Best Approach Concept for Patient Care* | | |
| Individual who transfer the patients should introduce and identify herself to lessen patient's anxiety | 53 | 54.1 |
| Correctly identify the patient before transferring to the respective procedure. | 78 | 79.6 |
| If the patient is conscious there is need of explanation about the transfer procedure and if not then explain it to the visitors | 75 | 76.5 |
| Maintain the patient's dignity during the transfer | 64 | 65.3 |

*Multiple Response**

Regarding the general equipment needed, almost all 95(96.9%) of the respondents responded, portable oxygen cylinder to be checked before transferring and 41(41.8%)of the

respondents responded, vital sign monitoring trays. Likewise, regarding safety measures to be followed during transfer, 79(80.6%) of respondents responded, Secure the accessory items, such as IV lines and drainage before transferring the patient; ensure the lines remain patent and functioning and 52(53.1%) of the respondents responded to adjust the furniture and equipment in the room to ensure adequate space for the safe transfer of the patient. Regarding patient care concept, 78(79.6%) of the respondents correctly answered, identifying the patient before transferring to the respective procedure and 53(54.1%) of the respondents answered, individual who transfer the patients should introduce and identify herself to lessen the patient's anxiety. **(Table 3)**

**Table 4**

*Knowledge on Special Equipment Needed and Acceptable Level of Oxygen in Oxygen Cylinder*

**n=98**

| Description | Frequency | Percentage (%) |
|---|---|---|
| Special Equipment* | | |
| Facemask/ nasal cannula | 53 | 54.1 |
| Suction equipment | 50 | 51.0 |
| Intubation equipment and medicines | 89 | 90.8 |
| Cardiac monitor | 63 | 64.3 |
| Acceptable Minimum Level of Oxygen in Cylinder | 3 | 33.7 |
| Above 100kg/cm$^2$ | | |

Multiple Response*

Regarding special equipment needed during transfer majority 89(90.84%) of respondents responded, intubation equipment and medicines and 50 (51.0%) of the respondents responded, suction equipment. Similarly, regarding acceptable minimum level of oxygen in cylinder only 33(33.7%) of the respondents answered above 100kg/cm$^2$ which was the correct answer. (Table 4)

**Table 5**

*Knowledge on Assessment, Parameter Recorded after Operation and during Transfer of Patient*

*n=98*

| Description | Frequency | Percentage (%) |
|---|---|---|
| Assessment of Patient after OT( Operation) | | |
| Assessing level of consciousness | 57 | 58.2 |
| Appropriate Time to Measure Vital Signs | | |
| Immediately after receiving the patient | 82 | 83.7 |
| Parameter Recorded during Transfer* | | |

| | | |
|---|---|---|
| Vital signs | 74 | 75.5 |
| Medication given during transfer and procedure | 59 | 60.2 |
| Intravenous fluid at the appropriate interval | 53 | 54.1 |
| Any adverse incident that occurred during transfer | 74 | 75.5 |

Multiple Response*

Regarding the assessment of patient after Operation, 57(58.2%) respondents answered, assessing level of consciousness which was the correct answer. Similarly, regarding appropriate time to measure vital sign, 82(83.7%) of the respondents answered immediately after receiving the patient which was the right answer. Regarding the parameter recorded during transfer, 74(75.5%)of the respondents responded, vital signs and 53(54.1%)of the respondent responded, intravenous fluid at the appropriate interval. (Table 5)

Table 6

*Knowledge on Safe Shifting of Patient*

*n=98*

| Description | Frequency | Percentage (%) |
|---|---|---|
| Way of Shifting | | |
| Roll up the sides of the sheet next to the side of the patient with standing two-two person on each side and one person for holding of the head and neck and hold the rolled of sheet close to the patient's body and keeping patients limbs together then sliding the patient to edge of trolley to bed and move with the count of 3 | 86 | 87.8 |
| Possible Adverse Incident during Transfer* | | |
| Oxygen cylinder running empty | 64 | 65.3 |
| Fall down from bed if patient is very agitated | 80 | 81.6 |
| Battery down of devices like cardiac monitor, syringe pump | 58 | 59.2 |
| Destination area is far from ICU | 36 | 36.7 |
| Difficult to push the trolley along with required equipment | 57 | 58. |
| Complication if Patient is not Safely Transfer* | | |
| Deterioration in vital signs | 66 | 67.3 |
| Agitation | 46 | 46.9 |
| Patient SPO2 may drop | 69 | 70.4 |
| Cardiac arrest | 39 | 39.8 |

