RESEARCH ARTICLE

KNOWLEDGE AND PRACTICES TOWARDS NEWBORN CARE BY NURSES IN KITAGATA HOSPITAL, SHEEMA DISTRICT

Nankya Viola[1], Hilard Nuwasiima[1], Ndagire Nuruh[1] and *Emmanuel Ifeanyi Obeagu[2]

1. School of Nursing Science, Kampala International University, Uganda.
2. Department of Medical Laboratory Science, Kampala International University, Uganda.

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Abstract

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In Uganda, newborn care remains poor since more than 75% of newborn deaths still results from preventable causes if appropriate newborn care practices are implemented. This study explored the knowledge and practices on newborn care among nurses in Kitagata hospital, Sheema Districts. A cross sectional study design was used to assess 40 nurses who were selected by simple random sampling and assessed by questionnaire, data was analyzed by SPSS and results presented by tables and figures. Results revealed that all 40(100%) nurses had ever heard of new born baby care, 40(100%) to identify preterm babies, 36(90%) had ever got extra training on baby care, 39(97.5%) knew hypothermia as a risk in new born babies while only a few 22(55%) knew that newborn babies are also at risk of hypoglycemia, 40(100%) nurses knew high temperatures as danger sign in newborns. 38(95%) of nurses had ever cared for new born baby during their professional nursing practice where 38(100%) suctioned newborn airway and did not touch newborn baby's cord with bare hands to avoid infections, , 38(100%) of nurses-maintained warmth by attachment of babies to the mothers' body, 30(78.9%) of nurses maintained premature glucose levels by maintenance fluids and 30(78.9%) ensured that newborn babies are also immunized yet only very few 2(5.3%) of nurses monitored for danger signs while they carried out newborn baby care. The nurse's knowledge on newborn care were generally fair and so were their practices.

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*Corresponding Author:- **Emmanuel Ifeanyi Obeagu***

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Introduction:-

New born care is defined as management of the neonate during the transition to extrauterine life and the subsequent period of stabilization [1-6] According to UNICEF, (2019), a newborn baby is the one from birth to 28 days of extrauterine like.

Globally, there remains gaps in new born care which has resulted into 4 million newborns dyeing every year before completing one month of life as result of poor new born care [1-].

Sub-Saharan Africa accounts for the two thirds (2/3) of all newborn babies who die or get lifelong

complications in life due to inadequate care received from birth to 28 days [7].

In East Africa (EA) in 2012 estimated 85% of all neonatal deaths results from gaps in standard of new born baby care, this was attributed to limited knowledge as well as limited standard practices [8]. As a result, many new born babies die, and those who survive face a lifetime of disability with limited access to supportive services [9].

And also new born care reduces morbidity from infection and respiratory insufficiency [10-14]. One of the highest impact interventions for newborn survival and health is quality new born care. This would be achieved by health workers having good new born care knowledge as well as skills of practice for to play their vital role in caring for new born babies [15].

Methodology:-

Study design and rationale

This study adopted a cross sectional study design using quantitative research approach. The rationale for the design was to obtain a direct detailed description on knowledge and practices on newborn care among nurses that were present in the facility at the time of data collection. The cross-sectional study design was used because it is more reliable and objective, it also saved time and cost. And quantitative approach was preferred because data would be easily analyzed.

Study area

The study was conducted at Kitagata Hospital in Sheema District

Study population

The study involved all nurses Kitagata hospital. These were selected because they are the ones that are involved in daily care for the neonates hence their knowledge and practices on preterm baby care have direct impact on survival of newborn babies they care for.

Sample size determination.

The sample size was determined using Sloven, (1962) formula with precision of

+/-5% at a confidence level of 95%. The formula is given by the expression below.

$$N = n/1+n (E)^2$$

Where;

N = Number of respondents.

n = Target population, n=45 (estimated number of nurses at Kitagata hospital) E = level of precision, E= 0.05 Therefore;

$$N = 45/1+45(0.05)^2$$

N = 40, therefore 40 nurses were recruited for the study

Sampling procedure and rationale

Simple random sampling was adopted to avoid bias in selection of participants. List with names of all nurses were established, by the use of their duty roster with independent names each on a separate paper but of equal size were folded and vigorously shaken. After shaking those papers, then the researcher randomly chose 40 of the papers, the names on papers picked were the study participant. If he/she did not consent or is in leave another paper was picked randomly. In case one of the selected names was off duty or on night duty the duty roster was checked to see when they are on day duty and the researcher came back and collected data during the period of their day duty.

