



ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
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**The Effects of Short duration Kangaroo Mother Care on Neonatal Pain
from Adhesive Tape Removal: A Randomized Controlled Trial among
Preterm Neonates Admitted to Tikur Anbessa Specialized and Gandhi
Memorial Hospitals in Addis Ababa, Ethiopia**

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Table of Contents

Acknowledgment.....	v
List of Abbreviations and Acronyms	vi
List of Figures.....	ix
List of Tables	x
Abstract.....	xi
1. Introduction.....	1
1.1. Background	1
1.2. Statement of problem	2
1.3. Significance of the study	3
2. Literature review	4
2.1. Historical Perspective.....	4
2.2. Pain assessment in preterm neonates.....	4
2.3. Determinants of pain response in preterm neonates.....	5
2.3.1. Demographic factors.....	6
2.3.2. Medical factors	7
2.3.3. Pain stimuli related factors	7
2.4. Kangaroo Mothers Care for Pain Reduction in Preterm Neonates	8
2.5. Conceptual frame work	10
3. Research question and Hypothesis	13
3.1. Research question.....	13
3.2. Research Hypothesis	13
4. Objective of the study	14
4.1. General objective.....	14
4.2. Specific objectives.....	14

5. Methods.....	15
5.1. Study period and settings	15
5.2. Study design	15
5.3. Study population	16
5.4. Eligibility criteria	16
5.5. Measurements of variables.....	16
5.5.1. Study outcome.....	16
5.5.2. Independent variable.....	17
5.5.3. Covariates.....	17
5.6. Sample size determination	17
5.7. Sampling technique	17
5.8. Data collection procedure.....	18
5.9. Data collection tool	21
5.10. Operational definitions	22
5.11. Quality Assurance.....	23
5.12. Data management, analysis procedures and presentation	23
5.13. Ethical consideration	24
5.14. Dissemination of result.....	24
6. Result.....	25
6.1. Demographic characteristics of the study participants.....	26
6.2. Medical characteristics of the study participants	27
6.3. Previous history of exposure to painful medical procedures	29
6.4. Characteristics of the removed adhesive tape in the study.....	30
6.5. The pain responses of preterm neonates towards adhesive tape removal	32
6.6. The effects of KMC on neonatal pain during adhesive tape removal	33

7. Discussion.....	36
8. Strengths and limitations of the study	41
8.1. Strengths of the study	41
8.2. Limitations of the study.....	41
9. Conclusion and Recommendations	42
9.1. Conclusion.....	42
9.2. Recommendations	42
References	44
ANNEX	48
Annex I- Data collection tools (English Version)	48
Annex II: Data collection tool (Amharic version)	59
Annex III: Training manual for data collectors (Amharic version)	71
Annex IV: Training manual for supervisors (Amharic version)	98

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List of Abbreviations and Acronyms

AAHB	Addis Ababa Health Bureau
AAU	Addis Ababa University
ANC	Antenatal Care
BP	Blood Pressure
Bpm	Beats per minute
BPM	Breaths Per Minute
CI	Confidence Interval
CNS	Central Nervous System
CPAP	Continuous Positive Airway Pressure
DID	Difference in difference
GA	Gestational Age
GMH	Gandhi Memorial Hospital
HMIS	Health Management Information System
HR	Heart Rate
HRV	Heart Rate Variability
IC	Incubator Care
IM	Intramuscular
INO2	Intranasal oxygen
IQR	Interquartile range
ITT	Intention to Treat Analysis
IV	Intravenous

IVH	Intraventricular Hemorrhage
KMC	Kangaroo Mothers Care
LNMP	Last Normal Menstrual Period
MD	Mean Difference
NFCS	Neonatal Facial Coding System
NG	Nasogastric
NICUs	Neonatal Intensive Care Units
O ₂	Oxygen
PA	Postnatal Age
PCA	Postconception Age
PI	Principal Investigator
PIPP	Premature Infant Pain Profile
RCT	Randomized Controlled Trial
RR	Respiratory Rate
SD	Standard Deviation
SDG	Sustainable Development Goal
SE	Standard Error
SNOSE	Sequentially Numbered Opaque Sealed Envelopes
SSC	Skin to Skin Contact
SVD	Spontaneous Vaginal Delivery
TASH	Tikur Anbessa Specialized Hospital

VLBW	Very Low Birth Weight
WHO	World Health Organization

List of Figures

Figure 1: Conceptual framework for the study “The effects of short duration kangaroo mother care on neonatal pain from adhesive tape removal among preterm neonates admitted to TASH and GMH in Addis Ababa, Ethiopia”, adapted from Cong et al, 2013.	12
Figure 2: CONSORT flowchart for the study “The effects of short duration kangaroo mother care on neonatal pain from adhesive tape removal among preterm neonates admitted to TASH and GMH, 2018”	25
Figure 3: Types of adhesive tapes removed from preterm neonates admitted to TASH and GMH, 2018.....	31
Figure 4: Body sites of adhesive tape removal for preterm neonates admitted toTASH and GMH, 2018.....	31
Figure 5: Reasons of adhesive tape removal for preterm neonates admitted to TASH and GMH, 2018.....	32

List of Tables

Table 1: Demographic characteristics of preterm neonates admitted to TASH and GMH, 2018	26
Table 2: Medical characteristics of preterm neonates admitted to TASH and GMH, 2018.....	28
Table 3: Painful medical procedures conductedamong preterm neonates admitted to TASH and GMH, 2018	29
Table 4: The PIPP scores of the study participants during adhesive tape removal	34
Table 5: Difference in difference estimation for PIPP scores of the study participants	35

Abstract

Background- Different studies showed that short duration Kangaroo mothers care has a pain relieving effects among preterm neonates exposed to various minor clinical procedures. However, since the responses and assessments of pain in preterm neonates vary in different settings, the study was planned to determine its effect in Ethiopian context.

Objective- The aim of this study was to measure the effects of short duration kangaroo mother care on neonatal pain from adhesive tape removal among preterm neonates admitted to Tikur Anbessa Specialized and Gandhi Memorial hospitals in Addis Ababa, Ethiopia.

Method- An open label parallel randomized controlled trial was conducted on 156 preterm neonates who were born between 28 and 36 completed weeks of gestation. The neonates assigned to one of the study groups by using block randomization and sequentially numbered sealed envelopes were used to conceal the allocation. Neonates assigned in intervention group received ten minutes of kangaroo mother care before adhesive tape removal while neonates in control group remained in the incubators. The outcome of the study was neonatal pain during adhesive tape removal measured by using premature infant pain profile score. Independent samples t-test was used to compare the pain scores of the groups during adhesive tape removal and 2 points difference was considered as clinically important difference. Additionally, multilevel mixed effects linear regression analysis was used to determine the effect of the intervention.

Result- Ten minutes of kangaroo mother care was able to significantly decrease pain from adhesive tape removal. The observed difference between the two groups [Mean difference= -2.5, 95% CI (-3.9, -1.2), $P < 0.001$] was both clinically and statistically important. The multilevel mixed effects linear regression analysis also showed that, the intervention decreased the pain of the neonates by 2 points than it would be if they were allocated in the control group ($\beta = -2.2$, 95% CI (-3.9, -0.5), $P = 0.01$).

Conclusion and recommendations- Ten minutes of kangaroo mother care can be used to relieve pain from adhesive tape removal among preterm neonates. Among preterm neonates, kangaroo mothers care should be considered as one of neonatal pain management methods during adhesive tape removal.

1. Introduction

1.1. Background

The International Association for the Study of Pain has defined pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage” [1]. It also stated that the perception of pain can vary from person to person as it is mainly dependent on personal experience and highly subjective [1]. Though this statement looks comprehensive definition of pain, it excluded individuals who are incapable verbalizing pain including newborns, small children, comatose, mentally retarded and verbally handicapped individuals [1]. In 1996, new definition of pain was requested in order to have better understanding of the issue among those segments of the population [1]. It was explained that the pain system will develop at each stage of life in a way necessary to perceive and respond to pain [1].

Kangaroo mother care (KMC), which was first introduced in Bogota, Colombia by Rey and Martinez, is a care for preterm infants characterized by early continuous and prolonged skin to skin contact between the baby and the mother and frequent exclusive breast feeding [2]. KMC is one of the highly recommended strategies to halt adverse outcomes in preterm neonates especially in settings where appropriate NICUs are scarce [3]. In 2015, World Health Organization (WHO) strongly suggested that all preterm neonates who have birth weight less than 2000 grams should receive continuous KMC care as much as possible [3].

Apart from thermal regulation and augmentation of breastfeeding, recent studies are now showing that even short and intermittent KMC is an important intervention which helps preterm neonates to survive within stressful environment of neonatal intensive care units (NICUs) by letting parents to comfort their babies during painful events.

In Ethiopia, Tikur Anbessa Specialized Hospital (TASH) started to provide KMC in 1996 which is then expanded to seven hospitals of the country [4]. By 2015, the national newborn and child survival strategy targeted to boost KMC coverage in the country from 10% to 90% by 2020 [5]. In 2017, KMC indicator was included in the Health Management Information System (HMIS) in order to assess the initiation of KMC at national level [4].

1.2. Statement of problem

Each year, 15 million neonates are born without completing their uterine growth around the world [6]. Unfortunately, these newborns are in need of spending the at least the first weeks of their life in NICUs where they are going to be exposed to various noxious stimuli. Despite their undeniable contributions in terms improving the survival of preterm neonates, poor neonatal pain management in NICUs remains as public health concern where 80% to 99 % of painful procedures left untreated [7-9]. A study conducted in the NICUs of Canada showed that, though tissue damaging procedures among neonates is reduced by 40% between 1997 and 2009. However in 2009, neonates admitted to similar NICUs were exposed to 33 painful procedures per week[8].

KMC is one of the non pharmacologic pain reduction methods important for preterm neonates. Other than mothers, fathers or other women can also provide KMC during painful procedures for preterm neonates[10, 11]. Previously conducted studies showed that short duration of KMC can reduce neonatal pain from different painful medical procedures. However, replications of studies that have similar outcome in different settings were found to be important to determine its effect size[12]. In Ethiopia, studies showed that KMC is safe and cost efficient intervention which can improve the survival rate of preterm and low birth weight infants[13, 14]. But, to the author's knowledge, the effects that KMC have on pain responses of preterm neonates are not studied in Ethiopian setting. Most of previously conducted studies were carried out in high income settings by using advanced measurement techniques. So, it was important to determine whether the mentioned pain relieving effect of KMC can be replicated in our setting.

