

Neonatal Nurses' Perceived Barriers to the Provision of Developmental Care in Neonatal Intensive Care Units of Selected Hospitals in Addis Ababa, Ethiopia

Mekdes Hailegebreal Habte
Department of Pediatric Nursing, Saint Paul's Hospital Millennium Medical Collage,
Addis Ababa, Ethiopia
E-mail: hmekdes@yahoo.com

Abstract

Introduction: studies have shown that there are multitudes of antecedent factors that may influence the way providers perceive the care they provide. Understanding these factors is essential for the successful planning and implementation of developmental care provision in the neonatal intensive care units. Nurses are the frontline care provider in the neonatal intensive care units as their approach to patient care, training, and scope of practice is wide. In spite of this, there are a few investigation on nurses' perceived barrier assessments of neonatal developmental care provision. Therefore, the aim of this study was to find out Nurses' perceived barriers to the provision of developmental care in neonatal intensive care units of governmental hospitals in Addis Ababa, Ethiopia. **Methods:** across-sectional survey was employed. A total of 90 nurses (n=90) working in neonatal intensive care units of five governmental hospitals in Addis Ababa, Ethiopia were participants of the study. Convenience sampling technique was used. The data were collected by using structured questionnaire in May 2019. Summary of samples and measures were done using descriptive statistics and Kruskal-Wallis tests (nonparametric comparisons) were used to compare the differences of nurses' perceived barriers according to various demographic groups. **Results:** The overall job satisfaction were the most perceived barrier that affects nurses perception on neonatal developmental care provision (M=2.44, SD=.21). Most of (93.3%) of the participants agreed that work overload (93.3%) and staff development opportunities (87.7%) were the main barriers among job satisfaction barriers. Kruskalwallis test shows that significant differences were found between job satisfaction barriers and year of experience (Kw2, 38.84; P=0.01), and level of education and job satisfaction (Kw2, 20.13; P=0.021). The nurses who had more experience agreed more on job satisfaction barriers. **Conclusion:** The most common nurses' perceived barriers to the provision of developmental care were job satisfaction barriers. Work overload and staff development opportunities received the highest ratings. Poor relationship with the coworker were less perceived as an obstacle when compared with the other barriers. Governmental efforts are needed to increase the nurses' job satisfaction, thus improve patients' perceptions of care quality and ensure an adequate nursing workforce. This in turn provides to adjust the gaps in providing quality neonatal intensive care units developmental care by nurses in different hospitals.

Keywords: Developmental care; Barriers; Perception

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Introduction

Neonatal developmental care refers to the use of a range of nursing interventions to reduce stressors originating from the Neonatal Intensive Care Unit (NICU) environment (1). Developmental care has a substantial contribution to the reduction of neonatal mortality which is currently very disturbing and comprising around 41% of all child deaths worldwide and 37 per 1000 live birth in Ethiopia (2). In 2009, the Federal Ministry of Health (FMOH) of Ethiopia with the support of the United Nations International Children Economic Fund and with technical assistance from the Ethiopian Pediatric Society piloted the new born corner in 100 health facilities (3). Though various approaches to quality assessment and quality improvement of the NICU services have been proposed over time, evidences shows that even when all the necessary structural components are available, the quality of care may still be poor unless appropriate use of an available resources to ensure effective case management (3). Thus, the implementation of developmental care in preterm infants indisputably contributes to the improvement of child survival which has been identified as one of the sustainable Development Goals (SDG) (4). Nurses play a key role in the coordination and successful implementation of developmental care in the NICU. However, the implementation of developmental care requires substantial work from nurses because they have to deal with challenging personal and unit related variations (5, 6).

Changing traditional newborn service; which is the newborn care given by resident doctors to the new model of newborn care where trained neonatal nurses provide care is sustainable and suitable for a long period of time. According to a new model of newborn care nurse practitioners should be seen as an alternative approach to high quality service provision and not as a substitute for resident doctors or a way of delegating tasks that

doctors find boring (6). In the new model of newborn care; factors involved in nurses job satisfaction included a well-defined role, working within a team, appropriate remuneration, and evidence of support for both role definition and continuing professional development and also the nurse manager are a full member of the team; this has helped maintain good rapport and stability in the face of organizational and management changes in the neonatal health service (6).

