Original Research

Open Access

Institutional ethnography of hemodialysis care: Perspectives of multidisciplinary health care teams in Nepal

Belitung Nursing Journal
Volume 9(4), 359-368

https://doi.org/10.33546/bnj.2691

Devaka Kumari Acharya[1,2], Kittikorn Nilmanat[1*], and Umaporn Boonyasopun[1]

[1] Faculty of Nursing, Prince of Songkla University, Hat Yai, Songkhla, Thailand
[2] Faculty of Nursing, Tribhuvan University, Kathmandu, Nepal

Abstract

Background: Hemodialysis is the most commonly used renal replacement therapy for end-stage renal disease. The collaborative efforts of multidisciplinary teams comprising nephrologists, nurses, pharmacists, and dietitians play a crucial role in enhancing patient outcomes, improving the quality of care, and reducing treatment costs. However, various factors such as healthcare cost reduction, limited resources, profit-driven systems, organizational structure, and involvement in patient care decisions impact the provision of hemodialysis care by the multidisciplinary teams.

Objective: This study aimed to explore the institutional practices of multidisciplinary teams within a hemodialysis unit.

Methods: This institutional ethnography study was conducted between April 2019 to February 2020 in a hemodialysis unit of a public university hospital in Kathmandu, Nepal. Data were collected through face-to-face interviews with ten nurses (including supervisors and incharge), two nephrologists, two dietitians, two pharmacists, and two technicians. Additionally, 167 hours of observation, two focus groups with nurses, analysis of institutional texts, and field notes were conducted. Participants were purposively selected based on their ability to provide diverse information regarding institutional practices in hemodialysis care. Interviews were recorded and transcribed.

Results: The analyzed data were presented in: 1) the context of hemodialysis care, 2) textual practices: the ruling relations of hemodialysis care (staffing, protocol, job description), 3) hemodialysis decision, and 4) institutional support.

Conclusion: Hemodialysis care provided by multidisciplinary teams is constrained by limited resources, particularly in terms of physical space, dialysis machines, nurses, doctors, and dietitians. The hospital's cost-cutting policies lead to reduced investment in patient care equipment, particularly dialysis machines, which significantly impact the workload of nurses and technicians. Insufficient nurse staffing necessitates the provision of other renal care responsibilities, resulting in increased workload, reduced time available for hemodialysis care, and unfinished tasks. The absence of clear job descriptions for hemodialysis care places an additional burden on nurses, who are often required to fulfill the responsibilities of other healthcare teams. Doctors hold the authority in making care decisions, which are subsequently followed by other team members.

Keywords

health professionals; institutional ethnography; multidisciplinary; Nepal; patient care team; renal dialysis

***Corresponding author:**
Assoc. Prof. Kittikorn Nilmanat, RN, PhD
15 Karnjanavanich Rd, Faculty of Nursing, Prince of Songkla University, Hat Yai, Songkhla 90110, Thailand
Email: kittikorn.n@psu.ac.th

Article info:
Received: 4 May 2023
Revised: 2 June 2022
Accepted: 21 June 2023

E-ISSN: 2477-4073 | P-ISSN: 2528-181X

Background

Hemodialysis is commonly used (Queeley & Campbell, 2018; Raja & Seyoum, 2020) for the vital management of end-stage renal disease (ESRD) (Ali et al., 2021). Patients on hemodialysis have complex physical, psychological, emotional (Davison et al., 2015; Himmelfarb et al., 2020; Ponce et al., 2019), nutritional (Rezeq et al., 2018; Vijaya et al., 2019), and medication-related problems (Ghimire et al., 2019; Manley et al., 2020). The purpose of hemodialysis care to these patients is to provide vascular access care, maintain adequate nutrition, reduce hospital admission, and improve the quality of life (QOL) (Ifudu, 1998).

The everyday practices of nurses and other healthcare professionals in hemodialysis are influenced by the work context, including hospital infrastructure, human resources, service organization, number of patients, and work shifts (Ponce et al., 2019). Lack of dialysis machines, poor nurse-to-patient ratio, inadequate physical space (Tranter et al., 2009), limited staff including nephrologists (Nobahar & Tamadon, 2016), technicians (Shahdadi & Rahnama, 2018), and unclear duties and professional boundaries (Johansson et al., 2015)

have affected in hemodialysis care. These constraints affect the quality of care, ultimately affecting the patient's QOL (Stavropoulou et al., 2017).

In hemodialysis care, a multidisciplinary team of nephrologists, nurses, pharmacists, dietitians, and other professionals (Shi et al., 2018) work for medical treatment, patient education, diet consultation, adjustment of behavior, and close monitoring of the patients (Chen et al., 2015). That improves the quality of care (Ponce et al., 2019) and patient outcomes (Shi et al., 2018). Providing integrated care from multidisciplinary teams is central to contemporary health policy. Worldwide, hospitals are attempting to move away from functional care and provide discipline-based specialized care (Liberati et al., 2016). There is increasing attention to multidisciplinary care for patients with chronic kidney disease (CKD) (Shi et al., 2018). Multidisciplinary care for the patients receiving hemodialysis reduces the treatment cost (Chen et al., 2015), but in the context of Nepal, such care is not practiced due to a lack of resources to reduce the cost of hemodialysis care.

As the Marxist theory of capitalism, the owner of the capital or the ruler of the organization tends to invest little and gain more profit (Marx, 1976) from that profit, further possessing more power (Marx, 1959). Traditionally, in industrial capitalism, the owner of the capital reduces the number of staff, makes their work harder, and generates more profit, which is also evidenced in health care (Humber, 2019). In the capitalist healthcare market, hospitals make a large profit through cost-effective medical and nursing care practices (Lowndes, 2012; Pichitpornchai, 2000). But reducing the cost of health care compromises the care (Lowndes, 2012), affecting people's lives (Humber, 2019).

People's everyday activities are organized by administrators through the different texts that carry the ruling relations that control the peoples' everyday work (Smith, 2006). Texts play an important role in the social organization of nurses' activities and give ideas on the organization of these activities to the power structure at the working level of the hospital administration. These texts are in a material form (Rankin, 2017). Texts that are used to organize health care, mainly nursing practices, are medical charts, enrollment reports, strategic plans (Walby, 2007), job descriptions, staffing, models of patient care delivery, roster (Pichitpornchai, 2000), policy (Waters, 2016), bio-physiological models (Waters, 2016), advanced technology (Rankin, 2015). Using these texts, hospital administrators organize the everyday practices of healthcare professionals in a certain way (Pichitpornchai, 2000; Walby, 2007). According to Marx, texts organize peoples' thinking and how they work (Marx, 1976). In hemodialysis practices, hemodialysis policy, staffing, dialysis plan, schedule, record documents, job description, staffing, etc., could be used as textual documents to organize the everyday practices of health care professionals to achieve the hospital's objective. Explication of health care professionals experiences help to find the link of texts at the practice level, that is hemodialysis unit with the hospital administration.

Women are marginalization in organizational culture and do not get the opportunity to exercise power. Women are outside the frame in the patriarchal society in the construction of institutional practices. Application of a feminist standpoint to understand their positions and keep them at the center of the decision (Smith, 1987). In the health care setting, doctors have the right and authority to make care decisions, while nurses must live with these decisions (Oberle & Hughes, 2008). Nurses working in the division of labor are largely women and struggle in the political-economic situation. Other healthcare professionals also have significant roles. As women, nurses and other health care professionals may have different standpoints regarding their social position in hemodialysis care and the decision opportunity. Their perspective would help to improve the quality of hemodialysis care.

