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Assessment of the Knowledge, Attitudes, and Related Attributes About Neonatal Resuscitation Among Health Care Providers at Hawassa University: A Cross-Sectional Study

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Abstract

Background
Birth asphyxia remains major causes of neonatal mortality in Ethiopia. Most asphyxia related problems defy if medical professionals are proficient in neonatal resuscitation. However, little is known about how well-versed in neonatal resuscitation the health care providers are at Sidama regional state hospitals in Ethiopia.

Objective
To assess the knowledge, attitudes, and related attributes about newborn resuscitation among medical professionals in hospitals in Sidama region of Ethiopia.

Method
A cross-sectional study was employed from October to December 2023, and 192 medical professionals took part as participants. Data was collected via a self-administered questionnaire, and SPSS version 25 was utilized for coding, input and analysis. When a logistic regression analysis unveils correlation, and a value of $p< 0.05$ with a 95% confidence interval was achieved, a statistically significant relationship was proclaimed.

Result
A response rate of 92.3% was obtained. 62% of the participants' demonstrated good knowledge about NR, with a mean knowledge score of 20.9. According to the findings, nurses (AOR: 0.07, 95% CI [0.01, 0.32]; $p<0.001$), those with NR training (AOR: 2.31, 95% CI [1.08, 4.95]; $p<0.001$), and people with access to guidelines (AOR: 2.45, 95% CI [1.10, 5.41]; $p=0.011$) knew more about neonatal resuscitation.

Conclusion
62% of medical experts although they knew enough, the study field of the participants, the availability of guidelines, and the presence of trained medical personnel all had an impact on their knowledge. In addition to teaching fundamental

procedures during medical education, simulation-based routines and periodic NR training are required to improve neonatal outcome.

Keywords: Neonatal Resuscitation, Knowledge, Health Professionals and NICU

Background

Neonatal resuscitation is an intervention delivered to an asphyxiated newborn [1]. Neonatal morbidity and mortality are significantly impacted by the quality of neonatal resuscitation and early stabilization during the "golden minute" of birth, especially in high-risk neonates like premature and LBW babies [2]. A delivery attendant may be slightly swayed by the mother's apparent priority over the baby's requirements if she chooses to postpone neonatal resuscitation in order to appease her [3]. However, a newborn's odds of survival might be significantly impacted by even a little resuscitation postponement. According to studies, a neonate's chance of dying increased by 16% for every 30 seconds of setback in starting ventilation and by 6% for every minute of lag in starting bag and mask ventilation [4].

Millions of neonates die as a result of inadequate or subpar resuscitation techniques, humorlessly in LMIC, and many of the survivors relentlessly suffer long-term neurologic sequelae such as cerebral palsy and cognitive impairment [5,6]. Evidence promulgates that competent healthcare professionals can avert over two million infant deaths caused by perinatal asphyxia annually by employing appropriate and effective newborn resuscitation [7]. Even in the unlikely event that COVID-19 has no influence on mortality, there is still a significant burden of child mortality [8].

Globally, an estimated 5 million U5M were reported in 2021, of which neonatal death contributed 47% (2.3 million). Consequently, the percentage of newborn deaths among all U5M rose from 40% in 1990 to 47% in 2021, accounting for a lion's share of all U5M [9-10] Sub-Saharan Africa has the highest rate of neonatal mortality in the world, with about 27 infant deaths per 1000 live births, or 43% of all newborn deaths globally [11]. Furthermore, Ethiopia is among the five sub-Saharan African countries contributing 50% of neonatal mortality [xi] A study at Debra Tabor, Dilla University Referral Hospital, Wolaita SodoTeathing Hospital, and Bahir Dar city in northwest Ethiopia found that the rates of peri-natal asphyxia were 29.9%, 32.8%, 25.7%, and 21.7%, respectively [6,12,13].

Helping Baby to Breath (HBB) addresses not just the science of resuscitation but also important measures to enhance the effectiveness of educational programs and the provision of healthcare services, both of which are essential for enhancing neonatal survival [1]. Initiating and stabilizing the neonate's cardiopulmonary functioning requires particular knowledge and abilities, and maintaining provider competency requires ongoing practice [14]. Health professionals' competency in neonatal resuscitation and consequently neonatal outcome are influenced by a variety of factors, including provider characteristics like educational level, experience, and specialization as well as institutional characteristics like training, accessibility to guidelines, and equipment [15,16].