Thus, this study was planned to determine the effect of short duration of KMC on neonatal pain from adhesive tape removal among preterm neonates admitted to TASH and Gandhi Memorial Hospital (GMH).

1.3. Significance of the study

The result of this study is expected to be used as an input for TASH and GMH to improve the current newborn care service in the hospitals. It is also expected to be used as input by different governmental and non governmental organizations to improve the quality of newborn care across the country. As a baseline study, it is expected that it will initiate further studies on assessment of the benefits of KMC for neonatal pain management. Additionally, in combination with further studies this study is expected to generate evidence for policy makers to develop neonatal pain management protocols.

2. Literature review

2.1. Historical Perspective

“It seems unbelievable how long it took the medical community to realize that newborns also feel pain” [15]. Failure to recognize that neonates, especially preterm neonates, can feel and memorize pain was one of the misfortunes in the history of medical science. The assumptions that newborns do not feel pain since they have less developed nervous system and unmyelinated nerve cells resulted in performing of most of clinical procedures with minimal or no anesthesia at all. This theory was challenged in 1987 thanks to the work of Paul Hickey and Kanwaljeet Anand who explained that the spinal cord and central nervous system(CNS) become fully myelinated in the second and third trimesters[16]. This indicated that these newborns begin to sense pain starting from these periods. They also added that these tiny babies can respond to the painful stimuli both behaviorally and physiologically[16].

Recent scientific evidences continue to show that, premature neonates not only feels pain but feel more pain than older children do. This is caused by the immature pain modulation system in preterm neonates compared to that of older children [17-19]. The poor ability of preterm neonates to modulate pain makes them to experience amplified and longer lasting pain from a single pain inducing stimuli [17-19]. This will result in altered brain and hormonal functions as well as disrupted stress responses in their later life. A single study conducted in British among 78 very preterm neonates also showed that there is a possibility that exposure to higher number of skin breaking painful procedures during early neonatal period is related to delayed postnatal growth in this gestational age (GA) group[20]. The mentioned and many of the other health complications secondary to early pain exposure make neonatal pain assessment as the “fifth vital sign” in NICUs.

2.2. Pain assessment in preterm neonates

Preterm neonates are both anatomically and physiologically capable of expressing behavioral and physiologic responses towards painful stimuli [21-23]. Pain assessment can be done mainly by using three methods including; measurement of physiologic responses of pain, observation of behavioral indicators of pain and verbal/written description of pain [24-26]. For preterm

neonates only the first two methods can be implemented since they lack the ability of verbal expression [24-26].

Behavioral indicators of pain includes change in facial expression (brow bulge, eye squeeze, nasolabial furrow and open mouth), crying and body movements [21-23, 27]. Among the behavioral indicators facial expressions are considered as the most reliable and consistent indicator of pain [21-23, 27]. These behavioral indicators are sensitive to pain in newborns but they may not be specific and are highly vulnerable to subjectivity [21-23]. On the other hand, physiologic pain indicators are increased heart rate(HR) and blood pressure (BP), heart rate variability (HRV), decreased oxygen (O₂) saturation, palmer sweating, shallow and irregular breathing[21-23, 27]. Though physiologic pain indicators are objective, it is not recommended to use them as a primary pain assessment technique due to lack of sensitivity and specificity[21-23, 27]. Facial expressions, HR and O₂ saturation are the common behavioral and physiologic pain indicators used to construct majority of pain assessment tools. However, the existing weak correlation between the behavioral and physiologic pain indicators makes it difficult to interpret the findings of studies [28-30].

Depending on the variables they used to assess, the currently available pain assessment tools can be categorized as uni-dimensional and multidimensional tools [24]. One dimensional pain assessment tools use only a single indicator, either behavioral or physiologic indicators, to measure the intensity of pain while multidimensional tools are the one that use different indicators at the same time to measure neonatal pain[24]. Though there is no one single gold standard pain assessment tool, most authors agreed that using of multi dimensional tools is important to have a comprehensive understanding pain in neonates.

2.3. Determinants of pain response in preterm neonates

Despite of the ongoing efforts to improve pain assessment techniques among newborns, verbalization of pain remained as the only “gold standard” means of pain assessment. Pain assessment in preterm neonates is not a straight forward task and can be affected by several interacting factors[21, 22]. The determinants of pain response in preterm neonates can be grouped as demographic, medical and painful stimuli related factors [21, 22]. However, the effects of these factors on the direction of behavioral and physiological responses remain arguable.

2.3.1. Demographic factors

Gestational age of preterm neonates is the important predictor of their responses towards pain inducing procedures. In a systematic review of 18 studies, out 16 studies which examined the effect of GA on pain responses, 14 of them were able to find significant association [23]. Yet, the findings of previously conducted studies varied regarding its effect on the direction of neonatal pain responses. A cross sectional study conducted on 44 preterm neonates whose GA was ≤ 32 weeks showed that during heel lance neonates who were born before 30 weeks of gestation had higher frequencies of finger splay, fisting, and hand on face than neonates born at later GA[24]. Similarly, a cross sectional study conducted on 72 neonates whose GA ranges from 27-40 weeks indicated that, during heel stick, preterm neonates born between 27 and 32 weeks of completed weeks of gestation had the highest premature infant pain profile (PIPP) score compared to the other GA groups [25]. Additionally, the most significant variation in HR was observed also among neonates who had the same GA.

On the other hand, a prospective cohort study conducted among 136 very low birth weight (VLBW) neonates showed that GA at birth was associated with reduced behavioral responses and increasedHRV[26]. Similarly, in a cross sectional study among 122 preterm neonates whose average GA was 28 weeks showed that the odds of showing behavioral and physiologic responses were 0.9 times higher per weeks of gestation[27].

Though there were no enough evidences, postnatal age (PA) and birth weight were able to associate with pain responses of preterm neonates. A study that was conducted among preterm neonates between 27 and 31 weeks of postconception age (PCA) at birth showed that, the odds of demonstrating of behavioral and physiologic pain responses were increased 0.99 times per hours of PA [27]. In a cohort study conducted on 40 preterm neonates whose GA was <30 weeks, for each 100 gram increment of birth weight, the pain scores of the study participants had increased by 0.16 points ($P=0.001$)[28].

In general, majority of studies do not found any association between sex and pain responses but in studies in which sex is identified as significantly associated with pain response males were more sensitive[23].

2.3.2. Medical factors

The other important determinant is illness severity in which out of 13 studies that have assessed illness severity ten of them found significant association between illness severity and pain response[23]. Critically ill preterm neonates had diminished facial and physiologic responses of pain even if their pain response trends were similar (increment in facial and behavioral responses) to that of medically stable neonates [25, 26]. However, unlike to that of the facial reactions those neonates can have higher frequencies of facial twitches, hand on face and fisting than the stable neonates[24]. Length of stay in health institutions, a factor related with critically ill neonates was also found to be negatively associated with their pain responses. For each additional week they have stayed in hospitals, preterm neonates had 0.05 points lower pain scores [28].

The behavioral state that preterm neonates have during the pre-procedures stages can determine the level of their pain response. Previous study showed that, the probability of sleeping preterm neonates showing pain responses during procedures was 17.87% of the awake neonates[27]. The behavioral state of neonates before painful procedures was negatively correlated with PIPP score. Additionally, for neonates born between 27 and 40 weeks of gestation 11% of variation in PIPP score was explained by their pre procedure behavioral state[25]. This means preterm neonates who are in sleeping state manifest lower facial responses of pain than awaked once[25, 29].

The findings of the previously conducted studies regarding the effect of opioids on the pain responses of preterm neonates were inconsistent. At 32 weeks of PCA exposure to morphine was able to increase the cardiac output of the neonates but not the facial expressions [26]. However, the study of Grunau and her associates identified that at the same PCA, preterm neonates who had higher opioids exposure had significantly higher frequencies of fisting and hand on face[24]. Among neonates born between 27 and 40 week of gestation on the other hand, the types and kinds of opioids/ sedatives that the neonates were exposed did not correlate with their PIPP scores [25]

2.3.3. Pain stimuli related factors

For preterm neonates, being exposed to higher painful procedures was associated with lower pain responses. It was indicated that exposure to 20 painful procedures is enough to convert an infant

from a “stimulus naïve” responder to “stimulus non naïve” responder at 32 weeks of age[26]. Similarly, in preterm neonates with 32-36 completed weeks of gestation the number of prior painful exposures were the predictors of reduced behavioral and exaggerated physiological responses after being exposed to 2.6 ± 1.1 procedures [30].

In contrast to this study, greater numbers of finger splay and fisting were observed among infants who had been exposed to higher number of invasive medical procedures[24]. As it was explained by the authors, these cues could be more specific signs of pain among sicker preterm neonates and in those neonates exposed to higher number of pain inducing procedures due to their reduced facial expressions.

It is not only the number of painful procedures that affect neonatal pain responses but also the level of invasiveness of procedures. Neonates who were pricked with 21-gauge needle had significantly higher PIPP scores compared to those neonates exposed to 27-gauge needle[25]. . Newborns even preterm newborns were able to manifest behavioral and physiologic responses according to the location, duration and place of painful stimuli[30]. A cohort study conducted on 135 preterm and term neonates during different painful medical procedures indicated that, both the behavioral and physiologic responses of pain increase as the invasiveness of the procedure gets increased [31]. However, there was no difference in the degree of sleep response for mildly and moderately painful procedures [31]. Moreover, no difference was observed in the oxygen saturation of the neonates for moderately and highly invasive procedures [31]. This indicated that there might be an overlap in the responses of the neonates towards the invasiveness of the procedures [31]. The magnitude of pain response increased from mildly to highly invasive procedures[31]. The exception for this phenomena was the lack of difference for mildly and moderately invasiveness while sleeping and for moderately and highly invasive procedure for oxygen saturation[31]. During the first week of life, the magnitude of the change in heart rate and agitation was correspondent to the invasiveness of procedures rather than GA[31].