In Nepal, healthcare resources in hemodialysis, such as healthcare professionals, infrastructure, equipment, and supplies are shortage (Mcgee et al., 2018), healthcare budget is modest (Mcgee et al., 2018; Singh & Ghimire, 2019). Staffing, job description, and other patient care documents organized hemodialysis care in a certain way. Doctors have the authority of hemodialysis care decisions, and nurses, dietitians, pharmacists, and technicians follow that decisions. In these contexts, multidisciplinary teams may have different experiences with hemodialysis care. No single study was found that explored the institutional practices of doctors, nurses, technicians, dietitians, and pharmacists on hemodialysis care. The study aimed to investigate the institutional practices of multidisciplinary teams in a hemodialysis unit.

Methods

Study Design

This study used Smith's (1987; 1990a; 1990b; 1999; 2005; 2006) institutional ethnography to investigate the perspectives of multidisciplinary teams of hemodialysis care at their everyday practices and its textual and social organization. Institutional ethnography was developed by Dorothy Smith, a feminist sociologist, as a method of inquiry that makes the politics and power embedded in peoples' everyday life visible. Institutional ethnography describes how routine activities of people's daily lives are socially organized in a particular way (Campbell & Gregor, 2002). It provides a specific way of investigation to link the nurses' and other health care professionals' everyday work with the institutional structure and shape their practices. It explicates everyday activities with institutional power relations (McGibbon et al., 2010). Institutional ethnography is different from other ethnography, and its aim is not to categorize, develop theory, and conceptualize the experiences of the people (Smith, 1990a; 1999). It describes and tracks people's work, looks for empirical links through texts and talk, and explicates what is happening (Rankin, 2015).

Texts are integral to courses of action (Smith, 2006). They coordinate people's activities and organize their social world in a certain way. Texts used in nursing practices include patient care charting documents, workload measurement grids that nurses must complete in each shift, professional journals, textbooks, videos, and web-based education. These texts play an important role in the social organization of nurses' activities and give ideas on the organization of these activities to the power structure at the workplace at the local level to beyond or trans-local. A doctor's order in the patient chart is a text that nurses need to perform several activities to carry that order, supporting the following power. In this context, the text creates

different power though the doctors and or the nurses perceive or not the relationship to be hierarchical (McGibbon et al., 2010). Ruling relations are complex relations mediated through texts that link people to other places and times and organize their daily lives, corporations, government bureaucracies, academic and professional discourses, mass media, and the complex relations that interconnect them (Smith, 2005).

Institutional ethnography uses the materialist method of Marxism and ethnomethodology with insight from the feminist practice of conscious-raising (DeVault & McCoy, 2006). As with Marxism, capitalism is a social relation of production with minimum expenditure and maximum profit. Administrators with capital power tend to produce more with minimum expenditure. They have the power to control the material production and the services in which people have to work more (Marx, 1976). In health care, administrators at higher hierarchical positions have the power to control the budget. Reducing the cost affects the activities of healthcare professionals and reduces the quality of patient care.

Institutional ethnography is a feminist standpoint theory. Smith argues that men are vested with authority and appear to represent the power and authority of the institutionalized structures that govern society. The marginalization of women in organizational cultures makes them invisible and limits their opportunities to exercise power (Smith, 1987). The feminist standpoint "expresses female experience at a particular time and place, located within a particular set of social relations" and allows going beneath the surface of appearances to reveal the real but concealed social relations (Hekman, 1997). According to Smith (1987), the application of a feminist standpoint requires women to start from where they are and understand their positions.

Participants

This study included 18 participants: ten nurses, two nephrologists, two dietitians, two technicians, and two pharmacists from public university hospital in Kathmandu, Nepal. All participants were purposively selected; none refused or withdrew from the study. The inclusion criteria for nurses were registered nurses, worked in the hemodialysis unit in different organizational hierarchies (i.e., staff nurse, incharge, and supervisor), and had a minimum of 6 months' work experiences in hemodialysis to describe the wide range of institutional practices, texts, and willing to participate. The inclusion criteria for other participants were direct or indirect involvement in hemodialysis care, such as patient checkups, maintenance of dialysis machines, provision of dialysis medicines, and dietary management. The exclusion criteria were nurses with less than six months of experience in hemodialysis and nephrologists, dietitians, technicians, and pharmacists not involved in hemodialysis care.

Data Collection

Data were collected from April 2019 to February 2020 by first author DKA, a PhD scholar, female, registered nurse in medical surgical nursing, through participant observations, in-depth interviews, focus groups, field notes, and texts. She has conducted research in hemodialysis previously and teaches and supervises the students about hemodialysis in clinical practicum. She knew the supervisor, some nurses, and a nephrologist in the hemodialysis unit that helped to establish the relationship. After taking written permission for data collection, the researcher conducted an informal meeting with the nurses and explained the study's objective, methods and tentative duration of data collection, their role during data collection, etc. Written consent was obtained from all participants.

Data collection began with participant observations of nurses' work. Gradually observation was directed toward the doctors' and technicians' involvement in hemodialysis care. Dietitians and pharmacists were not involved in everyday practices in the hemodialysis unit, so their practice could not observe. Observations included patient care, documentation, doctors' visit in the hemodialysis unit, maintenance of dialysis machines, and identification of texts. Observation covered morning, evening, and night shifts of weekdays and weekends in total 167 hours.

Interviews were conducted with the nurses, doctors, technicians, dietitians, and pharmacists using a semi-structured interview guide face-to-face that lasted from 38 to 80 minutes. The nurses were interviewed in the hemodialysis unit, the dietitians, technicians, pharmacists in their offices, and doctors in the nephrology OPD after finished patient checkups. All participants were interviewed one time, and interviews were audio-recorded with prior permission. No one was present while interviewing the participants. Data saturation was achieved when each recent interview produced no new information for research questions, and the researcher believed that enough data had been collected to draw necessary conclusions, and further data collection would not generate valuable insight. Pilot testing was done with the nurses. Two nurses from the same hemodialysis unit were interviewed.

At the end of data collection, two focus group sessions were conducted with nurses in the hemodialysis unit to verify any contrasting information obtained during the observations and individual interviews and to explore any new information. Bisaillon and Rankin (2012) suggested that after some exposure to the field and work processes, the researcher may conduct an interview concerning the texts and textual processes. Four nurses in the first focus group session and five in the second session participated, and the duration was 40 and 50 minutes, respectively. The interviews were audio-recorded with prior permission and field notes were written. Texts, staffing, protocol, and job description were collected, reviewed, and included in data analysis.

Trustworthiness

The trustworthiness was enhanced through different methods. The theory of Marxism explored the hospital expenditure on hemodialysis care, for example, the availability of dialysis machines, human resources, and infrastructure. Feminism investigated the perspectives of nurses, dietitians, and pharmacists as women and their challenges and problems during hemodialysis care. Different participants, nurses, doctors, dietitians, technicians, and pharmacists, and multiple data collection methods, participant observations, interviews, focus groups, and texts were used. Observations covered morning, evening, and night shifts. Prolong time (Lincoln & Guba, 1985) was spent in the field for data collection. Participants were asked to confirm their responses with the

interviewer's understanding at the end of each interview. Findings were presented with peer and research advisors, and an audit trail was maintained by making all data and documents available.