Poor resuscitations are used to carry on, despite the significant impact of asphyxia on neonatal mortality and morbidity. Studies conducted in public health facilities in Eastern Ethiopia validated a lack of basic knowledge on newborn resuscitation among midwives and nurses [17]. A parallel study carried out in South Wollo public hospitals discovered that midwives and nurses know relatively little about neonatal resuscitation [18]. In a similar vein, research among Ethiopian medical professionals indicated a broad ignorance about the procedure [19]. To the best of the investigator's knowledge, our hospital has poignantly carried out no similar studies. Therefore, this study is poised to uncover gaps that contribute to the ongoing rate of neonatal death and disability by assessing the attitudes, knowledge, and relevant characteristics of medical professionals on neonatal resuscitation working at HUCSH in the NICU and delivery room.

The significance of assessing the knowledge of health professionals in neonatal resuscitation cannot be overstated. Neonatal resuscitation is a critical intervention that can mean the difference between life and death for newborns that are having trouble breathing on their own. Ensuring that health professionals have the necessary knowledge and skills to perform this intervention is crucial to providing proper and timely care to newborns in need of it. By understanding the factors associated with knowledge levels in neonatal resuscitation, we can pinpoint areas in which training and educational initiatives fall short. The insight gained from this study can shed light on potential areas of improvement in neonatal resuscitation at Hawassa University's comprehensive specialized hospital.

The findings from the study can broaden the corpus of knowledge in the field of research on neonatal resuscitation. By providing accurate statistics regarding health professionals' knowledge in this area, it can also aid in the development of the discipline and serve as a reference for future research. Moreover, it can offer important information to other health facilities and practitioners who wish to enhance their own protocols for newborn resuscitation.

Methods and Materials

Study Area, Design and Period

The study was conducted at the pediatric department of the Hawassa University Comprehensive Specialized Hospital in southern Ethiopia. Hawassa is located 275 kilometers southeast of Addis Ababa, Ethiopia's capital city, at an elevation of 1700 meters above sea level. HUCSH is the region's first referral hospital and a teaching hospital, with a catchment

population of 10–12 million. It serves roughly 43,384 patients each year. The hospital comprises 11 departments and has introduced new specialized services, including an oncology and toxicology unit.

Pediatrics is one of the departments that care for over 15,000 pediatric patients a year. The level III NICU where this study was conducted has 38 beds, 5 incubators, 16 radiant warmers, 27 BSc nursing staff, 44 pediatric residents, 10 senior pediatricians, a neonatologist, a neurologist, a cardiologist, and an infectious subspecialist. The NICU provide both outpatient and inpatient services, with an average monthly admission rate of 100–150 nurslings for inborn and out-born babies. In respect to the equipment and other facilities, there are enough different oxygen sources available (CPAP). There are twenty beds in the obstetrics ward: three beds for triage examinations, seven prenatal beds, ten postnatal beds, four delivery coaches, twenty-eight midwives, thirty-eight GYN-OBS residents, eleven gynecologists, and eleven obstetricians. All four major wards get a total of approximately 144 medical interns, with an average of 36 interns per ward during each attachment. A cross-sectional study was carried out using self-administered questionnaires in HUCSH from October to December 2023.

Population

The source populations were the entire health care providers concerned on feto-maternal care at parturition working at HUCSH. The study populations were midwives, nurses, residents, and medical interns working in the NICU and obstetrics units during the study period.

Sample Size Determination

The sample size for the first objective was calculated by an open-source calculator using a single population proportion formula, considering the following assumptions: The knowledge level of the nurses and midwives was 46.5% from the study in Gonder, with a 95% confidence interval and a 5% margin of error. Accordingly, a sample size of 382 was obtained. Since the source population is < 10,000, the final sample size is determined by applying the finite population correction formula and adding 10% non-response rate to get a final sample size of 135. However, to improve the precision of the study, all 208 care providers were included in the study [20].

Sampling Technique and Procedure

First, the health professionals were divided into two main units (the NICU and the delivery unit). The leader of each group compiles a roster of health professionals; they are then further categorized depending on their professions as nurses, midwives, medical interns, pediatrics residents, and GYN-OBS residents. Then data collectors distributed self-administered questionnaires and collected sheets within a given time period.