2.4. Kangaroo Mothers Care for Pain Reduction in Preterm Neonates

In different studies the terms KMC and skin to skin contact (SSC) were used interchangeably to describe a care characterized by continuous skin to skin care between preterm and mothers. Among all the benefits of KMC for both parents and babies pain, reduction during acute procedures is one of them. KMC reduce pain through sensory saturation, the effect of oxytocin

itself and the ability of oxytocin to increase the level of beta- endorphin and activation of c-afferent nerves which produces analgesic effect[32]. In addition to this, continuous, warm and pleasant human touch in case of KMC will activates c-afferent nerves on the chest that are important for anxiety reduction[32]. Oxytocin and c-afferent nerves are also important for physiologic stability. Though further studies are needed, positive interaction of parents with their preterm neonates during hospitalization was also able to improve white matter maturation and reduced effects of pain related stress on the brain[33].

Studies showed that KMC of various durations can reduce pain in preterm neonates during different painful medical procedures. A cross over randomized clinical trial (RCT) conducted in San Salvador on 24 preterm neonates (GA <37 weeks) showed that, three hours of SSC among preterm neonates significantly reduced the increment of HR and crying from heel stick compared to incubator care of similar duration[34]. During the heel stick 64.95% of infants in SSC group were crying in contrast to 92% of the incubator groups.

Similarly, thirty minutes of SSC before and during procedure was also able to reduce crying during single and repeated heel lance procedures. The result of a cross over trial conducted in America among 10 premature neonates born between 30 and 32 weeks of gestation showed thirty minutes of KMC before heel prick can significantly decrease the time of audible and inaudible crying[35]. Another study in Turkey by Akan and her colleagues among 50 preterm neonates born between 26 and 36 completed weeks of gestation, study participants exposed to KMC 30 minutes before and 10 minutes after heel lance or venipuncture had lower PIPP scores in all phases of the data collection[36].

The effects of KMC remained unaffected even during repetitive tissue damaging procedures. A clinical trial carried out by H.Gao et al in China on 80 preterm neonates with GA of less than 37 weeks during three consecutive heel pricks was able to found that HR was significantly lower, the duration of crying and facial grimace were significantly shorter in KMC group than incubator group from blood collection to recovery phase[37]. In recovery phase, most of infants in KMC group were without crying (86%) and grimace (88%) in contrast to 40% and 31% of infants in the incubators respectively. There were significant difference in the duration of crying and grimace between baseline and recovery phases for both groups. However, the difference in HR

between the two phases was insignificant for KMC group. This indicated that KMC was effective in returning HR to the baseline state.

Ten to fifteen minutes of KMC was effective in terms of reducing pain from different procedures and maintaining the physiologic stability of the neonates during those procedures. A clinical trial study conducted in Brazil on 59 premature born between 30 and 36 completed weeks of infants showed that 15 minutes of KMC prior to heel prick significantly reduced pain compared to incubator[38]. The study showed that Neonatal Facial Coding System (NFCS) scores of neonates in treatment group were significantly lower throughout seven phases of heel prick. It also showed that during different phases of heel prick, higher proportions of neonates in treatment group were in deep sleeping state. Additionally, the crying duration of participants in the KMC group was 2.5 minutes in contrast to 4.8 minutes of the control group. This indicated that KMC was able to reduce crying duration by 37.41%. However, the groups were not different in terms of HR in all phases of the study. Though there are no plenty of studies which examined the pain relieving effect of KMC on neonates specifically born between 28 and 32 weeks of gestation, a study conducted in Canada on 61 infants showed that, 15 minutes of KMC prior to and throughout heel prick was able to invoke their endogenous pain regulating mechanism and reduced the duration needed to regain the baseline state by one minute than incubator care[39].

A clinical trial conducted in India among 50 VLBW neonates indicated that KMC of 15 minutes before adhesive tape removal had pain reducing effect as good as expressed breast milk[40]. Also, compared to incubator care, neonates treated with KMC had significantly lower pain. The other clinical trial study in Iran examined the pain reduction effect of 10 minutes of KMC prior to, during and after venipuncture in 90 preterm neonates born at less than 37 weeks of gestation[41]. The study showed neonates that received KMC had significantly lower PIPP scores than the control group. Additionally it showed that neonates in KMC group had significantly lower HR and higher oxygen saturation.

2.5. Conceptual frame work

The conceptual frame work that was adapted for this study was developed by Xiaomei Cong and her associates [21]. It was developed to explain that pain assessment in neonates was much more complex than that of adults and a lot of contextual factors should be considered before making any decision. Though studies tried to assess how these factors can determine the level of pain

experienced by the preterm neonates, the degree and the direction of the relations are still debatable. Additionally, many of the factors responsible for the variation of preterm neonates' pain responses are not explained yet (**Figure 1**).

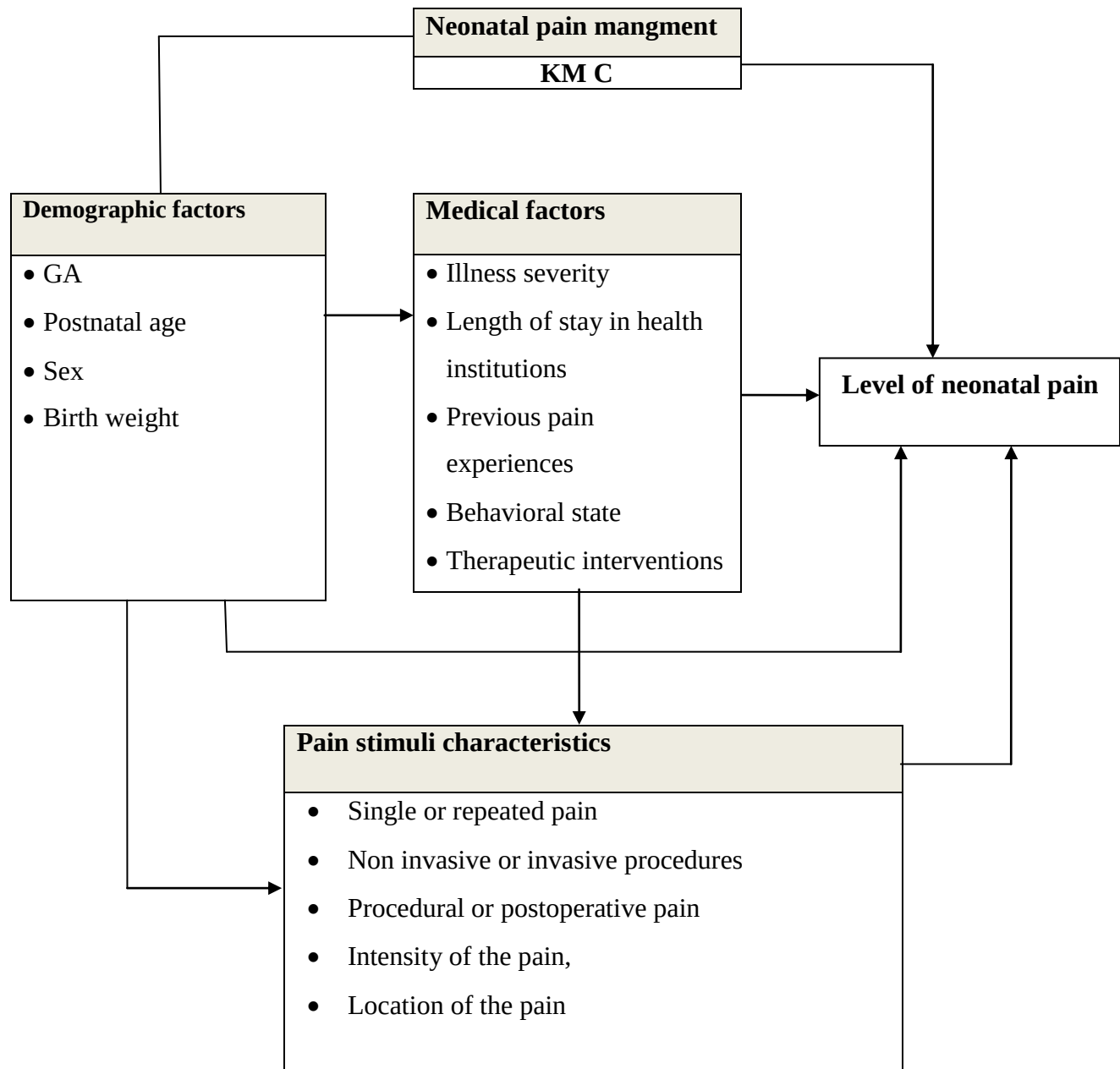


Figure 1: Conceptual framework for the study “The effects of short duration kangaroo mother care on neonatal pain from adhesive tape removal among preterm neonates admitted to TASH and GMH in Addis Ababa, Ethiopia”, adapted from Cong et al, 2013 [21].

3. Research question and Hypothesis

3.1. Research question

1. In preterm neonates, is KMC more effective than incubator care in relieving of pain during adhesive tape removal?

3.2. Research Hypothesis

This study hypothesized that preterm neonates exposed to KMC ten minutes before adhesive removal will have 2 points lesser PIPP score compared to those neonates kept in the incubator.

4. Objective of the study

4.1. General objective

The purpose of this study was to determine the effects of short duration KMC on neonatal pain from adhesive tape removal among preterm neonates admitted to TASH and GMH in Addis Ababa, Ethiopia.

4.2. Specific objectives

1. To describe the pain responses of preterm neonates during adhesive tape removal
2. To compare the effects of ten minutes of KMC and incubator care on neonatal pain from adhesive tape removal among preterm neonates admitted to TASH and GMH in Addis Ababa, Ethiopia.

5. Methods

5.1. Study period and settings

The study was conducted in Tikur Anbessa Specialized and Gandhi Memorial hospitals' NICUs from May to August, 2108.