Inclusion criteria
Trained nurses who were present in maternity and neonatal intensive care unit and were willing to consent

Exclusion criteria
The study excluded;

Nurses who were not willing to participate.

Research instruments
The questionnaires were developed in English because all nurses offering were presumed to be knowing English. The questionnaires included open and closed ended questions on demographic characteristics, knowledge of nurses on new born baby care and practices on newborn baby care.

Data collection procedures
The researchers got an introductory letter from research committee of Kampala international university school of nursing research committee, this was presented to the principal nursing officer & ward in-charges who gave permission for data collection. The researcher introduced himself to the participants and explained to them the purpose of the research.

Consent forms were given out and signed by willing participants. Questionnaires were given to respondents to fill independently.

Data analysis
Data analysis was done by help of computer application SPSS for analysis and quantified data was transferred to Microsoft excel for graphical presentations in tables, pie charts, bar and doughnut charts.

Ethical considerations.
An introductory letter issued by the research and ethics committee of Kampala International University School of Nursing was obtained and it was used to introduce the researcher to research study center.

Nurses were included in the study upon giving their consent to participate after a thorough explanation by the researcher on the purpose of the study and they were requested to consent and the researcher informed the participants that they had the right to with draw from the study if one felt uncomfortable during the course of the study. Participants were assured of maximum confidentiality and were informed that there was no hidden intention behind the study but research purposes only.

Results:-
Table 1:- Showing demographic characteristics of the respondents (N=40).

Demographic Character	Study Variable	Frequency (N)	Percentage (%)
Age	18-24	4	10
	25-31	10	25
	32-38	18	45
	39-45	6	15
	46 and above	2	5
Sex	Male	12	30
	Female	28	70
Level of training	Certificate nurse	20	50
	Diploma nurse	12	30
	Degree nurse	4	10
	Nursing aid	4	10
Years in practice	10-14	21	52.5
	5-9	9	22.5
	0-4	6	15

	15-above	4	10

Research study results indicate that majority 18(45%) of the nurses were aged between 32-38 years while only a few 2(5%) were aged above 46 years. Furthermore, a larger number 28(70%) were females, 12(30%) were males. Results also revealed that more than a third50(50%) were enrolled nurses, while degree nurses and nursing aids were the least 4(10%) of nurses. In addition to this,

majority 21(52.5%) of nurses had only 10-14 years of experience in healthy service care compared to the least 4(10%) that had above 15 years of experience.

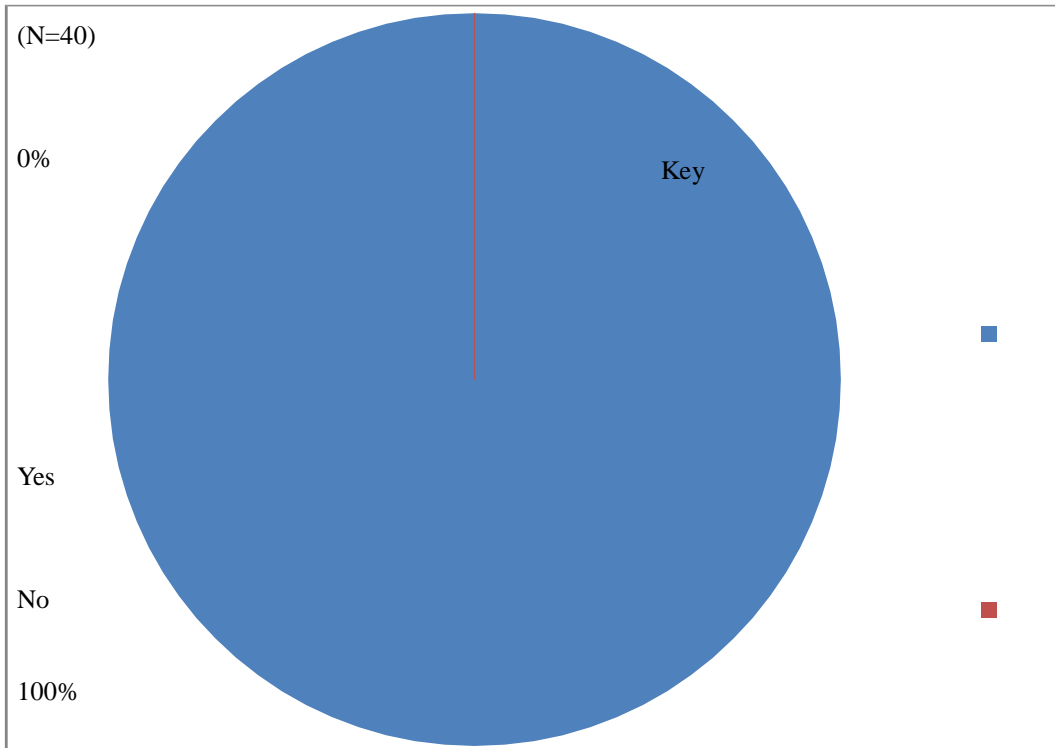**Knowledge of health workers on premature baby care**

Figure 1:- Showing whether nurses had ever heard of newborn baby care or not.