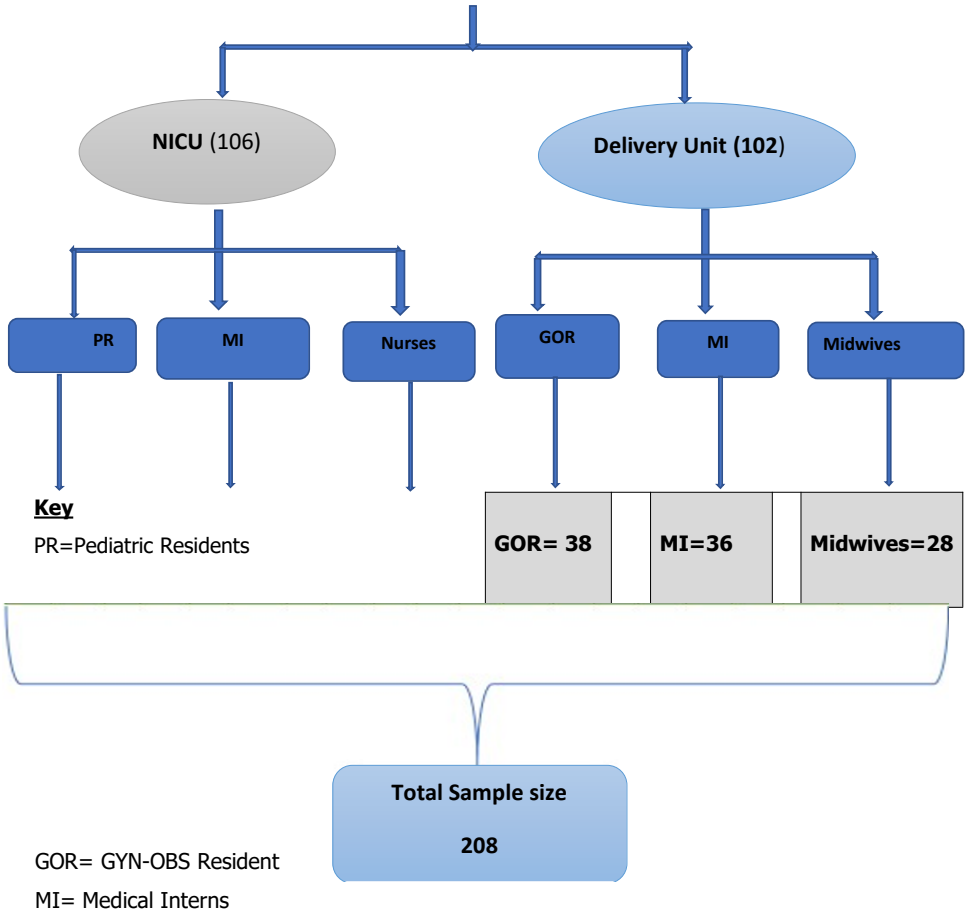

Figure 2: Schematic Presentation of Sampling Procedures for Assessment of Knowledge and Associated Factors Toward Neonatal Resuscitation in Hucsh, Sidama, Ethiopia 2024.

Data Collection Procedures

The data gathering method for this study was created using similar prior literature [1, 21]. The tool consists of structured self-administered surveys that cover socio-demographic, provider, and institutional aspects, as well as attitude and knowledge assessment questions for health professionals. One week prior to the actual data collection period, it was pretested on 5% of the entire sample size in Adare General Hospital. The unclear questionnaire was changed for clarity and uniformity based on the results of the pretest. The data were collected by five trained data collectors and supervised by the principal investigator. A one-day orientation was given to data collectors on the study's goal, methodology, how to provide self-administered questionnaires, obtain consent, maintain confidentiality, and respect participant rights. Thirty minutes were allotted to answer all of the questions.

Data Quality Assurance

The tool was pretested in another institution prior to the actual data collection period, and the pretest findings were not used in the actual data for the study. Based on the results of the pretest it was modified to improve clarity, understandability, and simplicity of the data collection tool by the principal investigator. Data was checked for completeness, accuracy and consistency by principal investigator on daily base.