Tikur Anbessa Specialized Hospital

The NICU of Tikur Anbessa Specialized Hospital has three separate rooms; preterm neonates' room, critical term neonates' room and subcritical term neonates' room. Inside of the preterm neonates' room there are 13 incubators and the room is prepared in order to predominantly accommodate preterm neonates. Inside of the critical and subcritical term neonates' rooms there are 38 baby bassinets. In addition to this, the unit also has two rooms with 12 beds for mothers and separate KMC room with 6 beds. According to the hospital's annual report, in 2009 E.C 4,479 neonates were admitted to the unit of which 4.2% (189) of them were admitted due to prematurity. Currently, 2 neonatologists and 36 nurses are working in the NICU. Among those nurses who work in the unit, 27 of them received training on newborn care that covers KMC.

Gandhi Memorial Hospital

The NICU of Gandhi memorial hospital is divided in to preterm neonates' room and term neonates' room. The preterm neonates' room that is equipped with 7 incubators and 1 radiant warmer. The room of term neonates which contains 24 baby cribs and two radiant warmers has two sections; for neonates admitted within 7 days of birth and for neonates admitted after 7 days of birth. Additionally there is separate KMC room with 4 beds. In 2009 E.C, 2,358 neonates were admitted to the neonatology unit of which 4.6% (108) of them were admitted due to prematurity. Currently 2 medical doctors, 2 health officers and 25 nurses work in the unit. Among 19 nurses who were working in the NICU in 2009 E.C, 9 of them have received training on newborn care that also covers KMC.

5.2. Study design

An open label, pragmatic, parallel, superiority RCT study was conducted among preterm neonates admitted to TASH and GMH between May-August, 2018.

5.3. Study population

Source population- All preterm neonates who were born in Addis Ababa and admitted to TASH and GMH from May-August, 2018

Study population- All preterm neonates who were born in Addis Ababa and admitted to TASH and GMH between May-August, 2018 and fulfil the eligibility criteria of the study.

Unit of randomization- Individual preterm neonates who were born in Addis Ababa and admitted to TASH and GMH between May-August, 2018 were randomized.

5.4. Eligibility criteria

5.4.1.1. Inclusion criteria

- Neonates who were born between the GA of 28 and 36 completed weeks of gestation. The health care providers determined the GA of the neonates was determined by using early antenatal care (ANC) ultrasound, Last Normal Menstrual Period (LNMP) or Ballard's score.
- Neonates who were not on CPAP (Continuous positive Airway Pressure) or Prong oxygen support during the time of data collection
- Neonates who had mothers who were capable of giving informed consent and provide KMC

5.4.1.2. Exclusion criteria

- Neonates who had visible or diagnosed congenital and neurological anomalies
- Neonates diagnosed with subgalial and intraventricular hemorrhage (IVH)
- Neonates who went through surgery before the time of data collection
- Neonates who begun the continuous type of KMC before the time of data collection

5.5. Measurements of variables

5.5.1. Study outcome

The primary outcome of this study was the level of pain among preterm neonates during adhesive tape removal. The pain level was measured using PIPP scale and a difference of 2 points in PIPP score was considered as clinically significant difference[42]. The findings were discussed in terms of mean and standard deviation (SD).

5.5.2. Independent variable

Neonatal pain management: Intervention of the study (KMC)

5.5.3. Covariates

Demographic factors –Sex, gestational age, postnatal age, birth weight

Medical factors- Previous pain exposure, illness severity, length of stay in health institution, previous history of analgesic drugs intake

Painful stimuli related factor: location of pain

5.6. Sample size determination

The mean and the standard deviation that were used to determine the sample size of the study were obtained from the pilot study conducted by Nanavati et al in 2013[40]. Stata software version 14.0 was used to calculate the sample size of the study. Though 2 points difference in PIPP score was considered as a clinically important difference, the sample size that can detect as lower as a mean difference (MD) of 1.5 points in PIPP score with $\beta=10\%$ and $\alpha=0.05$ between the KMC and incubator care (IC) groups was used to increase power of the study. Since mothers delivered by cesarean section might not be ready to provide KMC at a time of data collection, additional 32 (25%) participants were added. This resulted in a total sample size of 160; 80 participants in each group.

Confidence Interval (2-sided)	95%		
Power	90%		
Ratio of KMC to IC groups	1		
PIPP score during adhesive tape removal			
	KMC group	IC group	Difference
Mean	10.63	12.13	-1.5
Common SD	2.59		
Non response rate	25% (32 preterm neonates)		
Total sample size	160		

5.7. Sampling technique

TASH and GMH were selected for this study due to their higher number of caseload. Though the cases were allocated with 1:1 proportion among the two hospitals, the data collection in GMH took more time than expected. So, 90 cases were allocated to TASH while the rest 70 neonates

were allocated to GMH. In both hospitals, neonates in need of adhesive tape removal due to different reasons were screened based on the eligibility criteria of the study. Those neonates who fulfilled the inclusion criteria of the study and whose mothers gave informed consent were randomly assigned to one of the study groups. The recruitment of the study participants continued until the desired sample size was reached.

5.8. Data collection procedure

Written ethical approval was obtained from school of public health, Addis Ababa University (AAU) and Addis Ababa Health Bureau (AAHB) research ethical committee. Then, formal letters were submitted to TASH and GMH departments of pediatrics in order to get permission to carry out the study.

5.8.1.1. Randomization

Block randomization technique was used to randomize study participants. The investigator of the study who had no direct contact with the study participants was responsible for their randomization. The sequence of the two groups was determined using random sequence generator which is available online at <https://www.random.org> using a block size of 4 and 6. To avoid predictability, each block had its own unique sequence and the sizes of the blocks were not revealed for data collectors and supervisors during the time of data collection.

5.8.1.2. Allocation concealment

The allocation concealment was conducted using Sequentially Numbered Opaque Sealed Envelopes (SNOSE) technique after being modified in a way feasible for the study. After papers which contain the code of study participants and their groups were prepared, they were folded four times and inserted into small opaque envelopes. After that, the envelopes were sealed and numbered. During the data collection these envelopes were opened following their numerical sequences only after the mothers of the neonates gave informed consent to participate in the study. The supervisors of the study kept the envelopes and revealed the groups of the neonates. During supervision sessions, the intactness and sequences of the sealed envelopes were checked.

5.8.1.3. Blinding

During the time of data collection, the presence of mothers, data collectors and supervisors were required in order to conduct KMC and complete PIPP scores. So, blinding was not feasible for the current study.

5.8.1.4. Conditions of the groups

KMC group: Whenever adhesive tape was intended to be removed from the neonate's body due to different reasons, a supervisor began to screen the neonate based on the inclusion and exclusion criteria of the study. Once the eligibility status of the neonate was determined, his/her mother was approached to obtain written informed consent. After maternal informed consent was secured, the sealed envelope was opened following the numeric sequence and the group and the code of the neonate was revealed. For a neonate assigned in the KMC group, KMC was provided ten minutes before adhesive tape removal as an intervention to relieve pain. Once the group of the neonate was identified, the mother was asked to sit on one of the chairs available inside of the NICUs. Then the data collector nurses checked the suitability of the mother's cloth in order to conduct KMC and to complete the PIPP scores. If the mother's cloth is not comfortable, either she is asked to change convenient cloth or provided with gown prepared for the study. The nurse then took the neonate from the incubator and placed him/her on the mother's bare chest between her breasts in upright position while his/her head was slightly extended to facilitate breathing. His/her legs were positioned below the mothers' breasts wide opened and flexed. To prevent heat loss the back of the baby is wrapped with additional cloth up to his/her ear level. During the contact the mother is allowed to talk, move or do other activities with her neonate. However, the mother is not allowed to feed her baby. Once the comfort of the neonate and the mother is assured, this position is maintained for ten minutes before the adhesive tape removal. The stated procedure was the minimum criteria to consider that the neonate has received the intervention of the study. By the end of ten minutes the nurse who is responsible for the removal of the adhesive tape began to record the behavioral state of the neonate by observing his/her face for about 15 seconds. The duration of the KMC was recorded by using of Square Clock DS-510 adjusted to "beep" at the end of ten minutes. Then the pulse oximeter is placed on the feet of the neonate and baseline HR and O₂ saturation were measured. Then, the nurse removed the adhesive tape while the baby was in KMC position. Following the removal of the plaster, the

neonate's face is observed for about 30 seconds and the behavioral and physiologic component of the PIPP tool is recorded. To measure the HR and oxygen saturation of the study participants pulse oximeters (9M80A) manufactured by Infiniti Medlab Pvt. Ltd (India) were used. Once the data collection is completed, the KMC is continued or ceased immediately depending on the mother's need.

Incubator care group: for a neonate assigned in the incubator care group, the data collector nurse recorded their behavioral state while the neonate is placed inside of the incubator. Then pulse oximeter is placed on his/her feet and baseline HR and O₂ saturation are measured. Once the baseline parameters are recorded, the plaster is removed. Following the removal the neonate's face is observed for about 30 seconds and the behavioral and physiologic components of the PIPP tool are recorded.

5.8.1.5. Training of data collectors and supervisors

Eight BSc nurses (4 per hospital) who have received newborn care training were recruited for data collection purpose and additional three nurses who had better experience in previous data collections were recruited for supervision purpose. After training manuals are prepared, the data collectors and supervisors received separate training regarding the study. The training of the data collectors mainly focused on the process of obtaining informed consent, the eligibility criteria and intervention of the study, the interpretation of the variables in the data collection tool, the use of PIPP for measurement of pain and the steps of the data collection process. It took two hours to introduce the training manual for the data collectors. The training manual for the supervisors focused on how to handle the concealment allocation process, how to monitor adverse effects among neonates, how to check the collected data and how to manage the recorded data. Introduction of training manual for supervisors lasted for about one hour. After this, there were two to three days of practical sessions to familiarize the data collectors and supervisors with the data collection process and data collection tools. Those sessions were used to identify the gaps of the data collectors and supervisors and provide feedback accordingly. During the training it was established that the inter-rater agreement coefficient of the data collectors for the behavioral state and facial actions component of PIPP tool ranges between 0.7-0.9 which was acceptable.