Data Analysis

Institutional ethnographers tend not to use formal analytic strategies. The researcher listens for clues to the social organization of experience and then follows these "threads" to understand how institutional power relations (actual and conceptual) are used to structure the peoples' everyday experiences in ways that might not even be anticipated (Smith, 2006). People's knowledge and experience hold the clues for tracking what happens in the ruling processes. Hence, analysis begins with inquiries into ruling practices from the standpoint of actual people who occupy specific locations within the extended ruling regimes that coordinate everyday work (Rankin, 2017). Data were analyzed manually by the first author. The analysis begins with listening to the social organization of ruling practices of everyday work experiences from the standpoint of the nurses. The context of hemodialysis care, how nurses enact everyday practices in hemodialysis, and how texts organized the nurses' work with ruling relations of hospital administration were identified. Analysis of nurses' everyday practices found some problems; nurses did not get involved in dialysis planning, and doctors did not have daily rounds in hemodialysis. There was a shortage of dialysis machines and delays in their maintenance when broken, interruption of dialysis fluid supply, and inadequate administrative support. The analysis is then directed toward investigating the answers to these problems through the experiences and perspectives of doctors, dietitians, pharmacists, and technicians. Further, texts used in ruling relations to control the hemodialysis care of the multidisciplinary health care teams were analyzed. Rankin (2017) mentions people's use of texts gives ruling relations a material form that institutional ethnographers can use to investigate the social organization of peoples' work.

Ethical Considerations

Ethics committee approval was obtained from the Faculty of Nursing, Center for Social and Behavioral Sciences, Institutional Review Board, Prince of Songkla University, Thailand, (PSU IRB 2019 - NSt 004) and Nepal Health Research Council (NHRC) (Reg. no. 172/2019). Written permission was obtained from the hospital administration and hemodialysis unit supervisor to observe the patient care activities in the hemodialysis unit. Participants were informed about the study's purpose, methods, voluntary participation, their roles, and right to withdraw from the study. Written consent was obtained from all participants. Interviews were conducted in separate places. Code was given to interview audios and field notes and transcribed verbatim. Soft data in the computer were secured by password. It is also noted that a part of this study, specifically focusing on the viewpoints of nurses, has been previously published in a separate publication (Acharya et al., 2022). Stringent measures were taken to avoid any replication of content or duplication between the two studies.

Results

Context of Hemodialysis Care

The hemodialysis unit provided dialysis seven days a week for 24 hours in three shifts, morning, evening, and night to both outpatients and inpatients who were children, adults, and elderly. The hemodialysis unit had 11 beds and 11 hemodialysis machines. Of them, 3-4 machines were broken each day during dialysis. No beds and dialysis machines were on standby for emergency dialysis. When serious patients come for emergency dialysis, nurses should ask the OPD patients to wait for the next session due to a shortage of dialysis machines. The lack of a separate place, a patient room used to wash and disinfect the dialyzers, may increase the infection risk to the patients. There was one Renatron machine to disinfect the dialyzers, commonly used, which caused noise and affected patients' comfort. There was no place for the patients waiting for dialysis and taking rest after dialysis, patient education, maintenance of broken dialysis machines, waste disposal, and storing the equipment and supply.

The hemodialysis unit had 14 nurses, all women; ten nurses were included as participants in the study. The hospital had two dietitians for more than 700 inpatients and the same number of outpatients each day. Both dietitians were women. Among 20-22 pharmacists, approximately half were women. Two pharmacists were included in the study, and both were women. The hospital had five faculty nephrologists, one house officer, and eight resident doctors for hemodialysis, kidney transplantation, and other renal care; all were men except the head of the department. One faculty and another resident doctor participated in the study, and both were men. The hospital had eight to ten biomedical equipment technicians who were not experts in hemodialysis. Among them, two participated in the study, and both were men (**Table 1**).

Table 1 Characteristics of participants (n = 18)

Characteristics	*f*	%
Age		
≤ 30 years	9	50.0
> 30 years	9	50.0
Gender		
Male	4	22.0
Female	14	78.0
Education		
Diploma	2	11.0
Bachelor Degree	11	61.0
Master Degree	5	28.0
Designation		
Nurses	10	56.0
Nephrologists	2	11.0
Dieticians	2	11.0
Pharmacists	2	11.0
Technicians	2	11.0
Work experiences		
0- 5 years	7	39.0
6-10 years	4	39.0
Above 10 years	4	22.0
Shift work		
Roster basis	11	61.0
Morning	7	39.0

Textual Practices: The Ruling Relations of Hemodialysis Care

Staffing

The administration used staffing mainly to determine the number of nurses required in the hemodialysis unit. Fourteen nurses and one hemodialysis technical assistant were allocated to provide dialysis for 62 OPD patients for a weekly schedule and everyday 10 to 15 inpatients from the wards and emergency. The nurse-to-patient ratio for hemodialysis patients was adequate for OPD patients, but there was a high number of emergency dialysis patients, and they were seriously ill and required constant observation and more care than OPD patients. Beyond the dialysis, nurses were assigned to care for patients before kidney transplantation, kidney biopsy, and daycare treatment therapies. That increased the nurses' scope of work, contributing to the inadequate number of nurses. Sometimes, nurses leave unfinished work in shifts. One of the senior nurses talked about nurse staffing in the hemodialysis unit:

> *"We have less staff, only 14, including us supervisor and nurse incharge. We do not do evening and night duty, sometimes only round evening duty. The 12 nurses have to do evening, night, take the day off, and sometimes they become sick and have to take leave. Therefore, the number of staff is smaller."* (Nurse-5)

Junior nurses who worked in all the shifts said there were inadequate nurses in the evening and night shifts. Usually, three nurses were in the evening, two at night, and the remaining five to eight nurses were assigned to the morning shift. In the morning shift, most of the hemodialysis patients were from OPD and in stable health, and did not need extra care. Since most patients were from the emergency department and wards in the evening and night shifts, they were seriously ill and required more care. Therefore, these shifts were more hectic and busier than the morning shift, but staffing was reversed.

> *"The nurses' ratio does not match shift-wise. There are two nurses at night, three in the evening shift, and the remaining five to eight in the morning. The busiest duty is at night rather than evening. Morning duty is, to some extent, cool. But here is a reverse in staffing, fewer nurses are on night duty. The staff ratio is not matched in this ward."* (Nurse-3)

Two dietitians were in the hospital for 700 inpatients and the same number of outpatients. They were assigned multiple tasks, providing nutritional counseling and dietary management for OPD patients, kidney and liver transplantation patients, take round in wards.

> *"This hospital has 700 beds, but we dietitians are only two. She just came a few months before after her study. Before, I was only one. We have a high workload. We have to see OPD patients, do ward rounds, conduct diabetes clinic, and see transplant patients. We have to give more time to transplant patients. We need at least another dietitian, but the hospital administration does not give. We have very difficult."* (Dietitian-1)

One doctor was assigned to two settings, hemodialysis and nephrology ward. He also had to conduct OPD. Doctors were available in the unit when patients had serious dialysis complications, and nurses called them. The number of pharmacists was inadequate for the increasing number of patients.