Research results from the figure above revealed that all 40(100%) of the nurses had ever heard of new born baby care without anyone that objected to have not heard of it. (N=40)
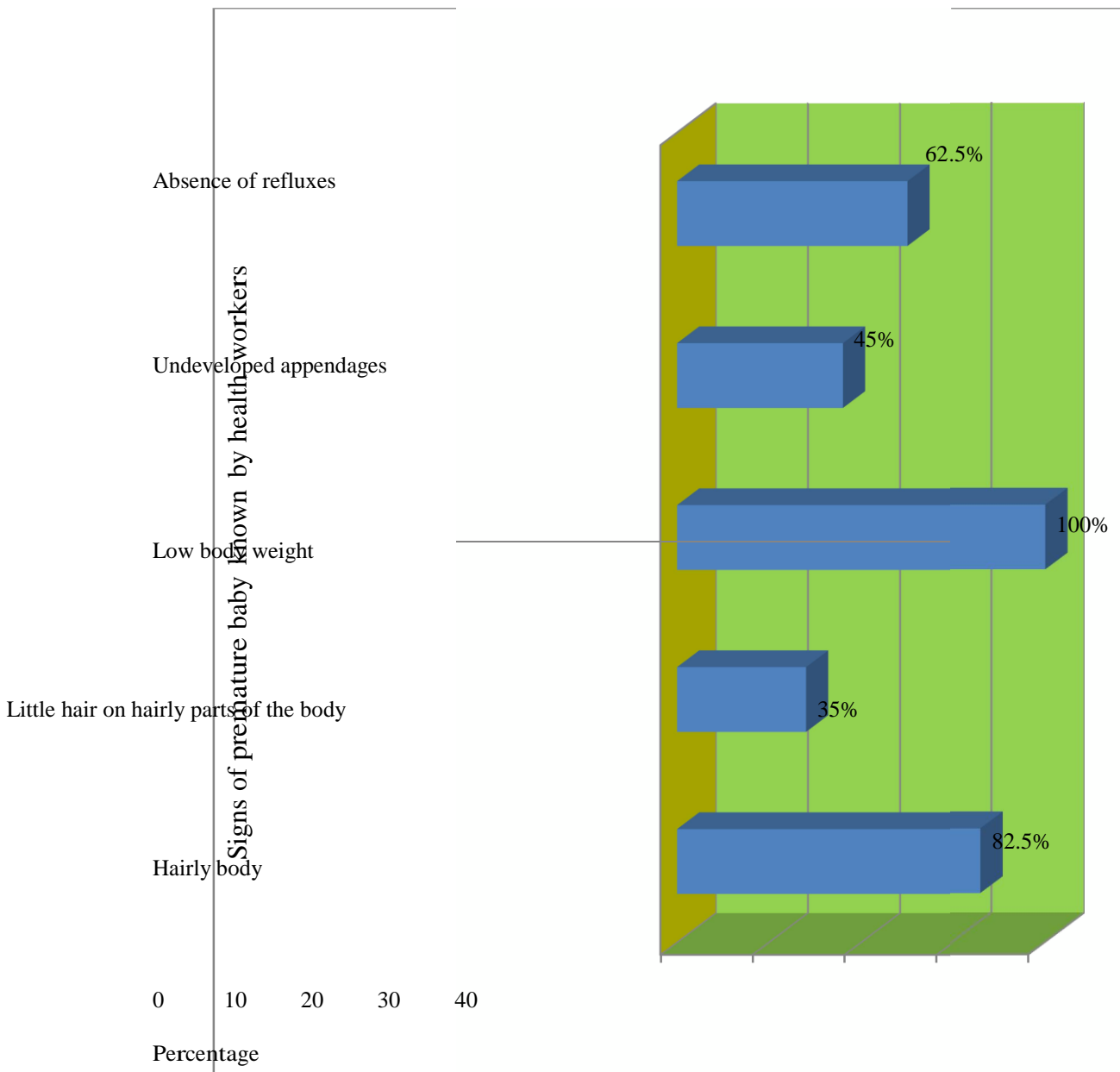
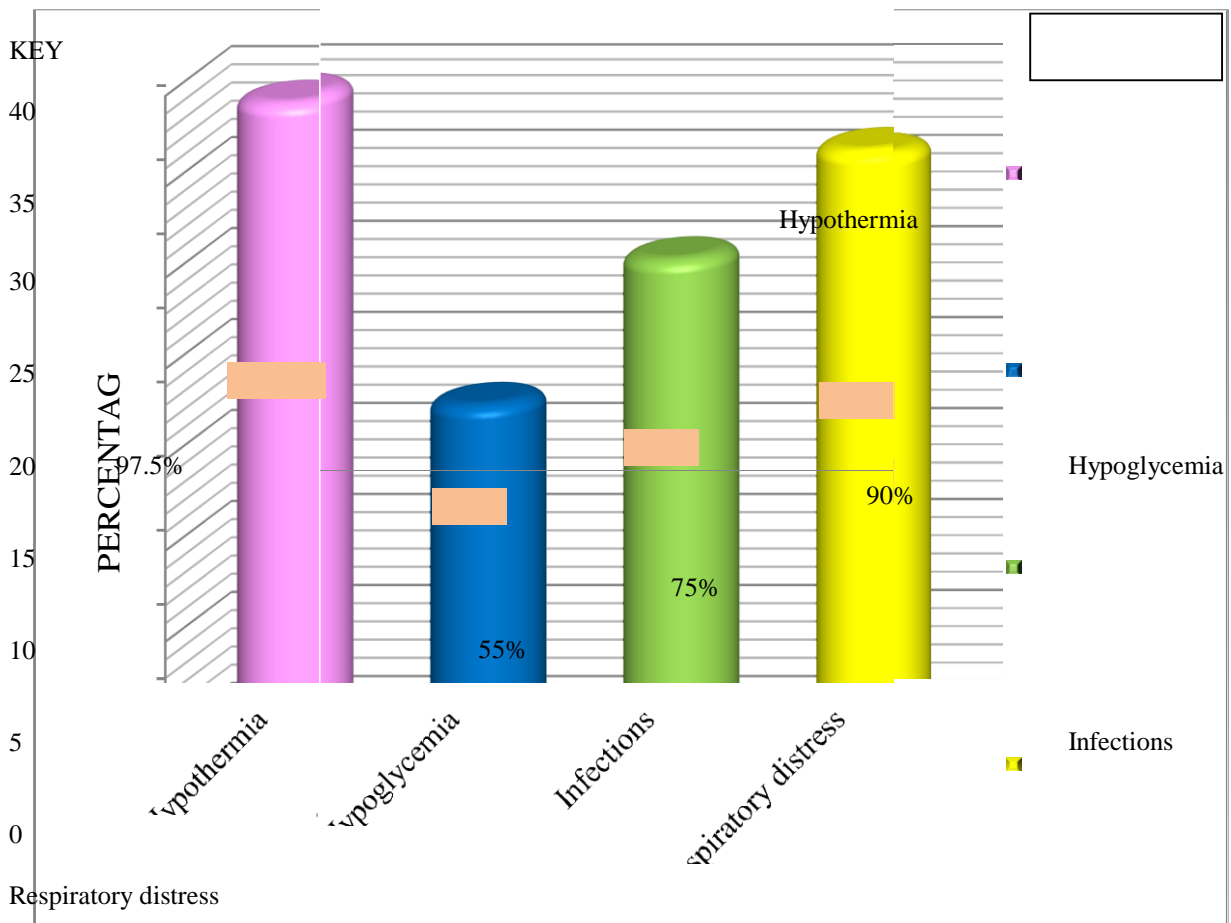**Figure 2:-** Showing nurses knowledge on signs of newborn baby.

