

Nurses' knowledge, attitudes and practices regarding feeding of low and very-low birth weight infants: a cross-sectional study at tertiary referral hospitals in Rwanda

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ABSTRACT

INTRODUCTION: Enteral nutrition is an important part of neonatal care. To make enteral feeding as effective as possible, nurses must have sufficient knowledge, positive attitudes, and effective techniques. This study sought to assess the knowledge, attitudes, and practices of nurses regarding the nutrition of low and very-low birth weight infants (LBW and VLBW) in Rwanda.

METHODS: The study took place in three tertiary referral hospitals in Rwanda from January to February 2020. A questionnaire was developed to facilitate the survey among neonatal nurses. Several items were used to evaluate their knowledge, attitudes, and practices concerning infant enteral feeding. Answers to knowledge questions were graded on their accuracy. Other items were rated on a Likert scale.

RESULTS: There was a total of 47 respondents. The vast majority of them (83%) were female and aged 31 to 40 years. The average knowledge score for feeding LBW and VLBW infants was 65.9% (SD=24.3%). Nurses were excellent at understanding the benefits of breast milk, but there were discrepancies in caloric requirements for growth (21.3%), gastric residuals (38.3%), and feeding methods (8.5%). The vast majority of nurses had neutral or negative attitudes toward nasogastric tube (NGT) feeding. NGT feeding was a common practice, with 76.6% adhering to safety protocols and 74.5% assessing nutritional status regularly. Almost half of the nurses (48.9%) reported feeding delays due to workload. The majority emphasized early feeding and valued their role in neonatal care.

CONCLUSION: In Rwandan tertiary referral hospitals, most nurses demonstrated adequate knowledge, neutral or negative attitudes, and relatively high levels of NGT infant feeding practices. Strategies are needed to improve and sustain this performance

Keywords: Knowledge, attitudes, practices, nurses, low and very low birth weight infants, feeding, Rwanda.

INTRODUCTION

Low birth weight (LBW), defined by the World Health Organization (WHO) as a birth weight of less than 2,500 grams, remains a significant public

health concern globally [1]. In 2020, approximately 19.8 million newborns worldwide—about 14.7% of all births—were classified as having low birth weight [2,3]. Specific data on very low birth weight (VLBW), defined as a birth weight of less

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Received: 29th August 2024; **Initial decision given:** 29th September 2024; **Revised manuscript received:** 10th March 2025; **Accepted:** 21st March 2025.
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Citation for this article: F. Buloze Rurumbi, F. Agaba, A. Musafili, et al. Nurses' knowledge, attitudes and practices regarding feeding of low and, very low birthweight infants: a cross-sectional study at tertiary referral hospitals in Rwanda. Rwanda Medical Journal, Vol. 82, no.1, p. 95-104, 2025. <https://dx.doi.org/10.4314/rmj.v82i1.11>

than 1,500 grams, is less frequently reported in global statistics [1]. However, the World Health Organization notes that low birth weight is more common in low-middle-income countries, with significant underreporting due to many deliveries occurring in homes or small health facilities where birth weights are not always recorded [4,5].

These babies with LBW and VLBW were more likely to experience complications such as hypothermia, hypoglycemia, neonatal sepsis, and death within the first month of life. Those who survived may face lifelong consequences such as stunted growth, lower intelligence quotient, visual and hearing disorders, and adult-onset chronic conditions like obesity and diabetes. Low birth weight contributes significantly to neonatal and under-5 mortality rates around the world, particularly in low- and middle-income countries [6-10].

Thus, neonatal morbidity and mortality can be reduced by providing adequate care to LBW infants, such as maintaining temperature, optimal feeding, cord and skin care, and preventing, detecting, and treating infections. Together, these interventions can help prevent morbidity and mortality from LBW, promoting the global targets of reducing neonatal mortality to 12 deaths per 1000 live births and under-5 mortality rate to 25 deaths per 1000 live births between 2015 and 2030 [10,11]. Optimal feeding, a critical intervention for improving the survival of neonates with LBW and VLBW, must be carried out correctly to ensure adequate growth and development [12,13]. Nurses, who play an important role in providing healthcare for LBW and VLBW in neonatal intensive care units and nurseries must have appropriate knowledge, nonjudgmental attitudes, and effective practical skills to ensure adequate infant feeding. However, there is evidence that such knowledge, attitudes, and skills may be insufficient and inconsistent across settings [14-17].