> *We are only five faculties, one house officer, and eight residents (two in each year). We have to conduct OPD, see the hemodialysis, kidney transplantation, and other kidney disease patients, and take rounds in the nephrology ward. Hospitals do not give doctors. We are very few doctors."* (Doctor-2)

> *"We are 20-22 pharmacists now. We are almost half … This number is equal for when the hospital had 300 beds. Now the hospital has more than 700 beds. OPD patients' flow is very high."* (Pharmacist-2)

Protocol

Dialysis protocol includes different procedures, hemodialysis, intravenous immunoglobulin, iron therapy, methylprednisolone therapy, plasma exchange, femoral, jugular, and subclavian catheterization. Nurses and doctors have to follow it. The hospital developed a protocol to control and organize hemodialysis care. Some procedures do not need to do exactly what is written in a protocol, such as a skin test before injection of anti-thymoglobulin, but nurses followed it. With low nurse staffing and high workload, sometimes nurses could not follow it exactly.

> *"Protocol and guidelines are very necessary for nursing because the work must be performed in a specific way. Sometimes many patients come for daycare therapy at a time. Protocol makes delay in procedure"* (Nurse-8)

> *"As protocol, we do a skin test before giving ATG (anti-thymoglobulin) to check reactions. Most of the patients do not have reactions, but we follow protocol and do it. It is time-consuming"* (Nurse-9)

Job description

The hospital provided a job description of a general nurse to the hemodialysis nurses that did not include hemodialysis care. Thus, the hospital was able to assign other work to the nurses, care to the patients before kidney transplantation, before and after kidney biopsy, daycare therapy (iron, prednisolone, cyclophosphamide, blood transfusion), and complications after kidney transplantation. Doctors, dietitians, technicians, and pharmacists were assigned multiple responsibilities. Doctors were assigned to care for caring patients undergoing hemodialysis and kidney transplantation, care for patients with other kidney diseases, and conduct OPD and ward rounds. The ideology for assigning different tasks is to reduce the number of healthcare professionals. One senior nurse described the job description:

> *"We do not have a hemodialysis job description, only a general job description. We do not have any … about what to do and what not to do. Therefore, we must do everything, the dialysis, care for the recipient and donor, fill out the investigation forms, draw the blood for investigation and cross-match, remove the swab, and fill out the form to process free hemodialysis. We do the technician's work when a machine is broken; we change the dialyzer, the filter, and the dicef. Technicians do not come when we call; patients are waiting. Rather than keep patients waiting, we do it ourselves."* (Nurse-1)

> *"It is the doctor's job to remove the jugular and femoral catheters, but they do not come, and if they come, it is very late. Patients need to wait for a long time. We think about the patients' comfort, and if we remove the catheters, patients can go home on time, so we remove the catheters."* (Nurse-5)

The lack of hemodialysis care in the job description created a blurring in professional boundaries among nurses, doctors, dietitians, and technicians. Doctors and technicians were not immediately available when needed, and dietitians and pharmacists were not involved in everyday practice in the hemodialysis unit. That puts the burden of others' work on the nurses, such as filling the investigation forms, giving medications without authority, removing the jugular or femoral catheter, repair dialysis machines. It increased nurses' workload and reduced the time for dialysis care.

The doctors had a different opinion on this issue. Both doctors said the number of doctors is inadequate. They must see patients in the wards and patients at the OPD clinic. Even though they would like to do as nurses request for the daily round, they cannot.

> *Inpatient flow is high; 40–42 patients are in the nephrology and other wards. We do not have a separate nephrologist for the dialysis unit. We have three dialysis sessions during 24 hours, so we cannot see all patients at the same time.*" (Doctor-2)

> *"We are not in the dialysis unit 24 hours a day. If patients need a blood investigation, we cannot ask them to wait for hours to fill out one form. In such conditions, the nurses can do it. It is the doctor's responsibility to remove the jugular and femoral catheters, but in an emergency, a well-trained nurse can also do it.*" (Doctor- 1).

Hemodialysis Decision

Upon a diagnosis of ESRD, doctors began hemodialysis treatment with the standard regimen and wrote the dialysis plan on the patient's examination ticket from the nephrology OPD, which was sent with the patient to the hemodialysis unit. The patient's ticket was the mediator and a text for ruling ideas that nurses should provide dialysis to follow the doctor's order. Nurses were not involved in the dialysis decision but were supposed to implement the decision.

> *"Usually, doctors initially check patients with CKD in the OPD. They write the dialysis prescription on the OPD ticket and send the patients here. Sometimes the doctors calculate the patients' dry weight and change the dialysis prescription during an OPD visit. For emergency patients, doctors write a hemodialysis plan on a continuation sheet from wards and emergency and send it here. They do not involve us in planning the patients' dialysis. We just carry out doctors' prescriptions"* (Nurse-8)

Since there was no standard dialysis plan for each patient in the hemodialysis unit, when patients had edema, difficulty breathing, or increased blood pressure, they consulted the doctors in the OPD, and the doctors increased the dialysis sessions without consulting the nurses or dietitians. Nurses should manage extra dialysis sessions as doctors order. There was a hierarchical discrepancy of power between doctors, nurses, and technicians.

> "*We know the patients' conditions and which patients need counseling to control fluid and sodium and regular medications to avoid extra dialysis sessions. But from the OPD, doctors decide to increase the dialysis sessions, write the prescription on the patient's ticket, and send it here. They do not ask us how to manage a patient's health problems to avoid extra dialysis sessions. We do not have machines for extra session dialysis. It affects our work."* (Nurse-2)

Doctors had different opinions about involving nurses in dialysis decisions. As a senior doctor, the hemodialysis decision and reviewing the dialysis plan is within the doctors' sphere, while the nurses can only make the decision when to access the fistula.

> "*In my understanding, generally, doctors make the hemodialysis plan and review it. The nephrologist prescribes the dialysis, even how much calcium, potassium, and sodium to keep in the dialysate and the dialysis temperature. Many things are fixed in our situation. We can consult with an expert nurse about when to access the fistula or whether the fistula works or not.*" (Doctor-1)

Doctors have the main responsibility and authority for the management of hemodialysis care. Pharmacists said that doctors did not take the initiative to involve other healthcare professionals in their team, and hospitals also did not ask them to be involved in the care of inpatients. Most pharmacists had Master's Degrees in Pharmaceutical Science, but they were assigned to distribute and sell the medicines thus hospitals could generate income.

> *"Until now, the hospital does not tell us to go to the wards. The hospital needs to make a policy to manage this. If we talk professionally, one sad thing about our country is doctors have the main authority, and they do not involve us."* (Pharmacist-2)

Doctors did not ask the dietitians to be involved in hemodialysis care in the unit though dietitians wanted to make a regular schedule to visit the hemodialysis unit, discuss with the doctors, and get involved in the nutritional management of the patients. There was a power differential between medicine and other professions.