Studies suggest that professionals often perceive the availability of more time, education, and staff as necessary for the implementation of developmental care in the NICU. A study also reported that fewer work hours per day, higher level of education, and fewer years of work experience in NICUs as significant perceived factors affecting the implementation of developmental care by nurses in China (7).

Broadly, there are multitudes of antecedent factors that may influence the way providers perceive the care they provide. Evidences point to the conclusion that early experience, education (8) and emotion and motivations are important in defining what and how we perceive things (9). Understanding these factors is essential for the successful planning and implementation of developmental care in the NICU. Despite the fact that nurses are the Frontline caregivers in inpatient settings, there is limited data on the nurses' perceived barriers to the provision of neonatal developmental care in our country. There is little evidence that could help us understand nurses' perceptions of developmental care and factors influencing these perceptions. The main objective of this study was, therefore, to assess the neonatal nurses' perceived barriers in the provision of developmental care in the neonatal care units of governmental hospitals in Addis Ababa, Ethiopia.

Objectives

This paper shows the different determinants of neonatal nurses' perceived barriers in the provision of neonatal developmental care in NICU. The aim was to assess the main barriers that affect the nurses' perception in providing developmental care in the NICU and to investigate the differences of nurses' perceived barriers according to various demographic groups.

Materials and Methods

This is a descriptive study, searching for the hospital nurses' perception of barriers to the provision of neonatal developmental care in the NICU of selected governmental hospital in Addis Ababa. Before obtaining verbal consent, participants were provided with complete information about the purpose of the study, their right to participate or not to participate and right to withdraw at any time or skip any question they do not wish to respond to.

Participants and Setting

All of the nurses working in the NICU of the five referral governmental hospitals in Addis Ababa were included, since the total number of nurses working in the NICU were only 92. Only largest governmental hospitals has relatively advanced health establishments, including NICU to provide neonatal developmental care with the involvement of nurses and other health professionals. But the rest of the governmental hospitals found not to have the NICU unit as why all the nurses working in the five governmental hospitals' NICU unit were taken. The lists of nurses working in the NICU were obtained from the unit heads of each hospital.

Study design

A quantitative cross-sectional study was conducted to assess nurse's perception of barriers in the provision of neonatal developmental care in selected public hospitals of Addis Ababa.

Data Collection Instrument and Procedure

The data were collected by using a structured questionnaire developed in English and translated into Amharic (the national official language) and back to English to check for its original meaning and consistency. The questionnaire was prepared based on reviewing related literatures.

A questionnaire was organized based on consisting items eliciting sociodemographic information, and Likert scales measuring nurses' perceptions of neonatal developmental care provision, emotion and motivation, job satisfaction, relationships with co-workers and work experience. Each scale consisted of seven items with three response options ranging from 1 for don't know, 2 for disagreeing and 3 for agreeing. The questionnaire was pretested to check for validity on nurses (10% of the sample size=9 neonatal nurses) working neonatal care units of other two hospitals, which were not included in the main study sites for relevance and comprehensibility. Based on the pretest result, some adjustments (eliminate unnecessary questions and add necessary ones) were made to the questionnaire for better validity of the main study. Principal component analysis (PCA) was done, where the collected questions loaded on to the same factor that determined respective domain of nurse's perception and internal consistency for each domain that affect nurse's perception was checked using cronbach's alpha and was between the range of 0.73 to 0.82. Three diploma nurses were recruited for data collection and two

nurses holding bachelor (BSc) degree as field work supervisors. Both the data collectors and supervisors were given a half day orientation on the data collection process and ethical conduct of the field work. The supervisors and the principal investigator closely monitored the overall quality of the data collection process by checking the completeness, accuracy, and consistency of the questionnaire daily.

Inclusion and exclusion criteria

Neonatal nurses working in the neonatal units of the selected hospitals and volunteer to participate in the study were included and those who were not volunteer were excluded from the study.