Results indicated that most 40(100%) of nurses knew low births weight as a sign of premature baby although only a few knew lack of hair on hairy parts of the body and undeveloped appendages with 14(35%) and 18(45%) respectively.

Table 2:- Showing whether nurses had ever been trained on newborn baby care (N=40).

Character	Variable	Frequency(N)	Percent(%)
Whether a nurse had	Had training care	36	90
	Never trained on baby care	4	10
evergot extra training on baby care(n=40)			
What health workers	Cord care	3	8.3
	Premature baby	1	2.7
had ever received extra training for (n=36)	New born feeding	8	22.2
	Resuscitation	24	66.6

From the table above, majority 36(90%) of nurses had ever got extra training on baby care, while the remaining 4(10%) had not. It was also revealed that most 24(66.6%) had been trained on neonatal resuscitation but only a few 1(2.7%) had ever got a continuous training on premature baby care.

The table above indicate that most 39(97.5%) of nurses knew hypothermia as a risk in new born babies while only a few 22(55%) knew that newborn babies are also at risk of hypoglycemia.

Figure 4:- Showing nurses knowledge on common risks in new born baby care(N=40).

Knowldge On Premature Baby Risks
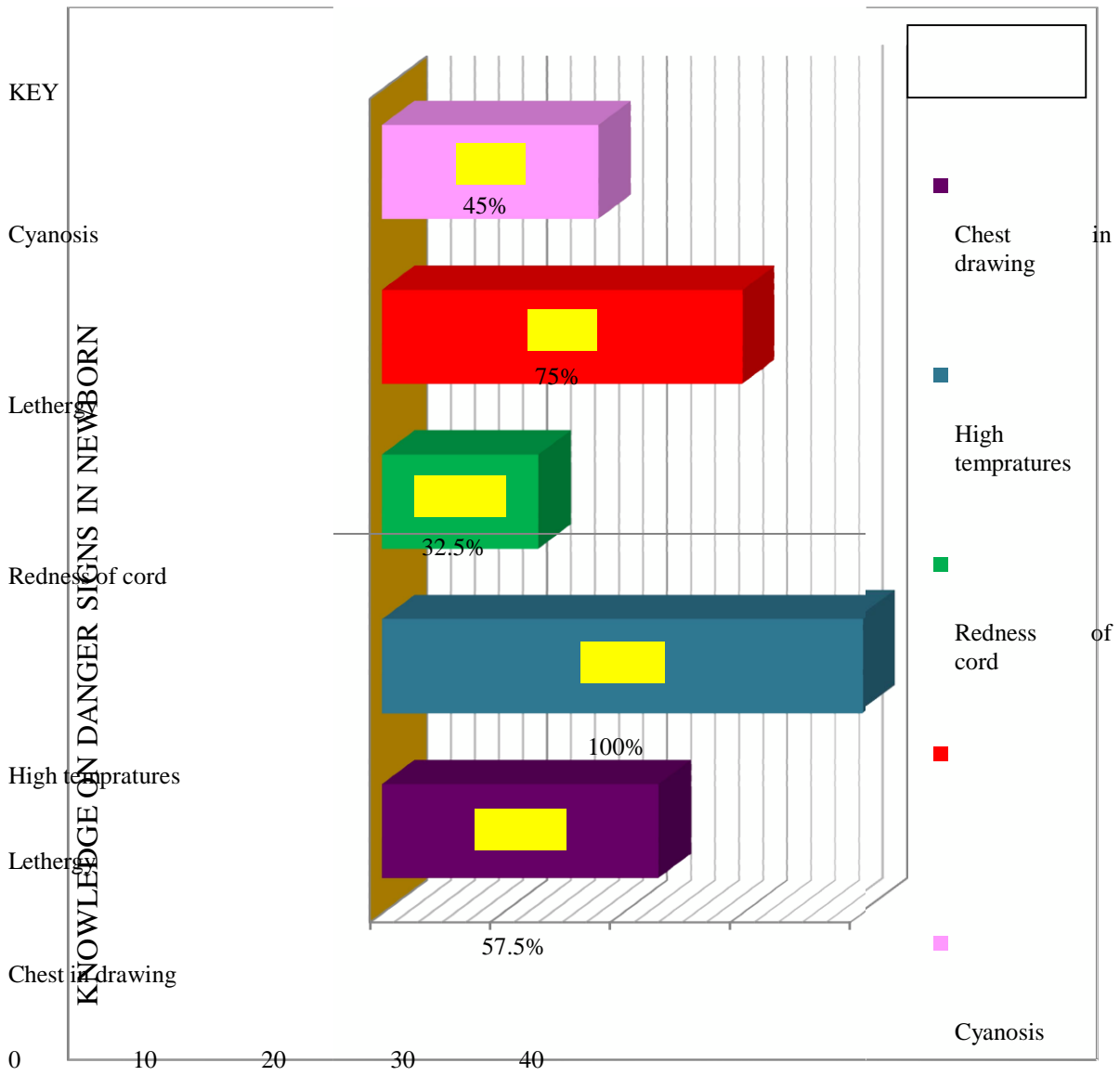
PERCENTAGE

Figure 5:- Showing nurses knowledge on common danger signs in new born babies (N=40)

From the figure above, findings indicate that all 40(100%) nurses knew high

temperatures while only very few 13(32.5%) knew redness of the newborn baby's

cord as a danger sign.