> *"Every week or at least once a month, doctors have to tell us, 'you the dietitians come … we sit together, you have to be updated.' They have to tell us you are our staff and you are in my team."* (Dietitian-1)

> *"Doctors do not ask us to work together for hemodialysis patients. Doctors talk with patients about diet."* (Dietitian-2)

Institutional Support

The healthcare professionals in hemodialysis care did not get the required support from the hospital authorities. The nurse incharge said due to the long purchasing process of the hospital they do not get broken parts of the dialysis machines on time. Administrators made the policy not to spend more than 30 % of the purchase cost on the maintenance of dialysis machines. They showed little interest in spending money to replace broken parts of old machines or buy new dialysis machines, which resulted in a shortage of machines and delayed dialysis treatments that nurses should extend the dialysis session at night.

> *"I filled out the requisition form to replace the broken parts of the machines many times, but the hospital did not respond. If I order one part of a machine, it arrives 6–7 months later. Another part of the machine then breaks. For that reason, the B-Braun machine has not functioned for a long time. Six months ago, its belt joint failed, and it took six months to replace it. Immediately after replacing the belt joint, another part broke; therefore, this machine is not working anymore. However, the hospital does not show interest in buying new machines."* (Nurse-5)

Dialysis machines were used more than the recommended hours; therefore, all machines had daily issues. The supervisor said she talked about the issue of dialysis machine shortage to the executive director, nursing director, and general administrator in the daily morning meetings. They did not hear

her voice, which challenged the nurses to meet the increased demand for dialysis.

The technicians also raised the same issues as the nurses. The maintenance of machines and changing the non-functioning parts take a long time. A technician said hospital administration had a long official paperwork process that delayed purchasing the parts. He stressed that the administration does not think hemodialysis is a priority. In an organizational hierarchy, technicians are lower in position and do not have the authority to purchase dialysis machines.

> *"The paperwork is too much. The paperwork (i.e., requisition form to buy new parts or equipment) needs to reach every table (administrators), and everyone analyzes the need for the purchase. There is a lack of knowledge about what gets the priority."* (Technician-2)

> *"If parts are replaced, it is faster than buying new machines. But here, many people intend to save expenses on maintenance. They do not show interest in changing small parts. If the part is not expensive, they do not want to buy it for maintenance. Another thing, if one part of the machine, for example, a coupler, has a problem, buying it is a long process. Until the coupler is bought, we will remove the pump from this machine for another machine with a pump problem. Therefore, one machine becomes completely out of order. Although we want to repair the machines, according to hospital policy, we cannot spend more than 30% of the machine's purchase cost for maintenance."* (Technician-1)

Technicians were tired of repairing old machines which had broken frequently. One technician said the machines were old and frequently broke despite being repaired.

> *"Our machines are very old. If we repair a machine today, it will have a problem tomorrow. In my opinion, upper management is responsible for this situation. Normally, new machines do not give problems for 5–7 years or until they run for 5000–7000 hours. For this hospital, this time is equal to 1 year. Our machines have already run the recommended hours."* (Technician-1)

Dialysate fluid part "A" was frequently in short supply, which caused delays in starting dialysis on time, which extended the dialysis sessions into the night many times.

> *"The pharmacy could not supply all medicines regularly. Sometimes we have a fluid shortage, sometimes a syringe shortage, and sometimes fistula and IV set shortages. We think they (pharmacists) do not purchase according to our needs. Every month we are short something, and then we are short something else. Patients are inconvenienced, and we also suffer because we cannot start dialysis on time."* (Nurse-2)

The pharmacists were asked why they could not provide dialysis fluid regularly and why there was a frequent shortage of dialysis fluid. They said the Department of Drug Administration under the Ministry of Health of Nepal permitted only one pharmaceutical company to produce and supply dialysis fluid part "A" to all dialysis centers throughout the country. The company experienced increased demand which caused a short supply of dialysis fluid. The hospital had an inadequate supply of dialysis fluids.

> *"Previously, Nepal did not produce dialysis fluid; therefore, it came from India. We did not have options. Now, Sunjibani Surgicare, which is located in Lele, Nepal, is the supplier of the fluids. We have an average of 50 dialysis patients per day. Recently, the fluid company has been giving us more problems, and it interrupts the supply, which causes a shortage of fluids. I cannot describe the difficulty and problems the company is giving us. Previously, the company said it would supply the dialysis fluid as needed and took the permission to produce the fluids."* (Pharmacist-2)

Discussion

The study found that lack of physical space in the hemodialysis unit affected patient care, washing and disinfecting the dialyzers, preparing the cannulation sets, patient education, and storing the equipment, medications, and patient care documents. Without dialysis machines, nurses should ask OPD patients to wait 4-5 hours for dialysis when two to three patients come for emergency dialysis. Sola et al. (2020) basic standards of hemodialysis care require adequate infrastructure and appropriate staff and funds to provide the basic levels of care and do practices safely. In a previous study, lack of space in the hemodialysis unit affected nursing care (Tranter et al., 2009). Hospital policy of not to expense more than 30% of the purchased equipment cost on its maintenance, dialysis machines were short, and the patients should wait a long time for dialysis, which affected their health. Nurses had difficulties providing dialysis on scheduled time. Sell (2021) argues that the capitalism of the 21st century undermines health outcomes in different ways. In a previous study overarching interest of the state in cost containment in the care of diabetes patients with serious mental illness created rationing that limited the care afforded to residents, which resulted in poor diet intake and lack of quality-of-life opportunities (Lowndes, 2012).

Administrators used texts documents staffing, protocol, and job description with the ideology to control and organize the health care professionals' activities in hemodialysis. Staffing was used to determine the minimum number of nurses for three shifts. Pichitpornchai (2000) described staffing as a textual document through which the ruling apparatus determines the number of nurses required in the wards and controls nursing practice. In this study, there was understaffing of nurses, especially in the evening and night shifts, since nurses should provide care in two settings hemodialysis unit and nephrology unit, at a time for a large number of patients with different care needs. That increased nurses' workload, decreased time for hemodialysis care, delayed documentation that caused duplication of care, and unfinished work. Staffing of doctors, dietitians, pharmacists, and technicians was low. The same doctors have to conduct OPD, care for hemodialysis, kidney transplantation, and other CKD patients at a time. The number of dietitians was very low. Two dietitians were responsible for more than 700 inpatients and the same number of outpatients daily. They had a high workload and were overwhelmed with multiple responsibilities of transplant cases, OPD, and wards. Pharmacists were in shortage. They were assigned to sell the medicines, not in patient care; thus, the hospital gets more income. Patients' medication management was not in priority, which may affect drug compliance. In previous studies, nursing staff shortage increased workload, nurses did not complete all nursing tasks, and there were high medication errors, and patient falls (Prezerakos et al., 2015). The high workload and shortage of human resources for hemodialysis reduced the care quality (Choi et al., 2016). Inadequate nurse staffing was associated with missed nursing care (Kalisch et al., 2009), left care

undone, and affected patients' safety (Thomas-Hawkins et al., 2020).

Protocol was used to show the standard of care and control the nurses' and doctors' work. The use of protocol controls nursing care (Sales et al., 2018). Before giving intravenous injections Anti-Thymocyte Globulin, nurses did a skin test as protocol, although patients did not have any reactions. It consumed the nurses' time and reduced patient care. In a previous study, nursing activities for triage decisions were organized by the Canadian Triage and Acuity Scale and the ongoing 'invisible' work between the logging of the numerical score (one to five) and the patients being seen by a physician. These texts were intended to show the efficiency and quality for the satisfaction of the media, people, and government. In contrast, the texts used, such as forms, documents, and management discourse, affected adversely on the quality, and reduced waiting time was not equal to better care (Melon et al., 2013).