Data Processing and Analysis

The data was verified, coded, and entered into SPSS version 25 software for analysis. The coding of individual questionnaires was checked before data entry into the software. Further data cleaning was performed to check for outliers, missed values, and any inconsistencies before the data were analyzed using the software. The analysis of the results was described using descriptive analysis. To measure the possible association of factors with the knowledge of health professionals, a binary logistic regression was computed. Variables that showed $p \leq 0.25$ in the bivariate analysis were considered candidates for multivariable logistic regression analysis. Factors with p-values of <0.05 were declared to have a statistically significant association with the dependent variables, and the strength of the association was described using the odds ratio, (COR, AOR). The goodness of fit of the model was checked using the Hosmer and Lemeshow tests ($p = 0.933$).

Variables

The dependent variables were knowledge toward neonatal resuscitation, and the independent variables included provider-related factors (sex, age, and profession, level of education, training, work experiences, and attitude) and institutional factors (working unit, availability of resuscitation guidelines, supportive supervision, and work load).

Measurements

Neonatal Resuscitation

Intervention to assist in breathing and circulation.

Basic Newborn Resuscitation

Airway clearing, head positioning and positive pressure ventilation via bag-and- mask.

Advanced Newborn Resuscitation

Basic neonatal resuscitation plus endotracheal intubation, supplemental oxygen, chest compressions, and medications. [References]

Knowledge

The participants with score of 80% was considered having good knowledge and those who scored <80% having poor knowledge toward neonatal resuscitation.

Attitude

Participants with score of greater than the mean was considered having good attitude and those who scored less than the mean having poor attitude toward neonatal resuscitation.

Full Equipment for Resuscitation

Hospitals with radiant warmer, bag with mask, suction machine & catheter, single/multi use suction bulb, stethoscope [3].

Results

Socio-demographic Characteristics of Participants

192 out of the 208 respondents answered completely, yielding a response rate of 92.3%. Sixteen participants were shunned; two for partial reply; eight were furloughed; and the remaining six were timed off. 110 (57.3%) of the respondents were aged 26 to 30 years, with a mean age of 28.4 ±3.3 years. Of the respondents, 143 (74.5%) were physicians, including interns and residents, and the remaining respondents were nurses and midwives, with a male-to-female ratio of 1.04. 73 (38%) had one to five years of hands-on experience.

Provider and Institutional Characteristics

Over half (53.6%) of the respondents had received neonatal resuscitation training, and 81 (42.2%) had previously worked at a hospital that offered a NICU or delivery services prior to being moved to the current facility. Of the volunteers, more than a quarter (27.1%) had previously worked in maternity or delivery units. 87(45.3%) denied supportive supervision, and 55.7% had no access to neonatal resuscitation guidelines in the workplace.

Variable	Category	Frequency	Percentage
Training	Yes No	103 89	53.6 46.4
Previous work place	Hospital which has delivery and NICU unit Hospital with no delivery and NICU unit No transfer history	81 21 90	42.2 10.9 46.9
Previous work unit	NICU Delivery unit or maternity Pediatric unit Other	35 52 50 55	18.2 27.1 26.0 28.6
Current working unit	NICU Labor ward Other	59 61 72	30.7 31.8 37.5
Presence of a resuscitation corner	Yes No	169 23	88.0 12.0
Full resuscitation material	Complete equipment Incomplete equipment	96 96	50.0 50.0
Resuscitation guideline	Yes No Not sure	85 60 47	44.3 31.3 24.5
Supportive supervision	Yes No Not sure	105 49 38	54.7 25.5 19.8
Number of new born served per day	0-5 5-10 >10	137 44 11	71.4 22.9 5.7

Table 1: Provider and Institutional Characteristics of the Study Participants

Attitude Towards NR

While 84.4% of respondents felt that it was their duty to perform NR, 110 people (57.3%) believed that the healthcare provider's perception that it had a secondary function in neonatal care may be the reason to procrastinate doing NR. Although most respondents(74.5%) were confident in performing it, 28.7% reported that the mere thought of doing so made them feel anxious, stressed, and scared. 139 (72.4%) respondents had positive attitudes towards NR, whereas 27.6% had a gloomy and ostentatious attitude, with a mean value of 6.