In Rwanda, approximately 35,000 neonates are born prematurely with LBW every year. Around 2,600 of these births die as a result of direct complications associated with prematurity and LBW [18]. However, little is known about the competencies of nurses in newborn infant nutrition, which is an important lifesaving intervention. This study was designed to answer some of the key questions about this critical component of newborn care. Thus, the aim was to assess nurses' knowledge, attitudes, and practices regarding infant feeding with low and very low birth weights at Rwandan

tertiary referral hospitals.

METHODS

Design: This was a cross-sectional study that took place in three Rwandan tertiary referral hospitals from January to February 2020.

Setting: The current study was carried out in neonatal units of three tertiary referral hospitals, including the University Teaching Hospital of Butare (UTHB), Rwanda Military Teaching Hospital (RMTH), and University Teaching Hospital of Kigali (UTHK). The UTHB is located in the Southern province, whereas the RMTH and UTHK are in the capital of Rwanda, Kigali. The neonatal units at these hospitals are among the busiest in the country. The bed capacity of these units is 35 at UTHB, 25 at RMTH, and 36 at UTHK. The total number of neonates admitted to these units each month may range between 60 and 120. These admissions primarily include in-born babies as well as out-born babies referred by district and provincial hospitals.

Neonatal units at the three hospitals provide a range of care, from basic newborn care to intensive neonatal services for critically ill neonates. These units are staffed by neonatologists, pediatricians, nurses, and social workers, with the exception of the UTHB, which lacks neonatologists. These units are also equipped with incubators, phototherapy machines, bubble Continuous Positive Airway Pressure (CPAP) machines, radiant warmers, and other necessary equipment and materials for the care of preterm babies or those with serious health issues.

UTHB serves a large catchment area and is an important resource for maternal and child health in a Southern and a portion of the Western Provinces. The main catchment area of RMTH includes the Eastern Province. UTHK is the primary referral center for neonatal cases in Rwanda, particularly critical cases that require specialized care. The neonatal units of these hospitals play a pivotal role in providing comprehensive lifesaving interventions and improving neonatal health outcomes, as well as contributing to medical education and research.

Population and data collection process: All nurses working in neonatal units and neonatal intensive care units in the three tertiary referral hospitals were approached to participate in the study. After

clear information about the research project and signing a consent form, the nurse who agreed to participate in this study was given an anonymous questionnaire to fill out and hand in later to the investigator when it was ready. The enrollment was opportunistic, and therefore, no sample size calculation was needed. The data collection was facilitated by a predesigned questionnaire with a Likert scale, adapted from a similar questionnaire, which was used by a previous author [19]. This questionnaire had 4 sections. Each section contained various statements reflecting knowledge, attitudes, and routine practice related to neonatal nutrition or care.

The section 1 included sociodemographic information of nurse participants. Section 2 focused on their knowledge that were assessed using a 5-point Likert scale as follows: strongly agree, agree, disagree, strongly disagree, and unsure. Section 3 comprised their attitudes, which were assessed using a 3-point Likert scale: agree, disagree, and unsure. Section 4 included their practices toward feeding neonates with low and very low birth weights. The latter were assessed using a 4-point Likert scale as follows: never, sometimes, often, always. On average, the time that this questionnaire required to be fully completed was around twenty to thirty minutes.

Outcomes: The primary outcomes included the knowledge, attitudes, and practices of nurses in Rwandan tertiary referral hospitals about neonatal infant feeding for low and very low birth weight infants.

Analysis: An Excel sheet created specifically for data entry was used. Following data cleaning, the data were exported for analysis into IBM SPSS Statistics 20. In order to convert the nominal Likert scale into numerical scores, agree and strongly agree were regarded as correct responses, while disagree, unsure, and strongly disagree were categorized as incorrect. While an incorrect response received a score of 0, all correct answers received a score of 1. These changes only affected nurse knowledge, as data on nurse attitudes and practices remained consistent with those recorded in the original questionnaires used for assessment throughout the analysis. The main outcomes were described with descriptive statistics derived from frequency tables. These statistics included percentages, mean, and standard deviation. Pearson's chi-square test was used to investigate

the differences in knowledge of nurses across sociodemographic groups.

This study was approved by the College of Medicine and Health Sciences Institutional Review Board, but before starting, formal permission was requested from the management of each hospital (approval number 010/CMHS IRB/2020).

RESULTS

A total of 72 questionnaires were distributed to all nurses working in neonatal units and neonatal intensive care units across the three hospitals. However, only 47 questionnaires were completed, yielding a response rate of 65%. Some nurses went on leave shortly after agreeing to participate in the study. Others went on another work mission or were too busy to complete the questionnaires.