5.8.1.6. Monitoring of data collection procedure

There were three supervisors in the study, two in TASH and one in GMH, who supervised the data collection on daily basis. The supervisors were responsible for making sure that preterm neonates admitted in the wards of the hospitals were assessed based on the eligibility criteria of the study and unnecessary missed cases were avoided. They were also responsible for making sure that the needed information was recorded and handled appropriately. In addition to the supervisors, the investigator of the study also monitored the progress of the data collection process every two days. During this supervision, we ensured that the data collectors followed the protocol of the study, the collected data were checked and corrections were made whenever needed, the sequences of the sealed envelopes were checked and the required support was provided.

5.9. Data collection tool

The structured data collection tool which was used in this study was composed of six sections; identification, socio demographic and medical characteristics of the study participants, characteristics of the adhesive tape removed, PIPP scale, data collection monitoring checklist and adverse effect reporting form. After the tools were prepared in English language they were translated in to Amharic language. Data collection tool which was used to assess majority of the socio demographic and medical characteristics of the neonates was adapted from neonatal intensive care unit registry which was prepared by Federal Ministry of Health. Additional variables were added in order to assess their feeding status, previous experience of KMC and history of previous exposure to painful procedures. Most of the socio demographic characteristics and the medical history of the neonates were extracted from their medical charts. However, the responses of some of the items were obtained from the mothers by using interviewer administered interview. The pain level of the neonates during adhesive tape removal was measured using PIPP tool. The tool was developed by Stevens et al in 1996 and its use in clinical setting was validated in different studies [42-44]. It has seven indicators which are classified in to contextual factor indicators (GA and behavioral state), physiologic pain indicators (HR and O₂ saturation) and behavioral pain indicators (brow bulge, eye squeeze and naso-labial furrow) [42-44]. In this study, the criteria to classify the facial actions of the neonates as none, mild, moderate and severe was adapted from the revised PIPP tool. This is because the measurements of facial actions in old PIPP tool were found to be difficult to be used at the

bedside setting. PIPP is the only tool that considers the effect of GA on the pain responses of the neonates [42-44]. The pain level was scored out of 21 and a 2 point difference in the score was considered as clinically significant. A score of 0-6 out of 21 indicates no or minimal pain, 7-12 indicates mild to moderate pain while if the score was greater than 12 it indicates the neonate feels severe pain [42-44]. The supervision tool for KMC group was adapted from WHO guideline[2]. The supervisors of the study completed the data collection monitoring checklist and adverse effect reporting form by observing the data collection process and close follow up of the neonates.

The tools were pretested on 5% of the total sample size in GMH two weeks before the initiation of the data collection. Depending on the findings from the pretest, the question about steroid drugs intake and history of intramuscular (IM) injections were removed. In contrast, history of intravenous (IV) medication intake was added based on the feedback from data collectors. In addition, types of plasters, reasons for removal adhesive tape removal and sites of plaster removal were added. Finally, grammatical and structural adjustments were made after discussion with data collectors to simplify the data collection tool.

5.10. Operational definitions

Critically ill neonate: a neonate who had signs of apnea, breathing rate of less than 40 breaths per minute (BPM), breathing rate greater than 60 BPM, intercostal/ subcostal retraction, chest indrawing or grunting during admission plus history of CPAP oxygen therapy.

Preterm neonate- a neonate who was born between 28 and 36 completed weeks of gestation that was determined by early ANC ultrasound, LNMP or Ballard's score.

Kangaroo mother care- position a newborn who only wore diaper on the bare chest of the mother, between her breasts in upright position while the head is slightly extended ten minutes before adhesive tape removal without introducing any kind of feeding

Length of stay in health institution: the period that the neonate spent in health institution after birth

Previous analgesic drug intake- being treated with any analgesic drug within the previous 24 hours of the data collection

Previous KMC experience- previous history of being in KMC position with mother, father or other care giver despite of the duration of contact

Previous pain exposure-being exposed to at least one tissue damaging or non tissue damaging painful medical procedures within the previous 24 hours of the data collection.

5.11. Quality Assurance

The quality of the necessary data for this study was assured through different measurements. The data collection tools were prepared in local language and were used after being pretested and appropriate corrections were made before the actual data collection. Previously conducted studies confirmed the validity of PIPP tool during neonatal pain assessment. The data collectors and supervisors of this study were involved in the data collection process after the required training was given. The data collectors and supervisors of the study were grouped and collected data based on their work shifts to avoid exhaustion. The assigned supervisors monitored the data collection process on daily basis while the investigator of the study supervised the study every two days.

5.12. Data management, analysis procedures and presentation

At the end of the data collection, the completeness and consistency of the questionnaires were checked visually and the variables were recoded. After this, the data were entered into Epi data version 3.1 to minimize errors during entry and exported to Stata version 14.0 for cleaning, editing and analysis. Descriptive statistics were used to describe the baseline characteristics of the study participants. Mean and SD or median and interquartile range (IQR) were used for the description of continuous data while frequencies and percentages were used for categorical data. The similarity of the baseline characteristics of the groups were compared by independent samples t-test for continuous variables and Chi square or Fisher's exact tests for categorical variables. The distribution of the outcome variable was checked by histogram and skewness/kurtosis tests for normality. Additionally, the homogeneity of variance was checked using Levene's test. During the analysis of the outcome variable of the study, the principle of intention to treat analysis (ITT) was used. This analysis includes all participants once they are randomized without considering all factors (non compliance, withdrawal...) that happened after the randomization process. The PIPP scores of the groups before and during adhesive tape removal were compared using independent samples t-test while Mann-Whitney U test was used to compare components of PIPP tool separately. A linear regression analysis was conducted to

determine the treatment effect of the intervention. Tables and bar graphs were used to present the findings.

5.13. Ethical consideration

The data collection process was initiated after ethical clearance was obtained from Institutional Review Board of College of Health Sciences of Addis Ababa University and AAHB and permission was obtained from the concerned bodies. The eligible study participants were enrolled in the study only after their mothers gave written informed consent and were not forced to participate. The participants refused to participate in the study were not hindered from receiving the health care that the hospitals provide. The adhesive tape removal was conducted as part of routine clinical procedures and was not intended for this study purpose. KMC is proved to be safe intervention for preterm neonates and countries are working to make it routine care. Additionally, in the selected hospitals, KMC is one of the routine cares provided for preterm neonates. The data collectors in this study were trained nurses who had experience of dealing with tiny babies as well as KMC. The neonates in the KMC group benefited from the comforting effects of KMC during painful procedure and mothers were given detail health education on KMC. For neonates in the incubator care group, KMC was initiated based on the hospitals' protocols. The information regarding the study participants was kept confidential by using specific identification code for each of them.

5.14. Dissemination of result

The finding of this study will be submitted to School of Public Health; Addis Ababa University, AAHB, TASH and GMH pediatrics departments so that they improve their routine newborn care based on the results of the study. Moreover as a baseline study it will also help them conduct different studies on neonatal pain. Additionally, it will be published in reputable journal and will be presented in different research related conferences and events.

6. Result

Among 1278 (TASH=751 and GMH=527) neonates admitted to the neonatology units of the two hospitals during the study period, 184 of them were preterm neonates born between 28 and 36 weeks of gestation. After exclusion of 24 neonates who did not meet the inclusion criteria of the study and 4 neonates whose mothers refused to participate in our study, 156 preterm neonates (TASH=87 and GMH=69) were randomized and assigned to one of the study groups (**Figure 2**). The response rate of the study was 97.5% and its power was 94.9%.

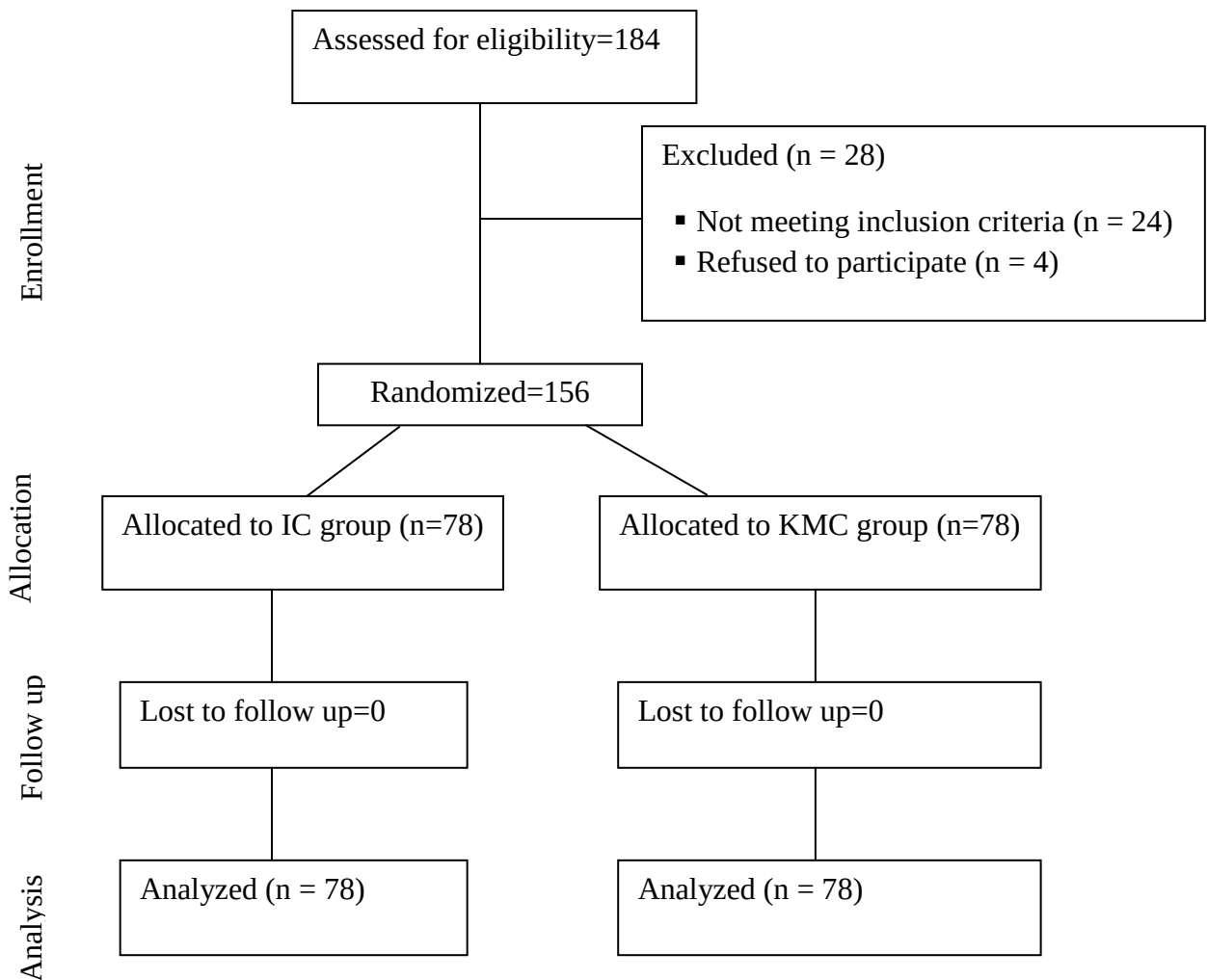


Figure 2: CONSORT flowchart for the study “The effects of short duration kangaroo mother care on neonatal pain from adhesive tape removal among preterm neonates admitted to TASH and GMH, 2018”