Questions	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Delay in NR may be related to the perception of HP as having a secondary role in neonatal care.	23(12.0)	27(14.1)	32(16.7)	74(38.5)	36(18.8)
NR is not the major role of my profession	104(54.2)	58(30.2)	9(4.7)	16(8.3)	5(2.6)
Resuscitation often lead me anxious and stressful as well as fear to do it	39(20.3)	69(35.9)	29(15.1)	37(19.3)	18(9.4)
It is imperative to prepare all equipment and personnel for resuscitation, regardless of any potential risks.	0	3(1.6)	10(5.2)	45(23.4)	134(69.8)
I support to assist hospitals that have a neonatal resuscitation team.	2(1)	2(1)	2(1)	36(18.8)	150(78.1)
Providers' motivation towards NR may be linked to incentives.	38(19.8)	23(12.0)	34(17.7)	52(27.1)	45(23.4)
With good knowledge and practice in resuscitation, I would not hesitate to use it whenever needed.	6(3.1)	13(6.8)	6(3.1)	52(27.1)	115(59.9)
I am confident in performing newborn resuscitation.	0	32(16.7)	17(8.9)	83(43.2)	60(31.3)
Attitude of NR (Summary index)				Frequency	Percentage

	Unfavorable		53	27.6
	Favorable		139	72.4

Table 2: Health Professionals' Attitude Towards Neonatal Resuscitation

Knowledge About Neonatal Resuscitation

The majority of respondents (62%, 95% CI: 55–69%) reported a mean score of 20.9 with minimum and maximum knowledge scores of 9/30 (3 participants) and 27/30 (5 participants), respectively, regarding NR. The number of respondents who correctly answered 21 and above out of 30 questions (70% and above) were only 53.13%, with the highest scorer were pediatrics residents. Most respondents correctly answered the following: which drug is recommended during resuscitation (97.9%), how the baby's neck should be positioned (97.4%), and what the proper ratio of chest compression to ventilation is (89.1%). Poorly addressed queries, on the other hand, include: monitoring the effect of epinephrine within 30 seconds (54.2%); reassessing heartbeat every 30 seconds while executing CPR (70.8%); and readiness of healthcare provider for resuscitation (45.3%).

Questions	Response	
	Correct (n, %)	Incorrect (n, %)
At every birth the care providers should be prepared for resuscitation	105(54.7)	87(45.3)
Every baby immediately keeps at mother's abdomen after delivery	170(88.5)	22(11.5)
Umbilical cord should be clamped and cut around 1-3 minutes after birth	165(85.9)	27(14.1)
Slapping/flicking the sole of the feet is the correct method of stimulation	139(72.4)	53(27.6)
Giving positive pressure ventilation for persistent apnea	127(66.1)	65(33.9)
Slightly extended neck of baby is the correct position for resuscitation of the new born	187(97.4)	5(2.6)
Mask has to covers mouth, nose and tip of chin during resuscitation	162(84.4)	30(15.6)
Two thump techniques for chest compression are recommended for resuscitation	143(74.5)	49(25.5)
The correct ratio of chest compression to ventilation is 3:1	171(89.1)	21(10.9)
Depth of chest compression is 1/3rd of the APD is recommended for NR	146(76.0)	46(24.0)
Epinephrine is the preferred medication for resuscitation	188(97.9)	4(2.1)
The effect of epinephrine should assess after the 30 second of administration	88(45.8)	104(54.2)
For every 30 sec CPR continued before reassessing heart beat	56(29.2)	136(70.8)A

Table 3: Responses Given by the Participants on Selected Main Steps of Neonatal Resuscitation

Mean Knowledge Score of the Participant

In this study, the mean score of all respondents on the first step of resuscitation was 9.39±1.71, with pediatric residents having the highest score (10.53±1.08) and comprehensive nurses having the lowest ones (8.11±0.99). The respondents exhibited an overall mean (±SD) knowledge score about bag and mask ventilation and chest compression of 4.43±1.48 and 3.74±1.12, respectively.

Figure 2: Mean Knowledge Score of the Participants in the Main Steps of Neonatal Resuscitation

Factors Associated With Knowledge of the Participants

In a bivariate logistic regression analysis; sex, age, profession, work experience, training on neonatal resuscitation, and attitude towards NR were found to have a significant association with knowledge of NR. The variables that were associated with knowledge score ($p<0.25$) were included in the multivariable regression model. In multivariable regression, those who had received training on NR were about 2.3 [AOR: 2.31; 95%CI: 1.08–4.95] times more likely to be well-rounded as compared to those who had not received training. Nurses and midwives had a 93% [AOR: 0.07; 95%CI: 0.01-0.32] and 37% (AOR; 0.63, 95% CI; 0.17-2.27) lower likelihood of being well-versed in NR compared to residents. Those who had NR guidelines at work were 2.5 [AOR: 2.45; 95%CI: 1.10–5.41] times more likely to be insightful about NR than people who did not have guidelines.