Table 1 summarizes the sociodemographic and professional characteristics of 47 nurse participants, focusing on aspects relevant to neonatal care. The majority of participants, 39 (83%), were female. The majority of nurses (61.7%) were aged 31 to 40, indicating an experienced demographic. Almost 60% had a diploma (A1), with the remaining 40.4% holding a bachelor's degree (A0) or postgraduate qualifications. Nurses' experience ranged from 5 to 9 years, with 36.2% having 10 to 14 years and 31.9% having 15 or more years. A significant portion, 55.3%, had 5-9 years of experience in neonatal nursing, with fewer having more than 10 years. The majority (76.6%) had received neonatal care training. Nurses' knowledge was primarily obtained through undergraduate courses (36.2%) and in-service experience (29.8%), with fewer citing formal courses (19.1%) or workshops (14.9%).

Knowledge of nurses in feeding babies with low and very low birth weight

Table 2 shows nurses' knowledge of neonatal nutrition for low- and very-low-birth-weight babies, including various aspects of feeding and care. The average of all correct answers was 65.9% (SD=24.3%). Overall, nurses demonstrated strong knowledge in areas such as the benefits of breast milk for preterm babies (100% correct), how breast milk boosts newborn immunity (100% correct), and the impact of colostrum's high protein levels (93.6% correct). Furthermore, there was moderate knowledge in areas such as average weight gain

Table 1: Sociodemographic characteristics of nurse participants

Characteristics	n=47	%
Gender		
Male	8	17.0
Female	39	83.0
Age (years)		
20-30	4	8.5
31-40	29	61.7
≥41	14	29.7
Education level		
A1*	28	59.6
A0** and postgraduate	19	40.4
Nursing Experience (years)		
5-9	17	36.2
10-14	15	31.9
≥15	15	31.9
Nursing experience (years)		
1-4	12	25.5
5-9	26	55.3
≥10	9	19.1
Training in neonatal care		
Yes	36	76.6
No	11	23.4
Sources of gaining neonatal feeding knowledge		
In-service personal experience	14	29.8
Recognized neonatal feeding course	9	19.1
Conferences and workshops	7	14.9
Undergraduate nursing course	17	36.2

* A1 or level A1 education was defined as holding a diploma earned after two years of postsecondary education. **A0 or level A0 education was defined as holding a bachelor's degree.

expectations (83.0% correct), target enteral feed volume (80.9% correct), and awareness of feeding progression volumes (57.4% correct). However, there were significant gaps in knowledge regarding certain feeding guidelines, such as correct gastric residual volume management (38.3% correct), a correct caloric requirement for neonatal growth (21.3% correct), and understanding of feeding methods for preterm neonates (8.5% correct). In addition, only 42.6% of nurses correctly understood the timing of iron supplementation.

The relationship between the sociodemographic characteristics of nurses and their knowledge of feeding low and very-low-birth-weight neonates

was analyzed, as shown in Table 3. This analysis revealed no significant differences in knowledge among nurses based on their ages, education levels, or lengths of experience in nursing or neonatal care. The only significant differences in knowledge were observed between nurses based on marital status, with married nurses scoring higher on knowledge assessment than others ($p=0.00$).

Nursing attitudes toward feeding neonates with low and very low birth weights

The attitudes of Rwandan nurses regarding the

Table 2: Neonatal nutrition knowledge for low and very-low birth weight babies among nurses in three tertiary referral hospitals in Rwanda, January – February 2020