6.1. Demographic characteristics of the study participants

Among those neonates involved in the study 77(49.4%) of them were males. The mean GA of the study participants was 33.8(1.8) weeks while their median PA was 5.1(2.4 to 8) days. The mode of delivery for ninety one (58.7%) of the neonates was spontaneous vaginal delivery (SVD). The average first minute Apgar score was 7 (4 to 8) while their fifth minutes Apgar score was 8(5 to 9). The average birth weight of the recruited study participant was 1744.7±380.4 grams. The groups were marginally different in terms mode of feedings and previous KMC experience (**Table 1**).

Table 1: Demographic characteristics of preterm neonates admitted to TASH and GMH, 2018

Characteristics	KMC (n=78)	IC (n=78)	P-value
Sex, n (%)			
Male	42(53.9)	35(44.9)	0.26
Female	36(46.2)	43(55.1)	
GA(weeks) †	33.8 (1.9)	33.7 (1.6)	0.88
PA(days)			
Median (IQR)	5.2 (3 to 8.3)	5.1 (2 to 7.2)	0.49
Mode of delivery, n (%)*			
SVD	48(62.3)	43(55.1)	0.36
Cesarean section	29(37.7)	35(44.9)	
1st minute Apgar score*			
Median (IQR)	7(6 to 8)	7(6 to 8)	0.33
5th minute Apgar score*			

Median (IQR)	8(7 to 9)	8(7 to 9)	0.44
Birth weight(gm) †	1792.2(380.9)	1696.5(376.2)	0.12
Hours passed between last feeding and time of data collection (hrs.)*			
Median (IQR)	1.3 (0.5 to 2)	1.2(0.5 to 2)	0.49
Mode of feeding, n (%)*φ			
Breastfeeding	47(61)	34 (45.3)	0.05
Cup feeding	18(23.4)	15(20)	0.61
NG tube feeding	27(35.1)	24(32)	0.69
Maintenance fluid	2(2.6)	8(10.7)	0.05
Previous KMC experience, n (%)*			
Yes	22 (28.2)	12 (15.6)	
No	56 (71.8)	65 (84.4)	0.05

[* missed values, †values in terms of mean (SD), φ multiple responses were possible]

6.2. Medical characteristics of the study participants

Preterm neonates recruited as study participants spent 5.08 (2.42 to 8.04) days in health institutions before the time of data collection and 56 (35.9%) of them were critically ill during admission. One hundred five neonates (67.3%) had been treated with oxygen for about 4(2 to 6.63) days. Among the neonates treated with oxygen, 66 (62.9%) of them were treated with CPAP at least for some time in their life. During the time of data collection, 22 (20.9%) of them were on intranasal oxygen support. None of the preterm neonates recruited for this study had received analgesic drugs at least for 24 hours before the data collection. The groups were not different in terms of their medical characteristics (**Table 2**).

Table 2: Medical characteristics of preterm neonates admitted to TASH and GMH, 2018

Characteristics	KMC(n=78)	IC(n=78)	P-value
Length of stay in health institutions since birth (days)*	5.1(3 to 8.3)	5.1 (2 to7.3)	0.44
Critically ill during admission, n (%)			
Yes	24(30.8)	32 (41)	
No	54(69.2)	46 (58.9)	0.18
History of oxygen support, n (%)			
Yes	54 (69.2)	51(65.4)	
No	24 (30.8)	27 (34.6)	0.61
Types oxygen support, n (%) **			
CPAP	30 (55.6)	36 (70.6)	0.11
Prong	13 (24.1)	12 (23.5)	0.95
INO ₂	48 (88.9)	46 (90.2)	0.83
Length of oxygen treatment since admission to the hospitals (days)*	3.5 (2 to 5.7)	4 (1.3 to 8)	0.64
Neonates on INO₂ support during data collection, n (%)			
Yes	9(16.7)	13(25.5)	
No	45(83.3)	38(74.5)	0.27

(* values in median (IQR), **multiple responses were possible,CPAP= continuous positive airway pressure, INO₂= Intranasal oxygen)

6.3. Previous history of exposure to painful medical procedures

One hundred forty six (93.6%) neonates [IC group=74(94.9%) and KMC group=72(92.3%), $P=0.51$] were exposed to at least one painful procedure before the time of data collection. One hundred five (71.9%) of those neonates were exposed to IV medication administration and 89 (60.9%) of them were exposed to blood drawing. Heel pricks and lumbar punctures were the least commonly performed procedures among the study participants; 4.5% and 0.6% respectively. The types and the numbers of painful medical procedures conducted on the neonates were not significantly different between the groups (Table 3).

Table 3: Painful medical procedures conducted among preterm neonates admitted to TASH and GMH, 2018

Types and frequencies of painful medical procedures conducted on preterm neonates, n (%)	KMC (n=78)	IC (n=78)	P-value
Blood draw			
Once	40 (51.3)	43 (55.1)	0.67
More than once	4 (5.1)	2 (2.6)	
IV medication administration			
Once	24 (30.8)	28 (35.9)	0.31
More than once	24 (30.8)	29 (37.2)	
IV cannula insertion			
Once	23 (29.5)	21 (26.9)	0.53
More than once	5 (6.4)	9 (11.5)	
IV cannula removal			
Once	21 (26.9)	13 (16.7)	0.26

More than once	3 (3.9)	5 (6.4)	
NGT insertion			
Once	18 (23.1)	13 (16.7)	0.44
More than once	4 (5.1)	7 (8.9)	
Heel prick			
Once	2 (2.6)	4 (5.1)	0.44
More than once	0	1 (1.3)	
Lumbar puncture			
Once	1(1.3)	0	1

(Multiple responses were possible)

6.4. Characteristics of the removed adhesive tape in the study

In both hospitals heuer zinc oxide cloth plaster manufactured by GST Corporation Ltd (India) was used to conduct different procedures. Additionally in GMH, ReliaMed[®] paper surgical tape manufactured by ReliaMed[®] (China) was used during minor procedres like nasogastric tube (NG) tube insertion. For 132 (84.6%) participants cloth plaster was removedand for 24 (15.4%) paper plaster was removed during data collection (**Figure 3**). The groups were similar in terms of the types of adhesive tape removed during the study (P=0.19).

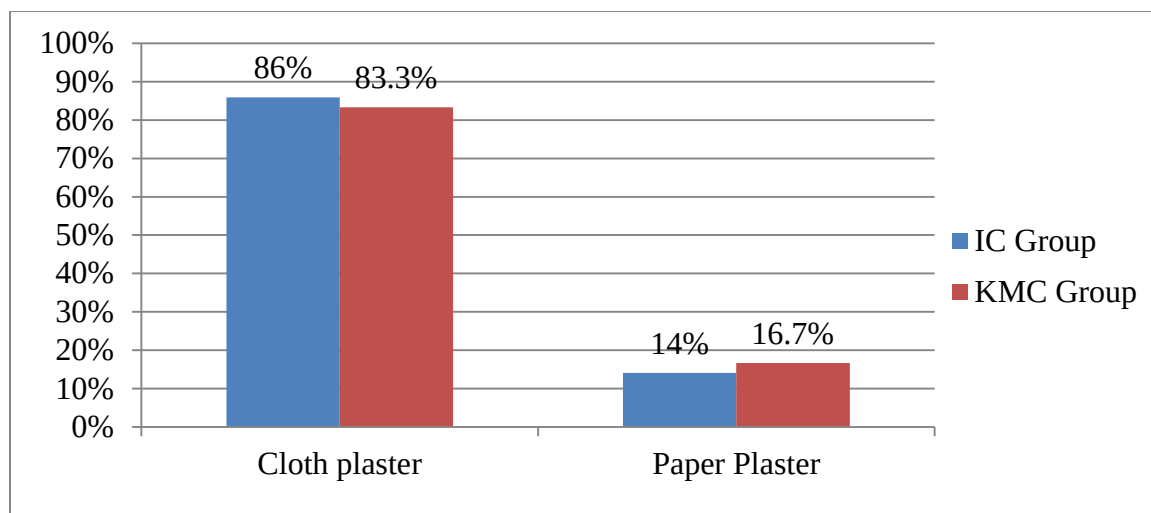


Figure 3: Types of adhesive tapes removed from preterm neonates admitted to TASH and GMH, 2018

For 113 (72.4%) neonates the tape was removed from their hands and for 30 (19.3%) neonates it was removed from their legs. The tape was removed from the face of 11(7.1%) neonates while for 2 (1.28) neonates the plaster was removed from their back (**Figure 4**). The body sites of the neonates for adhesive tape removal were not significantly different between the study groups ($P= 0.33$).