Variables	Category	Level of knowledge		COR	p-value	AOR
		Good	Poor			
Sex	Female Male	45(47.9) 74(75.5)	49(52.1) 24(24.5)	1 3.35(1.81,6.19)	 0.13	1 1.90(0.82,4.41)
Age	<25 26-30 >30	17(39.5) 74(67.3) 28(71.8)	26(60.5) 36(32.7) 11(28.2)	1 3.14(1.51,6.52) 3.89(1.54,9.84)	 0.38 0.06	1 1.51(0.59,3.86) 3.84(0.90,16.4)
Profession	Nurse Midwifery Intern Resident	7(29.2) 17(68.0) 30(42.9) 65(89.0)	17(70.8) 8(32.0) 40(57.1) 8(11.0)	0.05(0.01,0.15) 0.26(0.08,0.79) 0.09(0.03,0.22) 1	0.001 0.48 0.10	0.07(0.01,0.32) ** 0.63(0.17,2.27) 0.25(0.05,1.30) 1
Using Guideline	Yes No	58(68.2) 61(57.0)	27(31.8) 46(43.0)	1.62(0.89,2.93) 1	0.02	2.45(1.10,5.41) * 1
Work experience	<1 year 1-5 >5	31(43.1) 63(86.3) 25(53.2)	41(56.9) 10(13.7) 22(46.8)	1 8.33(3.69,18.8) 1.50(0.71,3.14)	 0.28 0.85	1 2.25(0.51,9.85) 0.85(0.15,4.65)
Training of NR	Yes No	77(74.8) 42(47.2)	26(25.2) 47(52.8)	3.31(1.80,6.09) 1	0.03	2.31(1.08,4.95)* 1
Attitude	Unfavorable Favorable	25(47.2) 94(67.6)	28(52.8) 45(32.4)	1 2.34(1.22,4.46)	 0.61	1 1.22(0.55,2.72)
Key ** = Highly significant, * = Significant at a p-value < 0.05, 1= Reference, COR=Crude odds ratio, AOR=Adjusted odds ratio						

Table 4: Bivariate and Multivariate Analysis Showing the Association of Independent Variables With the Knowledge Score of Participants

Discussion

Effective resuscitation is one of the most important life-saving procedures to prevent asphyxia-related complications and death. Understanding the level of knowledge and its predictors could provide get-go information for health care planning and quality improvement policies. The overall performance of the medical professionals sampled for neonatal resuscitation was found to be subpar, according to the current study's observations. Given that similar findings have been reported, the resuscitation of newborns in Afghanistan presents considerable hurdles [22]. It can be a sign of the low quality of training received by healthcare personnel.

In a similar vein, this poll verified that 53% of respondents had a solid understanding of neonatal resuscitation. This is in line with an Afghan study that assessed the level of knowledge among doctors and midwives regarding NR and discovered that they were quite knowledgeable about it.[2] Nonetheless, this finding is at odds with studies carried out in Kenya and Ethiopia [12,23]. It also includes findings from research done in western Nigeria and southern Ethiopia, where 78% and 76.2% of participants, respectively, said they were knowledgeable enough to help a newborn breathe [13,24]. Updates to the healthcare system and continuing education courses offered to physicians by the appropriate organizations may be the cause of this knowledge gap.

After adjustment for logistic regression, the study explained a significant association between newborn resuscitation training and the knowledge of health care professionals. Participants who received NR training were found to be 2.3 times more likely to possess good knowledge compared to those without such training. This can be attributed to the fact that trained health care providers had access to more up-to-date information compared to their untrained counterparts. These findings are consistent with previous studies conducted in Afghanistan, Kenya, Ghana, and Eastern Ethiopia [21,23,25].

As alluded to above, more than half of the respondents stated that executing resuscitation regularly reduces their stress and anxiety, as well as their dread of accomplishing it. Additionally, about 70% of participants strongly agreed that it is essential to have all necessary staff and equipment ready for resuscitation, regardless of any potential risks, as these factors affect the initiative and quality of performing appropriate resuscitation. This concatenation was further backed up by a Tanzanian study in which midwives claimed that the best ways to improve real ventilation techniques and increase baby survival were teamwork, frequent ventilation training, and having resuscitation equipment ready before delivery. They felt that their anxiety and fear due to the stress of ventilating an asphyxiated baby often led to poor resuscitation performance [26].