Asked questions	Correct answers	Incorrect/unknown answers
	n (%)	n (%)
Breast milk is the appropriate food for preterm babies	47 (100)	0 (0)
Trophic enteral feeding provides minimal nutrition	43 (91.5)	4 (8.5)
The recommended trophic feed volume is 10-24 ml/kg/day	27 (57.4)	20 (42.6)
The daily advancement feeding volume ranges from 10 to 24ml/kg	29 (61.7)	18 (38.3)
The fast advancement feeding volume exceeds 30ml/kg/day	27 (57.4)	20 (42.6)
The target enteral feed volume is 150-180mL/kg/day	38 (80.9)	9 (19.1)
The best time to start enteral feeding is day one to day three of life	41 (87.2)	6 (12.8)
There is no benefit to begin feeding after day four of life	20 (42.6)	27 (57.4)
Colostrum is characterized by high protein levels	44 (93.6)	3 (6.4)
Breast milk boosts the immunity of newborn babies	47 (100)	0 (0)
Breast milk production increases with increased sucking or expression	47 (100)	0 (0)
Breast milk composition is the same for preterm, term neonates, and infants	29 (61.7)	18 (38.3)
Human fortification begins when the newborn receives 100ml/kg per day	29 (61.7)	18 (38.3)
The average weight gain for severe preterm is 15 grams per kilogram per day	39 (83.0)	8 (17.0)
The average daily energy requirement for a preterm baby is 120kcal/kg/day	29 (61.7)	18 (38.3)
Most newborns pass their first urine within the first 24 hours	45 (95.7)	2 (4.3)
Meconium passage happens within 36 hours after birth	25 (53.2)	22 (46.8)
Significant residual volume for feed intolerance is >2ml/kg/feed, or >50% of the previous feed	30 (63.8)	17(36.2)
If the gastric residual volume is greater than the scheduled feeding volume, re-feed the GRV [†] only	18 (38.3)	29 (61.7)
The gold standard method for verifying nasogastric tube placement is by X-ray	17 (36.2)	30 (63.8)
Iron supplementation begins at 2 weeks of age	20 (42.6)	27 (57.4)
The risks associated with NGT ^{††}	37 (78.7)	10 (21.3)
Risk assessment of NGT	24 (51.1)	23 (48.9)
Different methods for feeding preterm neonates	4 (8.5)	43 (91.5)
Calories required for neonatal growth: 25 Cal/kg/day	10 (21.3)	37 (78.7)
Daily neonatal body weight measurement is important	34 (72.3)	13 (27.7)
Knows that breastfeeding should begin within the first hour after birth in a normal full-term neonate	20 (42.6)	27(57.4)
The nurse is responsible for hospitalized neonate feeding	43 (89.6)	4 (8.5)
Contraindications to enteral feeding	27 (57.4)	20 (42.6)

[†]GRV: Gastric residual volume. ^{††}NGT: Nasogastric tube

nasogastric tube feeding of low and very-low birth weight infants are displayed in Table 4. Most nurses had a neutral to negative opinion of NGT feeding, with only 23.4% finding it enjoyable and the majority disagreeing (46.8%) or unsure (29.8%). While 34% thought NGT feeding was extra work, more than half (53.2%) did not. Although a sizeable percentage (38.3%) disagreed, nearly half (48.9%) denied that NGT feeding was stressful, indicating that nurses' stress levels varied. The task's time demand was acknowledged by nearly half (48.9%) of respondents who agreed that NGT feeding took more time. The fact that the majority of nurses (83%) found NGT insertion easy suggests that they were competent or familiar with the procedure. More than half (53.2%) thought that insertion of the NGT was simpler than feeding through an OGT.

Sixty-seven percent of respondents agreed that the main goal of neonatal management should be newborn feeding. It was preferred to keep this duty, as more than half (53.2%) opposed the idea of non-nurses feeding newborns. Despite the risk of necrotizing enterocolitis, most (63.8%) disagreed that it was advisable to delay enteral feeding in preterm neonates, suggesting that early feeding initiation is recommended.

Self-reported nutrition nursing practices for neonates with low and very-low birth weights

The self-reported nutrition care practices of nurses for low and very-low-birth-weight neonates at three hospitals in Rwanda are shown in Table 5. With 44.7% performing orogastric tube insertion

Table 3: Relationship between socio-demographic characteristics of nurses and their knowledge of feeding of low and very low-birth-weight neonates in three tertiary referral hospitals in Rwanda, January – February 2020

Characteristics	Passing scores in knowledge (65%)				Chi-square	p-value
	Passed		Not passed			
	n=23	%	n=24	%		
Age (years)						
20-30	3	13	1	4.2	1.2	0.53
31-40	13	56.5	16	66.7		
≥41	7	34.4	7	29.2		
Marital status						
Single, divorced, or widow	7	30.4	0	0	8.5	0.00
Married or living with a partner	16	69.6	24	100		
Education						
A1*	14	60.9	14	58.3		
A0** and postgraduate	9	39.1	10	41.7	0.0	0.86
Nursing experience (years)						
5-9	7	30.4	10	41.7	0.6	0.73
10-14	8	34.8	7	29.2		
≥15	8	34.8	7	29.2		
Experience in neonatal care (years)						
1-4	8	34.8	4	16.7	2.8	0.24
5-9	10	43.5	16	66.7		
≥10	5	21.7	4	16.7		

*A1 or level A1 education was defined as holding a diploma earned after two years of postsecondary education. **A0 or level A0 education was defined as holding a bachelor's degree.