Practices of nurses on new born baby care

Key

5%

Have ever carried out premature baby care

95%

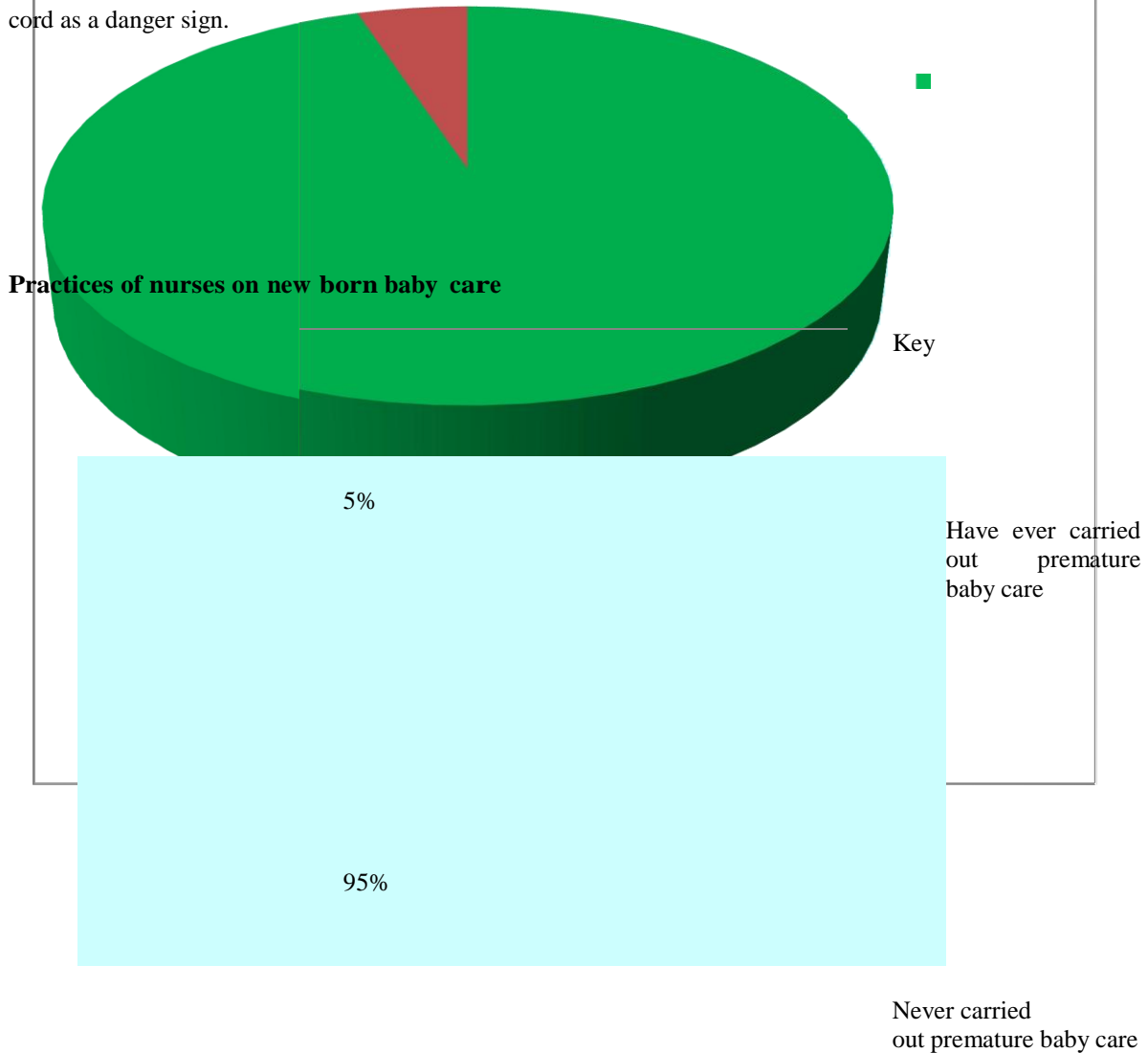Never carried out premature baby care

Figure 6:- Showing nurses practice of new born baby care.