It was noteworthy that health institutions with NR guidelines posted on their desks were significantly more educated about neonatal resuscitation than those without; in other words, HCPs were 2.5 times more ingeniously knowledgeable. A little over 74.5 percent of the participants said they were capable of doing resuscitation on a baby. Similar findings

have been reported in Afghanistan, Nepal, and Machakos, which may point to a problem that emerging countries face in common [17,27,28]. This could be the case because study participants would be encouraged to read more references after finding the resuscitation guidelines in the unit with ease. Their lack of proficiency was made even more complex by the fact that there were few refresher courses available to them following their graduation from medical school. They consequently continue to be oblivious and diffident about carrying out newborn resuscitation.

One might surmise that women health professionals tend to have more know-how about resuscitating newly delivered babies, as they are inherently piteous and meticulous. This study, however, showed that men knew 2.25 times more about neonatal resuscitation. This is in line with studies done at Gonder Specialty Hospital, which discovered a substantial gender difference (AOR = 2.33) in nurses' and midwives' understanding of neonatal resuscitation [20]. This assertion is debunked by the results of a study conducted at a university teaching hospital in northwest Ethiopia [12]. This may be due to the fact that female health personnel usually appear demure and put their apprenticeship ahead of getting real-world knowledge, and, of course, a larger multicenter study should have attempted to address this.

Nurses in particular, regardless of whether they had stayed in the NICU or wherever, performed dismally. The results of the study showed midwives and nurses, in comparison to medical residents, were 99.3 percent and 37 percent nescient in newborn resuscitation, respectively; nevertheless, midwives still possessed greater knowledge than nurses. Intriguingly, prior research disclosed that nurses and midwives consistently outperform physicians in the field of neonatal resuscitation, and they were regarded as the best ambassadors of neonatal care [29,30]. This alarming discovery raises the possibility of either a general lack of interest in the profession or a formal lack of training in neonatal care. A study from Easter Ethiopia indicated that midwives had 7.39 times higher competence levels than nurses. This disparity could be caused by a different reference category selection and NICU exposure. On the contrary, a Kenyan study in Kaka-Mega country revealed nurses were the main resuscitators in about 72.5 percent of newly born infants necessitating resuscitation [26]. This is in parallel with other studies, which reveal that nurses are poorly knowledgeable about neonatal resuscitation [31].

A study conducted at Jimma Zone revealed midwives were 3.899 times more likely to be knowledgeable than nurses [32]. Consequently, what this implies is that many neonates who may need resuscitation may end up suffering, especially in rural communities. Regarding the fact that nursing education takes almost half the duration of time it takes to train doctors, this may explain the constrained time for training [33]. Even though the participants' average work experience was 2.5 years and the questions were designed to assess a basic level of knowledge, only 53.0 percent of them were able to score better than the minimum competency level, which was 70% and above. Given all of this experience, one would believe that results from a demographic survey would be more accurate. This implies a serious ignorance of the principles involved in caring for neonates. Many medical personnel execute a significant number of resuscitations that are commonly performed inappropriately, despite their lack of knowledge about infant resuscitation [34]. These findings corroborate the notion that, in keeping with the failing health system, a small number of medical facilities currently provide the finest training on the importance of maternity and newborn care.

Given all of this experience, one would believe that results from a demographic survey would be more accurate. This implies a serious ignorance of the principles involved in caring for neonates. Many medical personnel execute a significant number of resuscitations that are commonly performed inappropriately, despite their lack of knowledge about infant resuscitation [34]. These findings corroborate the notion that, in keeping with the failing health system, a small number of medical facilities currently provide the finest training on the importance of maternity and newborn care.

Conclusion

The study revealed that 62% of the participants demonstrated a good level of knowledge regarding a neonatal resuscitation, as indicated by an overall mean knowledge score of 20.9%.The findings also indicated that trained healthcare providers, the presence of guidelines and profession of the participants were significantly associated with knowledge in this area . However, there was no discernible relationship between knowledge level of neonatal resuscitation and variables like age and attitude.

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