Table 4: Nursing attitudes toward feeding low and very-low-birth-weight neonates at three Rwandan tertiary referral hospitals, January–February 2024

Attitudes	Agree	Disagree	Unsure
	n (%)	n (%)	n (%)
NGT [†] feeding is enjoyable	11 (23.4%)	22 (46.8%)	14 (29.8%)
NGT feeding is an extra duty	16 (34%)	25 (53.2%)	6 (12.8%)
NGT feeding is stressful	18 (38.3%)	23 (48.9%)	6 (12.8%)
NGT feeding requires more time	23 (48.9%)	19 (40.4%)	5 (10.6%)
NGT insertion for feeding is challenging	5 (10.6%)	39 (83%)	3 (6.4%)
NGT insertion is easier than OGT ^{††}	25 (53.2%)	18 (38.3%)	4 (8.5%)
The primary focus of all neonatal management care should be on newborn feeding	29 (61.7%)	14 (29.8%)	4 (8.5%)
If someone other than a nurse could feed the newborn	12 (25.5%)	25 (53.2%)	10 (21.3%)
Delaying enteral feeding in preterm neonates is advised because early initiation results in necrotizing enterocolitis	10 (21.3%)	30 (63.8%)	7 (14.9%)

[†]GRV: Gastric residual volume. ^{††}NGT: Nasogastric tube

Table 5: Self-reported nutrition nursing practices for low and very-low birth weight infants at three Rwandan tertiary referral hospitals, January–February 2024

Practices	Never n (%)	Sometimes n (%)	Often n (%)	Always n (%)
Frequency of orogastric tube insertion	1 (2.1)	14 (29.8)	21 (44.7)	11 (23.4)
Frequency of nasogastric tube insertion	0	9 (19.1)	14 (29.8)	24 (51.1)
Frequency of tube placement assessment prior to every feeding	2 (4.3)	3 (6.4)	6 (12.8)	36 (76.6)
Frequency of nutritional status assessment	0	7 (14.9)	5 (10.6)	35 (74.5)
Frequency of gastric residual measurement	0	10 (21.3)	16 (34.0)	21 (44.7)
How frequently delays in patient feeding can result from being busy	7 (14.9)	23 (48.9)	14 (29.8)	3 (6.4)

frequently and 23.4% always, most nurses employ this technique regularly. The prevalence of tube feeding practices is also high, with 51.1% of people always using nasogastric insertion and 29.8% frequently using it. The vast majority of respondents (76.6%) emphasize strict adherence to safety procedures by evaluating tube placement before each feeding. Neonates' nutritional status is always evaluated by the majority of nurses (74.5%), highlighting a continuous emphasis on tracking development and health. With 44.7% of nurses always measuring gastric residuals and

34% frequently doing so, it appears that nurses routinely do so in order to avoid feeding issues. Workload is frequently the cause of feeding delays; nearly half (48.9%) of respondents said that it occasionally causes delays, suggesting that workload is a hindrance to timely feeding.

DISCUSSION

The purpose of this study was to assess the knowledge, attitudes, and practices of nursing staff regarding the feeding of low and very low

birth weight infants in Rwandan Tertiary Referral hospitals. Overall, nurses were very knowledgeable about the health benefits of breast milk, but there were significant gaps in their understanding of caloric requirements, gastric residuals, and various feeding methods. Married nurses had more knowledge than their peers who were single, divorced, or widowed. Most nurses had neutral or negative attitudes toward nasogastric tube feeding, though many found the insertion procedure relatively simple. NGT feeding was widely practiced, with nurses adhering to safety protocols and regularly assessing nutritional status. Although nurses occasionally delayed breastfeeding due to workload, most of them emphasized the importance of early breastfeeding and acknowledged their critical role in neonatal care.

This study found that nursing staff had an average knowledge score of 65.9% (SD=24.3%) for feeding low and very low birth weight infants. A hospital study in Turkey found that nurses had a mean knowledge score of 64.7% (SD=8.7) about transitioning preterm infants from nasogastric/orogastric tube feeding to oral feeding [20]. In contrast, in a study conducted in an Egyptian hospital setting, 69.5% of nurses had inadequate knowledge of nutritional requirements for stable, low birth weight newborn infants, highlighting variability in knowledge across countries and settings [21].