Majority of 38(95%) of nurses had ever cared for new born baby during their professional nursing practice whereas the remaining 2(5%) had never cared for a new born baby in their nursing professional carrier.

Table 3:- showing how nurses do their common premature care practices (N=38).

Premature care activity	Variable	Frequency (n)	Percentage (n)
Air way	I give oxygen therapy	30	78.9
	Suctioning	38	100
	CPAP administration	2	5.2
	I leave on free air	00	00
Infection control	Limit visitors	26	68.4
	Admit in NICU	33	86.8
	Only is attended by healthy health workers	3	7.9
	I dint touch cord with bare hands	38	100
	I apply TEO	20	52.6
Cord care	Immediate clamping	38	100
	I use sterile cord scissors and ligatures	38	100
	I daily wash with saline water	16	42
	I wash chalorhexidine	4	10.5
	I educate the mother not to apply herbs on it	2	5.75
Feeding	I administer maintenance fluids	35	92.1
	I initiate breast feeding	22	57.8
	I do NG tube feeding	30	78.9
	I help the mother to attach on breast	10	26.3
Warmthmain tenance	Referral to incubator	16	42.1
	I encourage KMC	14	36.8
	I don't baths the premature in first 24 hours	12	31.5
	I leave vernix caseosa	17	44.7
	Immediate skin to skin contact	38	100
	I keep in warm clothes	30	78.9
	I change wet clothes	32	84.2
Glucose maintenance	Ensure breast feeding	14	38.8
	I give maintenance fluids	30	78.9
	Express milk for those with no suckling reflex	18	47.3
Subsequent care	I monitor weight gain	16	42.1
	I ensure immunization	30	78.9
	I ensure bonding with family members	3	7.8
	I monitor for danger signs	2	5.3

On air way and respiratory care, most 38(100%) of nurses suctioned newborn airway, others 30(78.9%) administered oxygen to the newborn.

All 38(100%) of nurses did not touch newborn baby's cord with bare hands to avoid infections while 3(7.5%) ensured that newborns are attended to by healthynurses and doctors only

On cord care, all 38(100%) immediately clamped and ligatured the cord with sterile scissors and clamps, although only health educated mothers not to apply anything else on newborn baby's cord.

Findings on what nurses did to ensure feeding of newborn babies, majority

35(92.1%) administered maintenance fluids while the least 10(26.5%) helped mothersin case they can't breastfeed normally to attach babies during breastfeeding. In addition to the above, most 38(100%) of nurses-maintained warmth by attachment of babies to the mothers' bodynewborn babies while only a few 14(36.8%) ensured warmth maintenance by KMC.

On glucose level maintenance, most 30(78.9%) of nurses maintained premature glucose levels by maintenance fluids while less than a half 14(36.8%) maintained newborn glucose levels by ensuring breastfeeding.

More so, nurses that carried out subsequent care, majority 30(78.9%) ensured that newborn babies are also

immunized yet only very few 2(5.3%) of nurses monitored for danger signs while they carried out newborn baby care.

Discussion:-

Results revealed that majority 21(52.5%) of nurses had only 10-14 years of experience in healthy service care which could be good retention policy in government facilities which gives permanent contracts to its workers hence retaining their experience. With more years of experience, these are expected to have more skills in newborn babycare.

Also, research study results indicate that majority 18(45%) of the nurses were aged between 32-38 years, this could be because, Kitagata hospital being a government hospital hence recruiting some nurses after experience. These could have more experience in newborn baby care since they have had less interfaces with premature babies similarly to Ijumba et al. [16] whose study in Zimbabwe found out that nurses especially newly trained professionals had less confidence in new born baby care like feeding.

Results also revealed that more than a third 14(35%) were enrolled nurses which could be because since nurses make larger percentage of the nursing human resource in Uganda, hence the reason for their dominance in this studies population. These could have had less training on new born baby care hence may not effectively offer good care. The research study finding is contrary to Abadi et al. [18] research study in Uganda on baby care which found that high percentage (54%) of those that were caring for newborns were midwives.

Results indicated that all (100%) of nurses knew how to identify premature babies. This leaves other signs of premature babies like undeveloped appendages, undeveloped hair on hairy body parts among others hence are likely to go undetected with risk of missing on care they would need.

Majority 36(90%) of nurses had ever been trained on newborn baby care, most

24(66.6%) had been trained on neonatal resuscitation. This could be because, much attention of baby care could be being put on other aspects like resuscitation The results are similarly to Mohan et al., (2016) whose study in Sri-lanka found out that 95% of nurses that had training on newborn baby care periodically throughout the course of health workers' practice.