In this study, the lack of hemodialysis care in nurses' job description, nurses did what the hospital asked them to do. Nurses were assigned to provide other renal care before kidney transplantation, kidney biopsy care, and daycare therapies. It is argued that a lack of job descriptions makes it difficult for nurses to understand their roles and responsibilities (Gharib & Fekry, 2017). Doctors, technicians, dietitians, and pharmacists did not have formal job descriptions but were assigned multiple tasks. Blurring professional boundaries created a burden for the nurses with others' work; they gave medication without authority, removed jugular and femoral catheters, repaired dialysis machines, and provided dietary education. Nurses had a double burden of work from hospital administrators and other professionals. Job description makes administrator easy to achieve institutional objectives (de Ruiter, 2008).

In this study, doctors decide when to start patients' dialysis, what to write in the dialysis plan and when to revise it, what drugs to be prescribed, and how to manage drug complications. Nurses, dietitians, and pharmacists did not get an opportunity in these activities. Doctors believe the dialysis decision is medical sovereignty, and the nurses' role is to prick the fistula and provide dialysis. Dietitians and pharmacists were kept out of everyday practice in the hemodialysis unit. There was a lack of multidisciplinary teams in everyday practice and a lack of holistic management of patients receiving hemodialysis care. Hemodialysis care by a team of nurses, nephrologists, and allied health professionals can optimally approach patients with multifaceted and complex symptoms through coordinated, multidisciplinary care (Baragar et al., 2021). Shared decision-making about standards of care is essential in hemodialysis care (Sola et al., 2020), and the use of an interdisciplinary approach improves hemodialysis care (Hashemi et al., 2018). All nurses and dietitians, and most of the pharmacists were women. Though they wanted to do everyday practice in a team, as women, their voices did not hear by administrators and doctors. According to Luitel (2001), the patriarchal social system of Nepal subordinates women. The marginalization of women in organizational cultures makes them invisible and limits their opportunities to exercise power, especially in a patriarchal society (Smith, 1987). A previous study found similar results; doctors did not involve the nurses in decision-making while planning the patients for discharge. Nurses simply carried out the discharge process as doctors' decisions (Pichitpornchai, 2000). In another study, vascular access care by a multidisciplinary team of nephrologists, nurses, surgeons, and radiologists had a low rate of thrombosis, needed fewer catheters, and had fewer hospital admissions (Gruss et al., 2006).

In this study, the multidisciplinary team of hemodialysis care did not get adequate support from the hospital administration. Nurses are asked to increase their number and assign a doctor constantly to the hemodialysis unit, thus can manage patients' health problems optimally and on time. Nurses and technicians frequently asked the administration to replace broken parts of dialysis machines earlier and add new machines. Doctors could not take a daily round of hemodialysis as they were short. Pharmacists experienced an interruption in dialysis fluid supply. The hospital did not give priority to these issues. Organizations can support this by increasing nurses' numbers to optimize hemodialysis care (Jung & Roh, 2020) and collaborating and integrating multidisciplinary team care (Liberati et al., 2016).

Implications of the Study

The findings would help the nurses raise their voices for the improved work environment of the hemodialysis unit, supply of adequate resources, increase in nurse staffing, nurses' involvement in dialysis decisions, and practice within nurses' professional boundaries. That would improve the quality of hemodialysis care, patients' safety, and nurses' social position in hemodialysis care. Findings would help doctors, technicians, dietitians, and pharmacists bargain with hospital administration for adequate staffing and initiate integrated care delivery that would improve outcomes of hemodialysis care. Findings would use by hospital administrators to develop the hemodialysis care policy regarding opening a new dialysis unit for OPD patients, plan the budget for new dialysis machines, recruit the required human resources, and fast-track the administrative decision in patient care. It can be used to develop hemodialysis job descriptions for nurses, doctors, dietitians, pharmacists, and technicians and multidisciplinary management of hemodialysis care.

Limitations and Recommendations

The small number of participants from each discipline limits the generalizability of the findings. The literature search could not find how multidisciplinary teams of nurses, doctors, dietitians, and pharmacists are involved in hemodialysis decisions and patient care in Nepalese or international contexts. Research evidence on how cost reduction in hemodialysis impacts patient care and women and the roles of nurses and other health care professionals in hemodialysis care. In addition, nurses and other health care professionals should enhance their advocacy skills to protect the rights of patients as well as themselves and ultimately to meet the high standards of nursing and other aspects of hemodialysis care. Hospital administration should integrate multidisciplinary care, provide adequate resources, increase the budget, plan for human resources, and provide a hemodialysis job description. Hospitals need to extend dialysis units for OPD patients as separate wings, thus can address the increasing demand for dialysis. Further studies can be conducted on expenditure in

hemodialysis care and treatment outcomes of patients undergoing hemodialysis.

Conclusion

The multidisciplinary teams in hemodialysis care have different standpoints regarding their social position. Resources, physical space, dialysis machines, and health care professionals are lacking, that affect hemodialysis care. Hospital policy on expenditure has a greater shortage of dialysis machines. Lack of hemodialysis care in nurses' job description they have a double burden of work from hospital administration and other health professionals. Doctors are at the center of hemodialysis care with decision power and other health professionals are implementers of the decision. Lack of administrative support multidisciplinary teams struggling to provide minimum care that compromises the quality of hemodialysis care.

Declaration of Conflicting Interest

The authors declare that there is no conflict of interest.

Funding

This work was supported by the Graduate School, Prince of Songkla University, Thailand [Thesis grant support-2018].

Acknowledgment

The authors thank the Thailand government for Thailand's Education Hub for Southern Regions for ASEAN Countries (THE-AC) scholarship, the hospital for permission to conduct the study, and all study participants.

Authors' Contributions

DKA: Conceived the study, participated in the design, developed the proposal, undertook observations, interviews, and focus groups, transcribed the interview audios, analyzed data, and drafted the manuscript. KN and UB: Helped to conceptualize the study and design, oversaw the study, helped with data analysis, drafted and provided critical feedback on the manuscript, and approved the final manuscript.

Authors' Biographies

Devaka K. Acharya, RN, MN is a PhD Scholar at the Prince of Songkla University, Faculty of Nursing, Hat Yai, Songkhla, Thailand. She is an Associate Professor at the Tribhuvan University, Institute of Medicine, Maharajgunj Nursing Campus, Kathmandu, Nepal.

Kittikorn Nilmanat, RN, PhD is an Associate Professor, Associate Dean for Graduate Studies, and the Chairman of a PhD program in Nursing at Prince of Songkla University, Songkhla, Thailand.

Umaporn Boomyasopun, RN, PhD is an Assistant Professor Department of Community Health Nursing, Faculty of Nursing, Prince of Songkla University, Songkhla, Thailand.

Data Availability

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration of Use of AI in Scientific Writing

Nothing to disclose.