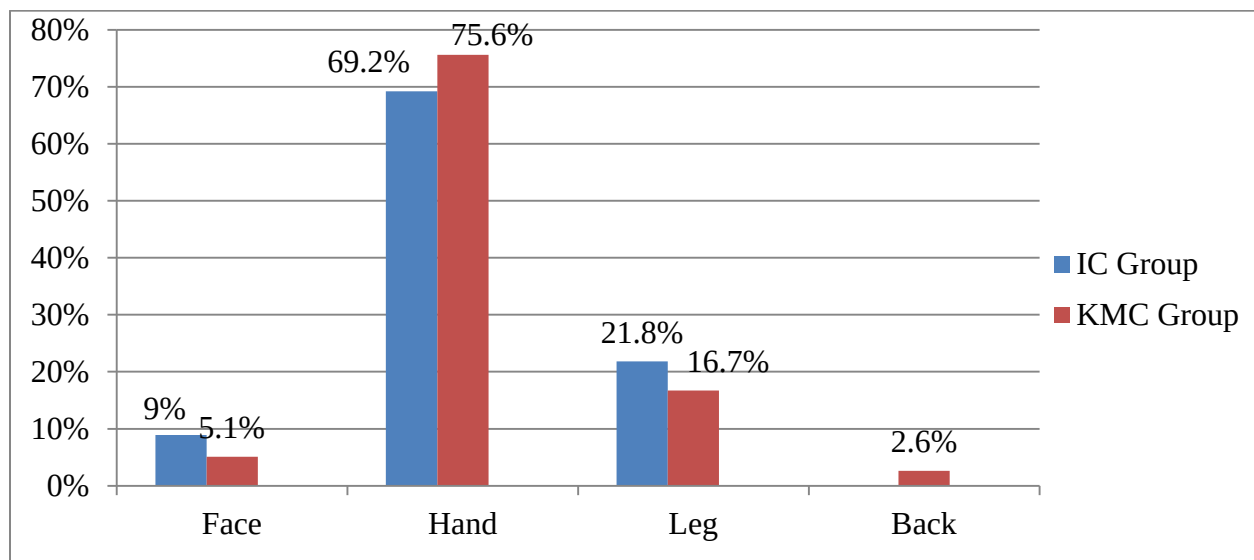


Figure 4: Body sites of adhesive tape removal for preterm neonates admitted to TASH and GMH, 2018

For 112(71.8%) of the recruited preterm neonates, the tape that was placed to cease bleeding after different medical procedures was removed. IV cannula removal (22.2%), NG tube removal (5.1%) and oxygen cannula removal (1.9%) were the remaining reasons of tape removal among the study participants (**Figure 5**). The reasons of adhesive tape removal during data collection were not significantly different among the groups ($P= 0.33$).

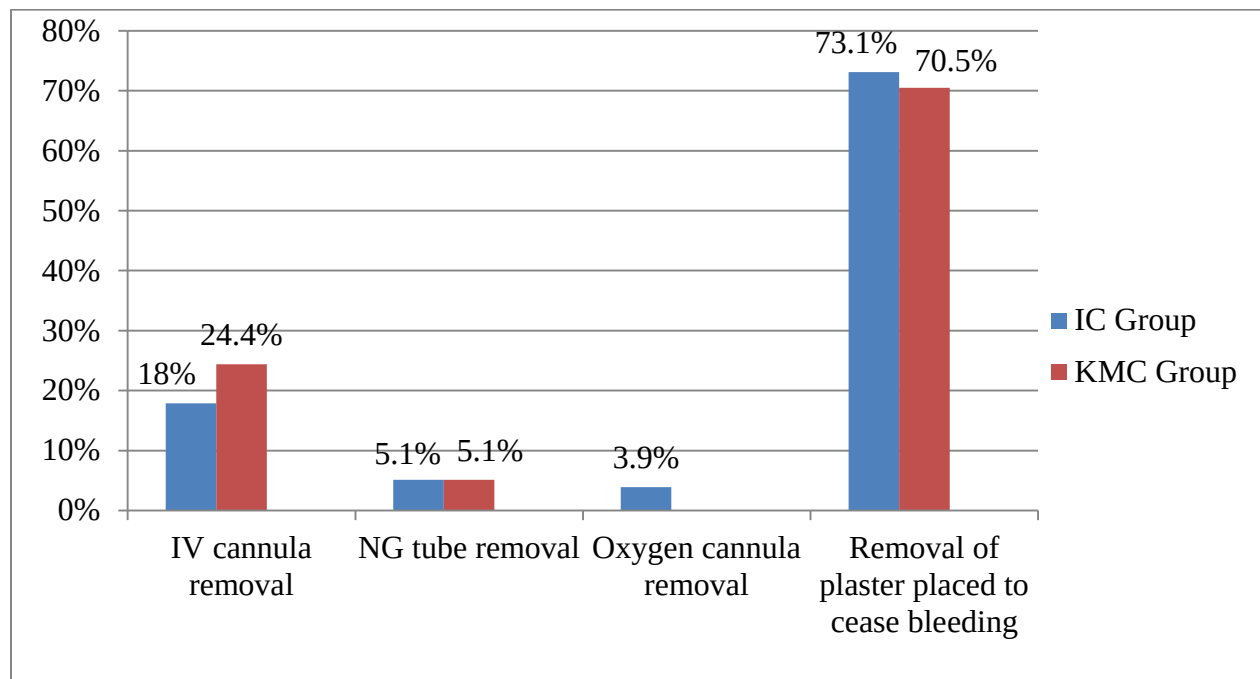


Figure 5: Reasons of adhesive tape removal for preterm neonates admitted to TASH and GMH, 2018

6.5. The pain responses of preterm neonates towards adhesive tape removal

Preterm neonates assigned in both groups were in active sleeping state short before the initiation of the adhesive tape removal and the scores for GA were similar among the groups (**Table 5**). Their average baseline PIPP score was 4 ± 3.4 and there was no statistically significant difference between the groups [KMC= 3.9 ± 3.6], IC group= 4 ± 3.3 , $p=0.79$]. The baseline PIPP score of the study participants was not also significantly different between the two hospitals [TASH= 4 (0 to 6), GMH= 5 (0 to 7), $P=0.2$]. The average baseline HR of the neonates was 139.7 ± 17.3 beats per minute (bpm) [KMC= 139.4 ± 15.9 bpm, IC= 139.9 ± 18.7 bpm, $P=0.82$] and their baseline oxygen saturation was 94% (91 to 96) [KMC= 94% (92 to 96), IC= 94% (91 to 96), $P=0.79$].

Compared to the baseline state of the study participants, the PIPP score of the preterm neonates assigned in both groups during adhesive tape removal was significantly increased [MD=5.1, 95% CI (4.4, 5.2), $P<0.00$]. A paired samples t-test also indicated that the actual HR of preterm neonates recruited for the study was significantly increased during the time of tape removal compared to their baseline state [MD=7.8bpm, 95% CI (5.6, 9.9), $P<0.00$]. However, the oxygen saturation of the neonates during adhesive tape removal was not significantly different from level of oxygen saturation before the adhesive tape removal ($P=0.26$).

No adverse effect was reported among preterm neonates participated in the study.

6.6. The effects of KMC on neonatal pain during adhesive tape removal

During adhesive tape removal, the PIPP scores of preterm neonates assigned in KMC group was significantly lower than that of neonates kept in the incubator [MD=-2.5, 95% CI (-3.9, -1.2), $P<0.00$](**Table 4**). Also, when compared to their baseline state, the average increment in the PIPP score of neonates in KMC group [MD=3.9, 95% CI (2.9, 4.9), ($P<0.00$)] was much lower than that of the neonates in the incubator group [MD=6.3, 95% CI (5.3, 7.4), ($P<0.00$)]. The PIPP score of the neonates during adhesive tape removal was not significantly different between the two hospitals (TASH=9.1±4.7, GMH=9.2±3.9, $P=0.79$).

To assess the effects of KMC on the behavioral and physiologic pain responses of the preterm neonates, the scores for each components of the PIPP tool were compared separately using Mann-Whitney U test. The test showed that the facial actions of pain were significantly lower among neonates assigned in KMC group. However, there were no statistically significant group differences in the scores physiologic pain responses (**Table 4**).

Though the actual HR of neonates assigned in KMC group during adhesive tape removal was lower than that of the neonates in the incubator group, the difference was not statistically significant [MD= -1.3, 95% CI (-7.8, 5.2), $P=0.69$] (**Table 4**). In addition, when compared to their baseline state, the average increment in the HR of preterm neonates in KMC group [MD=7.4bpm, 95% CI (4.7, 10.2), $P<0.00$] was comparable to that of the neonates in the incubator group [MD=8.1bpm, 95% CI (4.6, 11.5), $P<0.00$]. During tape removal, the study participants in KMC group did not have significantly higher actual oxygen saturation compared to the oxygen saturation of participants in the incubator group ($P=0.83$) (**Table 4**).

Table 4: The PIPP scores of the study participants during adhesive tape removal

Variables	KMC(n=78)	IC (n=78)	MD (95% CI)	p-value
	Mean (SD)	Mean (SD)		
PIPP score*¥	7.8(4.2)	10.3(4.2)	-2.5 (-3.9, -1.2)	0.00
Scores for PIPP tool components				
GA	1(0)	1(0)		0.55
Alertness state	2(1)	2(2)		0.82
Brow bulge	1(0 to 2)	2.5 (1 to 3)		0.00
Eye squeeze	1.5(0 to 3)	2(1 to 3)		0.02
Nasolabial furrow	1.5(0 to 2)	2(1 to 3)		0.00
Heart rate*	1(0to 2)	1(0to 2)		0.72
Oxygen saturation*	0(0 to 1)	0(0 to 1)		0.31
Actual HR (bpm)*¥	146.8 (17.3)	148.1(22.8)	-1.3(-7.8, 5.2)	0.69
Actual oxygen saturation (%)*	94(91 to 95)	93(91 to 96)		0.83

[*-Missed values (n=5), ¥: values in mean (SD), bpm (beats per minute)]

After the group differences in terms of PIPP score was determined using independent samples t-test, difference in difference (DID) estimation was conducted using multilevel mixed effects linear regression to determine the effect of the intervention. The finding indicated that, compared to the baseline scores, on average there were a 6 point increment in the PIPP scores of the neonates during the tape removal. However, due to the intervention, the PIPP scores of neonates assigned in KMC group were on average 2 points lesser than it would be if the adhesive tape was

removed while they were in the incubators (**Table 5**). This effect was both clinically and statistically significant.