Furthermore, the results of this study revealed that nurses had a thorough understanding of the health benefits of breast milk. This finding is supported by previous research, which found that 96.7% of nurses and midwives in a Turkish hospital understood the benefits of breastfeeding exclusively during the first six months [22]. These findings are consistent with the emphasis on increasing healthcare providers' knowledge and practices of optimal feeding of low birth weight infants to avoid growth retardation, infections, developmental delays, and mortality rates [23].

In the current study, there were gaps in nurses' knowledge of caloric requirements, with only 21.3% of nurses providing correct answers. This contrasts with the findings of a North American survey, which revealed that nurses and other healthcare providers have a high level of knowledge and practice regarding neonatal nutrition [24]. In addition, nurses who participated in this study

demonstrated a lack of understanding regarding the definition of significant gastric residuals and the correct amount of feed volume to replace these residuals. Only 38.3% of them were able to correctly respond. This finding is consistent with a survey from Australian neonatal care units, which found inconsistencies among nurses and other healthcare providers in their knowledge of precise amounts of gastric residuals indicating feed intolerance. For example, approximately 9% of these healthcare providers reported increased gastric residuals, taking into account the residual colors and the clinical conditions of neonates [25].

In this study, knowledge gaps were also identified regarding feeding methods for LBW and VLBW infants, with only 8.5% of nurses correctly responding to the existing methods. However, previous research in Egypt found relatively few gaps, with 42.4% of nurses lacking knowledge of various feeding methods for LBW infants, highlighting differences in knowledge across settings [21].

Previous research has found no association between sociodemographic characteristics of nurses, such as age, marital status, professional experience, and knowledge of neonatal care, including feeding LBW infants [26]. This finding was consistent with the findings of the current study, with the exception of differences in knowledge of feeding LBW and VLBW infants between married nurses and those who were single, divorced, or widowed. The majority of nurses were married and had more experience working in neonatal care than their single counterparts. This may help to explain why married nurses were more knowledgeable about feeding LBW and VLBW infants than their counterparts.

In this study, the majority of nurses held neutral or negative attitudes toward nasogastric tube feeding. Most nurses had a neutral to negative opinion of NGT feeding, with only 23.4% finding it enjoyable and the majority disagreeing (46.8%) or unsure (29.8%). Previous research found that nurses had varying attitudes toward providing enteral feeding using NGT. In a Palestinian setting, 50.5% of nurses thought enteral feeding was expensive, and 40.3% thought it was difficult to deliver [27], whereas 67.2% of nurses in South Africa said it was simple to deliver [28].

Our findings revealed that NGT feeding was a common practice, with 76.6% adhering to safety protocols and 74.5% regularly assessing nutritional status. Previous research found that nurses had varying rates of compliance with protocols and guidelines when administering enteral feeding using NGT. These rates ranged from 45% to 70% [29-31]. These findings confirm the variability in how nurses follow protocols and guidelines across health facilities.

In this study, delays in feeding due to workload were reported by 48.9%, indicating operational issues. Despite these challenges, the majority prioritized early feeding and valued their role in neonatal care. Other authors echoed the importance of early infant feeding despite delays due to overwork. In a Florida study, 43% of nurses cited a lack of time, and 31% cited understaffing as major reason for delaying their ability to assist mothers with the early initiation of breast milk expression [32].

This study was the first of its kind to be conducted in Rwanda. However, it has limitations because it includes a relatively small number of nurses due to logistical constraints. Another limitation is that the present study was only conducted in tertiary referral hospitals, so the results cannot be generalized to the entire country.

CONCLUSION

This study examined nurses' knowledge, attitudes, and practices when feeding infants with low and very low birth weights in three Rwandan tertiary referral hospitals. Nurses demonstrated excellent knowledge of health benefits of breast milk, but their knowledge of caloric requirements, significant gastric residuals, and various feeding methods was relatively limited. Married nurses demonstrated greater knowledge levels. Despite the fact that nasogastric tube feeding is a simple procedure, the majority of nurses felt neutral or negative about it. Nasogastric feeding tubes were commonly used, and established feeding protocols were followed. Nurses emphasized the significance of early breastfeeding, which was sometimes delayed due to overwork. They were also aware of their critical role in neonatal care. Based on our findings, regular training is required to close knowledge gaps in the feeding of LBW and VLBW infants. Workshops and peer education on appropriate feeding attitudes

and practices may also be beneficial in mitigating identified shortcomings.

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