References

Acharya, D. K., Nilmanat, K., & Boonyasopun, U. (2022). Textual organization of hemodialysis nursing practice: An institutional ethnography. *Journal of Nepal Health Research Council*, *20*(1), 180-185. https://doi.org/10.33314/jnhrc.v20i01.4023

Ali, M., Ejaz, A., Iram, H., Solangi, S. A., Junejo, A. M., & Solangi, S. A. (2021). Frequency of intradialytic complications in patients of end-stage renal disease on maintenance hemodialysis. *Cureus*, *13*(1), e12641. https://doi.org/10.7759/cureus.12641

Baragar, B., Elliott, M., Love, S., Donald, M., Schick-Makaroff, K., Sultana, M., Corradetti, B., & Manns, B. (2021). Pos-511'you need a team'-perspectives on multidisciplinary symptom management using patient-reported outcome measures in hemodialysis care: A qualitative study. *Kidney International Reports*, *6*(4, Supplement), S221-S222. https://doi.org/10.1016/j.ekir.2021.03.539

Bisaillon, L., & Rankin, J. (2012). Navigating the politics of fieldwork using institutional ethnography: Strategies for practice. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, *14*. https://doi.org/10.17169/fqs-14.1.1829

Campbell, M., & Gregor, F. (2002). *Mapping social relations: A primer in doing institutional ethnography*. Canada: University of Toronto Press.

Chen, P. M., Lai, T. S., Chen, P. Y., Lai, C. F., Yang, S. Y., Wu, V., Chiang, C. K., Kao, T. W., Huang, J. W., & Chiang, W. C. (2015). Multidisciplinary care program for advanced chronic kidney disease: Reduces renal replacement and medical costs. *The American Journal of Medicine*, *128*(1), 68-76. https://doi.org/10.1016/j.amjmed.2014.07.042

Choi, H.-H., Han, K.-T., Nam, C. M., Moon, K. T., Kim, W., & Park, E.-C. (2016). Association between human resources and risk of hospitalisation in end-stage renal disease outpatients receiving haemodialysis: A longitudinal cohort study using claim data during 2013–2014. *BMJ Open*, *6*(8), e011319. https://doi.org/10.1136/bmjopen-2016-011319

Davison, S. N., Levin, A., Moss, A. H., Jha, V., Brown, E. A., Brennan, F., Murtagh, F. E. M., Naicker, S., Germain, M. J., & O'Donoghue, D. J. (2015). Executive summary of the KDIGO Controversies Conference on Supportive Care in Chronic Kidney Disease: Developing a roadmap to improving quality care. *Kidney International*, *88*(3), 447-459. https://doi.org/10.1038/ki.2015.110

de Ruiter, H. (2008). *To lift or not to lift: An institutional ethnography of patient handling practices* (Publication Number 3339000) [Doctoral Dissertation, University of Minnesota].

DeVault, M., & McCoy, L. (2006). Institutional ethnography: Using interviews to investigate ruling relations. In D. E. Smith (Ed.), *Institutional ethnography as practice* (pp. 15-44). Rowman and Littlefield.

Gharib, S., & Fekry, N. (2017). Designing job descriptions for toxicology nurses. *Asian Social Science*, *13*(7), 167-180. https://doi.org/10.5539/ass.v13n7p167

Ghimire, S., Lee, K., Jose, M. D., Castelino, R. L., & Zaidi, S. T. R. (2019). Adherence assessment practices in haemodialysis settings: A qualitative exploration of nurses and pharmacists' perspectives. *Journal of Clinical Nursing*, *28*(11-12), 2197-2205. https://doi.org/10.1111/jocn.14821

Gruss, E., Portolés, J., Jiménez, P., Hernández, T., Rueda, J. A., Del Cerro, J., Lasala, M., Tato, A., Gago, M. C., & Martínez, S. (2006). Prospective monitoring of vascular access in hemodialysis by means of a multidisciplinary team. *Nefrología (English Edition)*, *26*(6), 703-710.

Hashemi, M. S., Irajpour, A., & Abazari, P. (2018). Improving quality of care in hemodialysis: A content analysis. *Journal of Caring Sciences*, *7*(3), 149-155. https://doi.org/10.15171/jcs.2018.024

Hekman, S. (1997). Truth and method: Feminist standpoint theory revisited. *Signs: Journal of Women in Culture and Society*, *22*(2), 341-365.

Himmelfarb, J., Vanholder, R., Mehrotra, R., & Tonelli, M. (2020). The current and future landscape of dialysis. *Nature Reviews Nephrology*, *16*(10), 573-585. https://doi.org/10.1038/s41581-020-0315-4

Humber, L. (2019). The growth of healthcare capitalism. *Tribune*. https://tribunemag.co.uk/2019/11/the-growth-of-healthcare-capitalism

Ifudu, O. (1998). Care of patients undergoing hemodialysis. *New England Journal of Medicine*, *339*(15), 1054-1062. https://doi.org/10.1056/NEJM199810083391507

Johansson, P., Lundström, K., & Heiwe, S. (2015). The primary nursing care delivery system within a haemodialysis context–experiences of haemodialysis primary nurses in Sweden. *Clinical Nursing Studies*, *3*(4), 7-14. http://dx.doi.org/10.5430/cns.v3n4p7

Jung, M. J., & Roh, Y. S. (2020). Factors influencing the patient education performance of hemodialysis unit nurses. *Patient Education and Counseling*, *103*(12), 2483-2488. https://doi.org/10.1016/j.pec.2020.06.010

Kalisch, B. J., Landstrom, G. L., & Hinshaw, A. S. (2009). Missed nursing care: A concept analysis. *Journal of Advanced Nursing*, *65*(7), 1509-1517. https://doi.org/10.1111/j.1365-2648.2009.05027.x

Liberati, E. G., Gorli, M., & Scaratti, G. (2016). Invisible walls within multidisciplinary teams: Disciplinary boundaries and their effects on integrated care. *Social Science & Medicine*, *150*, 31-39. https://doi.org/10.1016/j.socscimed.2015.12.002

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. California: Sage Publications.

Lowndes, R. (2012). *Diabetes care and serious mental illness: An institutional ethnography* (Publication Number NR79494) [Doctoral Dissertation, University of Toronto].

Luitel, S. (2001). The social world of Nepalese women. *Occasional Papers in Sociology and Anthropology*, *7*, 101-114.

Manley, H. J., Aweh, G., Weiner, D. E., Jiang, H., Miskulin, D. C., Johnson, D., & Lacson, E. K. (2020). Multidisciplinary medication therapy management and hospital readmission in patients undergoing maintenance dialysis: A retrospective cohort study. *American Journal of Kidney Diseases*, *76*(1), 13-21. https://doi.org/10.1053/j.ajkd.2019.12.002

Marx, K. (1959). *Economic and philosophic manuscripts of 1844*. India: Progress Publishers.

Marx, K. (1976). *Wage-labor and capital & value, price, and profit* (Combined edition ed.). New York: International Publishers.