Multiple Response *

In relation to the way of shifting, 86(87.8%) of respondents answered, to roll up the sides of the sheet next to the side of the patient with standing two-two person on each side and one person for holding of the head and neck and hold the rolled sheet close to the patient's body and keeping the patient's limbs together then sliding the patient to the edge of trolley to the bed and move with the count of 3. Similarly, regarding possible adverse incident during transfer, 80(81.6%) of the respondents responded, fall down from the bed if patient is very agitated and less than half 36(36.7%)of the respondent responded that the destination area is far from ICU. Moreover, regarding complication if the patient is not safely transferred, 69 (70.4%) of respondents responded, patient's SpO□ may drop whereas 39(39.8%) of the respondents responded that the patient may have cardiac arrest. (Table 6)

**Table 7**

*Information on Visual Monitoring, Minimizing Risk and Maintain Continuous Ventilation*

*n=98*

| Description | Frequency | Percentage (%) |
|---|---|---|
| Visual of the Monitor during Transport | | |
| Turned towards the nurse all the time during transfer of patient | 67 | 68.4 |
| Risk Minimization* | | |
| Stabilize the patient before transfer complete and proper preparation before transfer | 71 | 72.4 |
| Adequate monitoring during transfer | 69 | 70.4 |
| Communication between the personnel those who are involved in the transfer process | 59 | 60.2 |
| Complete and proper preparation before transfer | 31 | 31.6 |
| Maintain Continuous Ventilation for Intubated Patient | 48 | 49 |
| Wear protective apron and continue to ventilate patient manual | 48 | 49 |

Multiple response *

Regarding the visual of the monitor during transfer, 67(68.4%) of the respondents answered that they turned towards the nurse all the time during transfer of the patient, which is the correct answer. Furthermore, regarding the risk minimization, 71(72.4%) of the respondents responded, "Stabilize the patient before transfer complete and proper preparation before transfer and 31(31.6%) of them answered, complete and proper preparation before transfer. Likewise, half of the 48 (49%) of the respondents answered maintain continuous ventilation for intubated patient which was the correct answer. (Table 7)

**Table 8**

*Knowledge Level of Respondents regarding Transfer of Critically Ill patient*

**n=98**

| Description | Frequency | Percentage (%) |
|---|---|---|
| High level of knowledge (80-100%) | 22 | 22.4 |
| Moderate level of knowledge(60-79% | 46 | 46.9 |
| Low level of knowledge (0-59%) | 30 | 30.6 |

Regarding the level of knowledge, only 22(22.4%) of respondents had a higher level of knowledge whereas 46(46.9) had a moderate level of knowledge and 30 (30.6%) of the respondents had a low level of knowledge. (Table 8)

**Table 9**

*Association between Level of Knowledge with Educational Level, Working Area and Work Experience*

*n=98*

| Socio-demographic variables | $X^2$ value | P value |
|---|---|---|
| Educational level | 0.093 | 0.955 |
| Working area | 30.237 | 0.066 |
| Work experience | 7.739 | 0.258 |

*P value <0.05= statistically significance Associations*

Regarding the association between knowledge and socio-demographic variables, there was no statistically significant association between knowledge and socio-demographic variables. (Table 9)

## Discussion

In the present study 42 (42.9%) of the respondents answered correctly the guideline that helps for safe transportation of the patient is checklist which is supported by the study conducted by Williams et al. (2020). And also supported by a study conducted prospectively after interviewing the 347 nurses who work in the emergency department, which show s 86.7% of the participants stated that usage of control checklists would decreases the rate of unwanted situations (Salt et al., 2020).