Data Analysis

The data was cleaned and entered into Epi Info 7.1.4.0 software. Then it was exported into SPSS version 20 for analysis. Descriptive statistics were run on sociodemographic data. Kruskal-Wallis tests (non parametric comparisons) were used to compare the differences of nurses' perceived barriers, according to various demographic groups, including age, level of nursing education, and working experience. To compare the differences of years of experience X^2 test was used. A significance level of $p \leq 0.05$ was used for declaring the association between the dependent variable and covariates.

Results

Sociodemographic characteristics

Out of the total of 92 nurses, 90 completed the questionnaire making the response rate of 97.83%. The rest 2 nurses (2.17%), not participated as they were on maternity leave. More than half (53.33%) of respondents were within the age range of 30-39 years. Two point two percent had work experiences from 1 to five years and more than half (57.8%) held a BSc degree in nursing (Table 1).

Table 1: Socio-demographic characteristics of nurse in the selected government hospitals, AddisAbaba, Ethiopia, 2019.

Characteristics	Frequency	Percent (%)
Age:		
20 – 29	37	41.11
30 – 39	48	53.33
40 – 49	5	5.55
Sex:		
Male	18	20.00
Female	72	80.00
Level of Education:		
Diploma Nurse	38	42.20
BSc Nurse	52	57.80
Work experience:		
< 1 year	18	20.00
1 – 5 years	65	72.22
6 – 10 years	7	7.77

Nurses' perceived barriers to provision of Developmental Care in neonatal intensive care unit (NICU)

In this study, nurses' perceived barriers to the provision of neonatal developmental care was evaluated in five different parts; relationship with the coworkers, emotion and motivation at work, management's recognition of nurses' performance, job satisfaction and work experience. The most commonly perceived barriers to provision of developmental care were barriers related to job satisfaction. When compared with other barriers, relationship with the coworkers was less perceived as an obstacle (Table 2).

When barriers were analyzed according to demographic variables, no significance association were found between age and sex of nurses and barriers that affect the nurses' perception. However, significant difference were found between educational level ($Kw2,20.13;P=0.021$) and year of experience ($Kw2,38.84;P=0.001$). The nurses who has more experience and higher level of education agreed more on job satisfaction barriers.

Table 2: The means of nurses' perceived barriers to the provision of neonatal developmental care in NICU.

Barriers	N	Minimum	Maximum	Mean	SD
Relationship with the coworkers barrier	90	1.86	2.86	2.4397	.20788
Emotion and motivation at work	90	1.86	3	2.3	.25613
Managements recognition of nurses' performance	90	1.43	2.86	2.2222	.27350
Job satisfaction.	90	1.43	2.57	1.8587	.26271
Work experience	93	1.43	3.00	2.1603	.27990

Table 3. Relationship with the Co worker barriers.

Barriers	Agree	Disagree	Don't know
1. My working unit doesn't encourage team work	76(84.4)	9(10)	5(5.6)
2. Team members aren't held accountable for the decisions they make	68(75.6)	13(14.4)	9(10)
3. Work assignments aren't distributed fairly	74(82.2)	6(6.7)	10(11.1)
4. Strongly Agree Sufficient effort isn't made to get the opinions and ideas of the employees	50(55.6)	18(20)	12(13.3)
5. There is no strong teamwork among the staff I work most closely with.	66(73.3)	15(16.7)	9(10)
6. I didn't enjoy working with the staff I work most closely with.	70(77.8)	13(14.4)	7(7.8)
7. No opportunity to utilize your skills and talents	52(57.8)	16(17.8)	22(24.4)

Table 4: Nurses' motivation and emotion at work.

Barriers	Agree	Disagree	Don't know
1. Top management isn't interested to motivate employees.	60(66.7)	24(26.7)	6(6.7)
2. No reasonable periodical increase in salary.	34(37.8)	54(60)	2(2.2)
3. No job security	31(34.4)	46(51.1)	3(3.3)
4. No good relationship with other staff members.	78(86.7)	4(4.4)	8(8.9)
5. No effective promotional opportunities.	64(71.11)	9(10)	17(18.9)
6. Support from other staff members isn't helpful to get motivated.	1(1.1)	87(96.7)	2(2.2)
7. The organization doesn't recognize and acknowledge your work.	55(61.1)	17(18.9)	18(20)

Table 5. Job Satisfaction barriers.