Research study results also indicated that nurse's knowledge on essentials of newborn baby care, majority 40(100%) knew warmth maintenance, these are
likely to maintain warms thereby preventing newborns from hypothermia.

Research results indicated that most 39(97.5%) of nurses knew hypothermia as a risk in newborn babies, which could be because they understand the relationship of surface area to volume ratio for heat loss and undeveloped osmoregulatory mechanisms in newborn babies. The finding is similarly to Abiimbo et al. [18] in Kenya, found gap on knowledge on risk factors and danger signs in newborn baby care.

Furthermore, research study findings also indicated that all 40(100%) nurses knew high temperatures as a danger sign. This could be because, health workers do not mind about identifying dander signs while caring for premature babies or lack proper skills in doing so, hence they commonly identify what is common to all babies with advanced pathological progress but less attention is given what is mostly peculiar with premature babies like infections, hypoglycemia and chest in- drawing. The finding is similarly to Awasthi et al. [19] in India which found out that 45% of nurses who did not have adequate knowledge to diagnose danger signs in neonates hence they died even in hands of nurses.

Majority of health workers 38(95%) had ever practiced care for a newborn baby, which could be because being in a busy facility where maternity and neonatal care are among the busy units of the facility could have had that interface with premature babies necessitating them to offer care hence are expected to have good skills in practice of newborn baby care. These findings are slightly higher compared to those of Sharmin et al.

[20] findings from research study at Dhaka medical college hospital found out that only (79.4%) of nurses practicing premature baby care.

On air way and respiratory care, most 38(100%) of nurses suctioned newborn airway, this could be because airway suctioning is common among most newborn care guidelines. This could help to open the airways of the newborn babies. The finding is similarly to Sharif et al [21] in turkey which revealed interventions like suctioning of airways and oxygen support to newborn babies.

Furthermore, findings indicated that majority 38(100%) of nurses did not touch premature cord with hands to avoid infections which could be because, nurses understand the risk of touching the cord with bare a hands as port of infections to premature babies hence could relatively reduce infections. The finding is contrary to Aghamohammadi et al. [22] in Iran which found newborn care associated with practices like handling directly by health workers.

On cord care, a larger number 38(100%) immediately clamped and ligatured the cord with sterile scissors and clamps, this could be because, health workers understand the potential impact of poor cord care commonly which is infections.

Findings on what nurses did to ensure feeding of premature babies, majority 35(92.1%) administered maintenance fluids which could be because, most premature having undeveloped suckling reflexes, health workers find it difficult to ensure initiating breastfeeding hence resort to maintenance fluids. Although these may sustain the premature, they have no vitamins and other vital nutrients that could be obtained from mothers' breast milk which could expose the premature baby to diseases and later affect its development in life. The finding is similarly to Kate [23] in her study in eastern Kenya on health workers influence on preterm baby feeding found out those preterm babies were less (66%) initiated on breastfeeding by healthcare workers in first hour of births compared to their term counterparts (98.6%).

In addition to the above, most 38(100%) of nurses-maintained warmth by skin-to-skin contact to babies' mothers which could be due to lack of other warmth maintenance measures like incubators. The finding is contrary to those of with what was found out at Dhaka medical college hospital where health workers provided with incubators, but only 8% improvised with KMC in case of full incubators.

On glucose level maintenance, most 30(78.9%) of nurses-maintained glucose levels by maintenance fluids which could be as well maintained by ensuring breastfeeding and feeding on expressed breast milk to those without a clear suckling reflex. Maintenance fluids have various challenges compared to breast milk in that being invasive, exposes injuries to newborn babies and does not give the newborn baby antibodies as well as being risk for infections.

Moreso, nurses that carried out subsequent care, majority 30(78.9%) ensured that newborn babies are also immunized which could be a routine baby care not only limited which could help in preventing immunizable diseases. This finding is contrary to Sharmin et al. [20] at Dhaka medical college hospital where only 8% of health workers ensured newborn babies are immunized in subsequent care.

Conclusions:-
From the research study findings, there was a low level of knowledge among nurses on newborn baby care, generally nurses knew could identify premature babies that need extra care, they also knew essentials of newborn care like thermo care, but not ensuring assisted breast feeding and glucose maintenance. Nurses also lacked knowledge on common risks in newborn babies like hypoglycemia although they knew hypothermia. They could only identify high degree fever as a danger sign.

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