Regarding the assessment of general equipment, almost all 95(96.9%) of the respondents responded, that portable oxygen cylinder should be checked before transfer. This finding was supported by the study done by Mukabagire Denise in Kigali-Rwanda, which showed that 96.8% of the respondents replied, portable oxygen cylinder to be checked. Similarly, regarding the acceptable minimum level of oxygen in cylinder, 33(33.7%)

respondents gave correct answer which is in contrast with the same study which showed, acceptable minimum level of oxygen is 74% (Mukabagire, 2019).

In this study more than half 57(58.2%) of the respondents responded, monitored the level of consciousness after the patient reached the ICU from the OT, which is similar to the findings of the study conducted in Al Ahli Hospital, Qatar which showed that 66.6% monitored the level of consciousness after the patient reached to ICU from the OT. Likewise, regarding the appropriate time to measure vital signs, 82(83.7%) of the respondents responded immediately after receiving the patient the findings of the present study were similar to the same study which revealed that 70% of respondents replied that vital signs monitoring as parameters during transfer of the patient (Dunn et al., 2007).

Furthermore, regarding possible adverse incidents during transfer 80(81.6%) of the respondents answered "falling down from the bed if the patient is very agitated," 64 (65.3%) answered, "oxygen cylinder running empty and 36(36.7%)of the respondents answered destination area is far from ICU. Moreover, regarding complications if the patient is not safely transfer, 69(70.4%) of the respondents responded that the patient's SPO2 may drop whereas 39(39.8%)of the respondents responded cardiac arrest. This study finding was supported by the study conducted by Wulandari et al. (2020) regarding the prevalence of adverse events during transport of critically ill patients from emergency to the intensive care unit, 45.5 of the respondents answered agitation and 27.7 of them answered oxygen supply ran out as adverse events.

Likewise regarding the level of knowledge regarding the transfer of critically ill patient only 22 (22.4%) of respondents had high level of knowledge, 46(46.9%) has moderate knowledge whereas 30 (30.6%) had a low level of knowledge. This study finding was supported by the study conducted on assessing the knowledge regarding intra hospital transport of critically ill patients among nurses of Dhiraj Hospital by Mr. Macwan Arpit 2018 which revealed that 78% of respondents had a moderate level of knowledge whereas 20% of respondents had an adequate level of knowledge and only 2% of them had inadequate knowledge. (Doctoral dissertation, University of Rwanda).

Similarly, the study finding of the present study was in contrast with a study conducted among 20 ICU nurses in Sulpizio's Cardiovascular Center to assess knowledge regarding institutional transport policy in 2017 which revealed that the nurses' overall knowledge score on patient transport policy was 30.8% (Ignatyeva et al., 2018) (Quazi & Apte, 2018). This finding was also supported by the study, Effect of Intra Hospital Safe Transportation Guidelines for Critically Ill Patients which revealed that a great majority (90%) of the respondents reported a low level of total knowledge on pre-implementation of guidelines regarding transfer of patients (Mohammed Amein Ghanem et al., 2023).

## Conclusion

This study assessed the nurses' knowledge regarding the transfer of critically ill patients at Kathmandu Model Hospital. The findings revealed that the majority of nurses had only moderate to low levels of knowledge, indicating a significant gap in understanding and preparedness for the safe transfer of critically ill patients. Furthermore, there was no

statistically significant association between the nurses' knowledge level and demographic variables (educational qualification, working area, or work experience, which suggests that the knowledge gap is consistent among different categories of nurses. These results highlight the need to strengthen ongoing in-service education, and hands-on practical sessions focused on the transfer of critically ill patients. Enhancing the nurses' competencies through continuous professional development is essential to ensure patient safety and improve the quality of critical care delivery.

## Implications

The study's findings indicate a need to strengthen educational and clinical interventions related to the transfer of critically ill patients. Regular simulation-based sessions should be integrated into hospital practice to enhance nurses' competence and confidence. Incorporating this topic into continuing nursing education and orientation programs will help ensure that all nurses maintain up-to-date knowledge and skills.

## Acknowledgments

The authors would like to thank the administration and hospital matron of Kathmandu Model Hospital for providing information regarding the study population and permission to conduct this study. Similarly, we would like to thank all the participants who contributed to this study by giving their valuable time and sharing their experiences and views through the questionnaire. We want to extend thanks to Kritipur Hospital also for granting the permission to carry out pre-testing.

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