Barrier	Agree	Disagree	Don't know
1. My work is not well suited to my personal and professional interest.	42(46.7)	36(40)	12(13.3)
2. My work doesn't provide me with an opportunity to use my skills and abilities.	56(62.2)	23(25.6)	11(12.2)
3. A major problem that I face in my work is overwork.	84(93.3)	3(3.3)	3(3.3)
4. I feel that my personal development hasn't been supported and encouraged during the job.	47(52.2)	22(24.4)	21(23.3)
5. Everyone in the organization has no equal opportunity to attend staff training and staff development opportunities.	79(87.8)	10(11.1)	1(1.1)
6. I feel that I had no experience sharing inside and outside this Hospital.	40(44.4)	26(28.9)	34(37.8)
7. A major problem I face the lack of discussion among nurses that I work with.	4(4.4)	78(86.7)	8(8.9)

Table 6. Work experience barriers.

Barriers	Agree	Disagree	Don't know
1. Degree of independence not associated with your work roles.	41(45.5)	14(15.6)	35(38.9)
2. Overall, not satisfied with the spirit of teamwork within the working unit.	47(52.2)	11(12.2)	32(35.6)
3. Limited opportunities for research in discipline.	74(82.2)	2(2.2)	14(15.6)
4. Inadequate opportunities for professional development.	23(25.6)	60(6.7)	7(7.8)
5. Inadequate opportunities for experience sharing.	70(77.8)	8(8.9)	12(13.3)
6. I am not satisfied with working this hospital.	40(44.4)	26(28.9)	24(26.7)
7. I am not satisfied working with the staff and managers.	69(76.7)	5(5.6)	16(17.8)

The barriers related to relationship with the coworkers can be seen in Table 3. Working unit doesn't encourages teamwork (84.4%) and didn't enjoy working with the staff working most closely with (77.8%) were the most commonly reported barriers. Nurses' account 13% to 25% indicated that they have no idea with regard to 2 of 7 relationship with the coworker barrier items.

According to the barriers related to nurses' motivation and emotion at work, the majority of nurses (86.7%) agreed that there is no good relationship with other staff members. Most of the nurses (18.9% to 96.7%) did not agree with 5 of 7 nurses 'motivation and emotion at work barrier items. A small percentage of the nurses (1.1%) agreed that support from other staff members isn't helpful to get motivated and nurses' job insecurity (34 %) were barriers to nurses' motivation and emotion at work. (Table 4)

Barriers related to job satisfaction perceived by the nurses are shown in Table 5. Work overload (93%) and no equal opportunity for staff training and development (88%) were the most reported barriers by nurses. More than half of the nurses disagreed on the lack of discussion among nurses they work with and their work is not well suited to their personal and professional interest. Majority of the nurses (38%) indicated that they had no idea about the experience sharing in and outside hospital.

Table 6 shows the work experience barriers, no opportunities for research was indicated as a barrier by 82%% of the participants followed by limited experience sharing as a barrier which accounts 78 although this study did not evaluate the work experience practice association with the provision of neonatal developmental care, a number of studies indicate experience sharing and staff development opportunities play a significant contribution in rendering evidence base practice and improve quality care provision.

Discussion

The nurse is one of the professionals responsible for the care directed toward the physical, mental and social development of newborns in the neonatal intensive care unit (10). It is very important to determine the barriers perceived by nurses in the provision of neonatal developmental care. Neonatal developmental care provision barriers experienced by the nurses from different countries have been defined in a number of earlier studies (11, 12, 13). However, these barriers may show some differences according to some variables, including work experience of nurses and level of education. Despite the fact that nurses are the front-line caregivers in inpatient settings, there is limited data on the nurses' perceived barriers to the provision of neonatal developmental care in Ethiopia. This study aimed to define the nurses' perceived barriers to the provision of neonatal developmental care in governmental hospitals. The results of this study indicate that nurses perceive a variety of barriers when attempting to provide optimal neonatal developmental care in selected hospitals. The most commonly perceived barriers were job satisfaction barriers. When compared with the other barriers, relationship with the coworker were less perceived as an obstacle. Among job satisfaction, work overload was the most commonly perceived barrier. This finding is similar to the results of studies which defined work overload as being a barrier interfering with the optimal provision of developmental care in NICU (14).