Mcgee, J., Pandey, B., Maskey, A., Frazer, T., & Mackinney, T. (2018). Free dialysis in Nepal: Logistical challenges explored. *Hemodialysis International*, *22*(3), 283-289. https://doi.org/10.1111/hdi.12629

McGibbon, E., Peter, E., & Gallop, R. (2010). An institutional ethnography of nurses' stress. *Qualitative Health Research*, *20*(10), 1353-1378. https://doi.org/10.1177/1049732310375435

Melon, K. A., White, D., & Rankin, J. (2013). Beat the clock! Wait times and the production of 'quality' in emergency departments. *Nursing Philosophy*, *14*(3), 223-237. https://doi.org/10.1111/nup.12022

Nobahar, M., & Tamadon, M. R. (2016). Barriers to and facilitators of care for hemodialysis patients; A qualitative study. *Journal of Renal Injury Prevention*, *5*(1), 39-44. https://doi.org/10.15171%2Fjrip.2016.09

Oberle, K., & Hughes, D. (2008). Doctors' and nurses' perceptions of ethical problems in end-of-life decisions. *Journal of Advanced Nursing*, *33*(6), 707-715. https://doi.org/10.1046/j.1365-2648.2001.01710.x

Pichitpornchai, W. (2000). *Discharge planning: Exploring current nursing practices in acute care settings in Thailand* [Unpublished Doctoral Dissertation, La Trobe University]. Australia.

Ponce, K. L. P., Tejada-Tayabas, L. M., González, Y. C., Haro, O. H., Zúñiga, M. L., & Morán, A. C. A. (2019). Nursing care for renal patients on hemodialysis: Challenges, dilemmas and satisfactions. *Revista da Escola de Enfermagem da USP*, *53*, 2019. https://doi.org/10.1590/S1980-220X2018011103502

Prezerakos, P., Galanis, P., & Moisoglou, I. (2015). The work environment of haemodialysis nurses and its impact on patients' outcomes. *International Journal of Nursing Practice*, *21*(2), 132-140. https://doi.org/10.1111/ijn.12223

Queeley, G. L., & Campbell, E. S. (2018). Comparing treatment modalities for end-stage renal disease: A meta-analysis. *American Health & Drug Benefits*, *11*(3), 118–127.

Raja, S. M., & Seyoum, Y. (2020). Intradialytic complications among patients on twice-weekly maintenance hemodialysis: An experience from a hemodialysis center in Eritrea. *BMC Nephrology*, *21*, 163. https://doi.org/10.1186/s12882-020-01806-9

Rankin, J. (2017). Conducting analysis in institutional ethnography: Analytical work prior to commencing data collection. *International Journal of Qualitative Methods*, *16*(1), 1609406917734484. https://doi.org/10.1177/1609406917734484

Rankin, J. M. (2015). The rhetoric of patient and family centred care: An institutional ethnography into what actually happens. *Journal of Advanced Nursing*, *71*(3), 526-534. https://doi.org/10.1111/jan.12575

Rezeq, H. A., Khdair, L. N., Hamdan, Z. I., & Sweileh, W. M. (2018). Prevalence of malnutrition in hemodialysis patients: A single-center study in Palestine. *Saudi Journal of Kidney Diseases and Transplantation*, *29*(2), 332-340. https://doi.org/10.4103/1319-2442.229264

Sales, C. B., Bernardes, A., Gabriel, C. S., Brito, M. d. F. P., Moura, A. A. d., & Zanetti, A. C. B. (2018). Standard Operational Protocols in professional nursing practice: Use, weaknesses and potentialities. *Revista Brasileira de Enfermagem*, *71*(1), 126-134. https://doi.org/10.1590/0034-7167-2016-0621

Sell, S. K. (2021). 21st century capitalism and innovation for health. *Global Policy*, *12*(S6), 12-20. https://doi.org/10.1111/1758-5899.12911

Shahdadi, H., & Rahnama, M. (2018). Experience of nurses in hemodialysis care: A phenomenological study. *Journal of Clinical Medicine*, *7*(2), 30. https://doi.org/10.3390/jcm7020030

Shi, Y., Xiong, J., Chen, Y., Deng, J., Peng, H., Zhao, J., & He, J. (2018). The effectiveness of multidisciplinary care models for patients with chronic kidney disease: A systematic review and meta-analysis. *International Urology and Nephrology*, *50*, 301-312. https://doi.org/10.1007/s11255-017-1679-7

Singh, S., & Ghimire, T. (2019). *Chronic kidney disease: Emphasis on its burden and challenges in Nepal* International Youth Conference on Science, Technology and Innovation, Kathmandu, Nepal.

Smith, D. E. (1987). *The everyday world as problematic: A feminist sociology*. Toronto: University of Toronto Press.

Smith, D. E. (1990a). *The conceptual practices of power: A feminist sociology of knowledge*. Toronto: University of Toronto Press.

Smith, D. E. (1990b). *Texts, facts, and femininity: Exploring the relations of ruling* (1st ed.). London: Routledge. https://doi.org/10.4324/9780203425022

Smith, D. E. (1999). *Writing the social: Critique, theory, and investigations*. Toronto: University of Toronto Press.

Smith, D. E. (2005). *Institutional ethnography: A sociology for people*. New York: Rowman Altamira.

Smith, D. E. (2006). *Institutional ethnography as practice*. Oxford: Rowman & Littlefield. https://books.google.co.th/books?id=BGSP-8Y1Q3IC

Sola, L., Levin, N. W., Johnson, D. W., Pecoits-Filho, R., Aljubori, H. M., Chen, Y., Claus, S., Collins, A., Cullis, B., & Feehally, J. (2020). Development of a framework for minimum and optimal safety and quality standards for hemodialysis and peritoneal dialysis. *Kidney International Supplements*, *10*(1), e55-e62. https://doi.org/10.1016/j.kisu.2019.11.009

Stavropoulou, A., Grammatikopoulou, M. G., Rovithis, M., Kyriakidi, K., Pylarinou, A., & Markaki, A. G. (2017). Through the patients' eyes: The experience of end-stage renal disease patients concerning the provided nursing care. *Healthcare*, *5*, 36. https://doi.org/10.3390/healthcare5030036

Thomas-Hawkins, C., Flynn, L., & Dillon, J. (2020). Registered nurse staffing, workload, and nursing care left undone, and their relationships to patient safety in hemodialysis units. *Nephrology Nursing Journal*, *47*(2), 133-142. https://doi.org/10.37526/1526-744X.2020.47.2.133

Tranter, S. A., Donoghue, J. M., & Baker, J. D. (2009). Nursing the machine: An ethnography of a hospital haemodialysis unit. *Journal of Nephrology & Renal Transplantation*, *2*(3), 28-41.

Vijaya, K. L., Aruna, M., Rao, S. V. L. N., & Mohan, P. R. (2019). Dietary counseling by renal dietician improves the nutritional status of hemodialysis patients. *Indian Journal of Nephrology*, *29*(3), 179-185. https://doi.org/10.4103%2Fijn.IJN_272_16

Walby, K. (2007). On the social relations of research: A critical assessment of institutional ethnography. *Qualitative Inquiry*, *13*(7), 1008-1030. https://doi.org/10.1177/1077800407305809

Waters, N. R. (2016). *The social organization of wound clinic work: An institutional ethnography* (Publication Number 10296363) [Doctoral Dissertation, University of Calgary]. Canada.

Cite this article as: Acharya, D. K., Nilmanat, K., & Boonyasopun, U. (2023). Institutional ethnography of hemodialysis care: Perspectives of multidisciplinary health care teams in Nepal. *Belitung Nursing Journal, 9*(4), 359-368. https://doi.org/10.33546/bnj.2691