Although another commonly expressed job satisfaction barrier (74%) was having no equal opportunity to attend staff training and staff development opportunities. This result was also consistent with some earlier studies which shows that training and staff development is an essential factor contributing to greater efficiency of the staff and organization (15).

Research from developed countries may show different figures reporting that job satisfaction could be explained by the set of independent variables including organizational commitment in staff development, educational level, age and working years. Organizational commitment in staff development had the strongest impact on job satisfaction (16). In this study also most of the nurses agreed on there were no equal staff training and development opportunities which reveals that institutions should give pay attention to modify this barrier.

This finding basically stands contrary to that of Saudis' study in which most of the personnel –related factors, namely age, gender and level of education did not influence nurses' job satisfaction (17). However job satisfaction was affected by level of education and work experience of nurses in this study. Nevertheless, it is

worth to note here that nurses with a better level of education agreed more on job satisfaction barriers, which may be due to a high nursing turnover in the nursing profession. All nursing associations' and unions report a deteriorating quality of work life for nurses. Quality of work life is widely believed to be one of the most important factors in recruitment and retention, thus having an impact on the current and the future supply of nurses.

The number of years of nursing work experience was significant ($p=0.006$), work experience positively correlates with job satisfaction (18). In this study also Kruskal Wallis test shows nurses who have more year of work experience agreed more on job satisfaction ($P= 0.01$) this shows that nurses who work for many years have less job satisfaction.

Majority of the participating nurses indicated that support from other staff members and good relationship with other staff members were important among motivation and emotion barriers to neonatal developmental care provision by nurses. In studied hospitals, nurses and physicians have been making separate patient rounds, more significantly no continuous nursing round except communication about the patient during handover. The negative impact of this disconnection can be clearly seen in these results. The appropriate neonatal developmental care provision is highly dependent upon communication between physicians and nurses. Lack of adequate and accurate communication between nurses and physicians was reported as an important barrier to optimal management of pain and showed that nurses who did not feel adequately consulted by physicians were significantly more likely to encounter barriers such as insufficient cooperation with patient's physicians and inadequate prescription of analgesic medications (19,20). A collaborative relationship between the two professions would ensure that the barriers experienced by nurses could be resolved in a supportive team approach. Therefore, the importance of teamwork, and role of each health care professional in the team is essential to overcome this barrier.

In conclusion, this study showed that the barriers related to job satisfaction, off this work overload and staff training and development opportunity were the most commonly perceived barriers by the nurses. Institutional and governmental efforts are needed to tackle the staff's workload and provide better opportunity for training and staff development opportunities. Job satisfaction is an important factor of productivity and job quality, especially in healthcare workers. For this, meetings should be held between health professionals and concerned stakeholders to facilitate the problems in neonatal developmental care provision and to review recommendations for solutions.

There are studies showing that ongoing training and staff development opportunities are absolutely pivotal in maintaining a happy workforce (13). For this reason, there should be regular and continuous staff development programs for all health professionals who are involved in providing neonatal developmental care.

Study limitations

- The staffs who fill the questionnaire were working on shift, only available early in the morning. This was overcome by engaging some research assistants to contact the staff before they left the office.
- A few nurses used to responding to questionnaires saw as a waste of time. This was overcome by taking time to explain the importance of research in increasing knowledge that can be beneficial to all the population.
- Known factor associated with the study design, i.e. could not show a cause effect relationship between variables.

List of Abbreviations

Bsc: Bachelor of Science
NICU: Neonatal Intensive care unit
FMOH: Federal Ministry of health
SPSS: Statistical Package for the Social Sciences
SDG: Sustainable Development Goal

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