Table 5: Difference in difference estimation for PIPP scores of the study participants

Variables	β	SE	95% (CI)	P-value
PIPP scores before adhesive tape removal				
KMC Group	-0.3	0.6	(-1.5, 0.9)	0.7
Incubator Group	1		1	
PIPP scores during adhesive tape removal	6.3	0.6	(5.1, 7.5)	0.00
Difference in difference				
KMC Group	-2.2	0.9	(-3.9, -0.5)	0.01
Incubator Group	1		1	
Constant	4.1			
(SE=standard error)				

7. Discussion

The objective of this study was to determine the effects of short duration KMC on neonatal pain from adhesive tape removal among preterm neonates. A parallel RCT study was conducted among 156 preterm neonates born between 28 and 36 weeks of gestation and admitted to TASH and GMH in Addis Ababa, Ethiopia. The findings of this study showed that in preterm neonates, as short as ten minutes KMC can significantly reduce pain from adhesive tape removal compared to incubator. The difference of the groups in terms of PIPP score during adhesive tape removal was both clinically and statistically significant. After adjusted for different confounders, being treated with ten minutes of KMC before adhesive tape removal was associated with reduced pain responses.

Our study showed that preterm neonates treated with ten minutes of KMC before adhesive tape removal had significantly lower pain compared to neonates kept in incubators. This finding was in accordance with the previous studies conducted by, Akan E et al[36], C Celeste Johnston et al [39] and Dezhdar S et al [41]. The mentioned studies showed that preterm neonates treated with various duration of KMC before, during and after different painful medical procedures had significantly lower PIPP scores compared to neonates kept in incubator. The difference of PIPP scores between KMC and incubator groups in our study was higher than that of the study by C Celeste Johnston et al [39]. This could be because of the differences in the characteristics of the study participants. The study of C Celeste Johnston et al was conducted among preterm neonates born between 28 and 32 completed weeks of gestation while in our study only 22% of the neonates were born at the similar GA. One of the postulated mechanisms for the pain reduction effect KMC is activating of different pain related mediators like oxytocine and beta-endorphin[32]. However, the more the neonates born early, lower the concentration of pain modulating mediators in their body and they become incapable of regulating their pain responses [19]. Due to this reason, the pain reduction magnitude of KMC might not be as large as estimated in late preterm neonates or their might be a need of longer duration of KMC to ameliorate the pain responses of very preterm neonates.

In our study, lower proportion of preterm neonates in KMC group was in deep sleeping state (23.1%) compared to the proportion of neonates in the incubator group (29.5%). This was interesting because being in deep sleep before the initiation of painful procedures is associated

with reduced neonatal pain responses [25, 29]. Additionally, some studies pointed out that, the pain reducing effect of KMC could be originated from its sleep inducing effect[39, 40]. In our study, neonates assigned in incubator group had the advantage of being in their true baseline state without disturbance and exposure to relatively newer environment (KMC) which might take some time to adapt. Thus, this finding could indicate that for preterm neonates, a sense of security emerged from being intimate with their mothers might be the more important factor than being in deep sleeping state. After all, the first thing preterm neonates need during painful events is their mothers.

In the current study, preterm neonates exposed to KMC had significantly lower facial actions of pain compared to the control group. This finding was important since those facial actions have higher sensitivity and specificity for neonatal pain. The finding was supplemented by different previously conducted studies. T.C Casteral showed that preterm neonates in KMC group had lower facial expressions than neonates in the incubator throughout the whole phases of heel prick[38]. Moreover, the studies by Ludington-Hoe and Hosseini, Kostandy et al and H.Gao et al showed that preterm neonates exposed to KMC of various durations had lesser crying and grimace [34, 35, 37].

The lack of significant group differences in HR and oxygen saturation of the study participants during adhesive tape removal was similar to that of the study done by T.C Casteral[38]. In contrast to this study, Ludington-Hoe and Hosseini and H.Gao et al showed that during heel prick, the HR of preterm neonates in KMC group was significantly lower than that of the control group[34, 37]. Additionally, Dezhdar S et al showed that during vein puncture the HR of preterm neonates kept in KMC was significantly lower than the control group and their oxygen saturation was significantly higher[41]. These inconsistencies might be caused by different reasons. The first reason might be individual variation among the study participants. As it was supported by the definition of international association for the study of pain, pain is subjective experience and it is possible for each preterm neonate to have different responses towards the same painful stimuli[1].

The second possible reason could be the observed weak correlation between behavioral and physiologic pain indicators. Unlike to that of physiologic pain responses, behavioral responses are usually sensitive and specific for pain. They are “overt” responses that newborns used to

communicate and alarm their caregivers whenever they are in need of help[45]. On the other hand, physiologic pain responses are “covert” responses which cannot be easily detected by caregivers[45]. Due to this reason the two types of pain responses are loosely correlated or might not be correlated at all[45]. Yet, their correlation might get increased as the intensity of the pain increased[46]. In this case, the intensity of pain during adhesive removal might not be large enough to cause strong correlation between the behavioral and physiologic responses. The other reason might be the measurements of HR and oxygen saturation in the current study could be also affected by the fact that some of the neonates were receiving intranasal oxygen support during data collection. Another justification could be since the sample size of this study was determined to detect clinically and statistically significant difference in composite PIPP score, it might not be powered enough specifically to detect significant differences in HR and oxygen saturation.

Alleviating of pain from different medical procedures is one way of supporting preterm neonates to make it through the harsh environment of NICUs. Neonatal pain management protocols indicated that adhesive tape removal is one of the medical procedures which require non pharmacologic pain managements[47]. Similar to those protocols, our study was able to show that adhesive tape removal is a painful procedure for preterm neonates. Thus, health care providers taking care of preterm neonates should be cautious to avoid unnecessary adhesive tape removal. Whenever the procedure is mandatory, it is important for the health care providers to assess the level of pain among the neonates during and after the removal and take actions depending on their measurements. During adhesive tape removal, short duration of KMC could be an alternative pain management method for preterm neonates.

Our study showed that as short as ten minutes of KMC can reduce neonatal pain caused by adhesive tape removal. During painful events, preterm neonates do not only need analgesics but also the reassuring presence of their mothers. KMC is the best way of letting the neonates to know that their mothers are on their side. Thus, the health care providers should always support mothers to comfort their neonates during painful events. Using of KMC as a routine pain management means for preterm neonates could also benefit mothers and health care providers.

On daily basis, numerous mothers of preterm neonates get discharged from hospitals without being told about KMC. This might be due to the fact that group health education is inconvenient

to teach about KMC or mothers are usually in rush to go to their homes. If KMC is to be implemented for routine neonatal pain management purpose, it could be a good opportunity to educate these mothers about the procedure and its benefits. Considering its health benefits for preterm neonates, the more the mothers practice KMC the lesser the neonates stay in health institutions and readmit. It could be also a good opportunity to share some of the responsibilities of health care providers with the mothers. This could reduce the work load of the health care providers. On the other hand, being able to taking care of their babies during stressful moments will make mothers to value themselves and feel confident. However, to practice KMC for routine neonatal pain management purpose, the importance of the availability of enabling environment and policies are undeniable.

Neonatal pain has many short and long term adverse effects and it is expected for countries to have neonatal pain management protocols. In contrast to these facts however, there are nonational neonatal pain assessment and management protocols. Newborn related courses and trainings are not designed in a way necessary to equip health care providers with the required knowledge and skills. In fact, majority of health professionals in the country are completing their education without being properly taught about the possible adverse health consequences, assessment techniques and managements of pain in preterm neonates. These facts indicate that neonatal pain management is overlooked in Ethiopian health system.

As a country in sustainable development goals (SDG) era, Ethiopia is working hard for preterm neonates not only to survive but also to thrive and transform. Since proper pain management is one way of ensuring smooth transformation among preterm neonates, unless protocols are going to be developed and actions are started to be taken soon, the accomplishments of these efforts will not be complete. In Ethiopian setting it will be worthy if protocols incorporate KMC as one means of neonatal pain management due to the already existed supporting system including trained personnel, infrastructures and positive attitude of mothers. Additionally, the more the benefits of KMC are known and practiced, the more its coverage will increase. This could result in reduction of morbidity and mortality of preterm neonates which in turn can highly contribute for the achievement of SDG 3. Pain management among preterm neonates is not only important to design policies and strategies but also has implication for different researches.

So far, different researches have been conducted to examine the effects of KMC on neonatal pain responses and promising results have been reported. This study also assessed the effects of KMC on neonatal pain from adhesive tape removal in different setting than that of the previously conducted studies and contributed its share on the already existed knowledge. However, all of the studies, including the current one, excluded preterm neonates who are critically ill and exposed to chronic pain. If these groups are included in the future studies, it could help us to have a better understanding of pain in preterm neonates and to make KMC a comprehensive pain management strategy. Furthermore, previously conducted studies examined the effects of KMC considering different duration of contact and KMC was effective in all durations. However, the fact that how much duration of KMC can optimally benefit preterm neonates is not determined yet. If this question is to be answered in the future researches, it will be an important input for policy makers to develop neonatal pain management protocols that incorporate KMC. It will be also interesting if the effects of KMC are assessed in different GA groups at the same time and reported separately. The findings of studies regarding the effects of KMC on physiologic pain responses have been inconsistent and additional evidences are needed to understand what these physiologic responses actually means and the cause of controversies among the studies.

8. Strengths and limitations of the study

8.1. Strengths of the study

- The study used a validated tool to measure pain among preterm neonates. The PIPP tool incorporates contextual, behavioral and physiologic responses of pain which can help to measure neonatal pain from different perspectives.
- The study was powered enough to detect minimal group differences.

8.2. Limitations of the study

The results of this study should be interpreted with caution due to the following limitations;

- Due to lack of blinding, biases might be introduced to the study. To minimize the possibility of biases, strict follow up was made on the randomization and concealment allocation processes. We also encouraged the data collectors and supervisors to stick with the study protocol. In the future, researchers planned to use PIPP tool at bed side setting might benefited from cluster randomization.
- The study did not control for external factors such as noise, light and temperature. In order to reduce the effect of those variables, we have restricted the data collection to take place in similar rooms for the intervention and control groups.
- Due to feasibility reasons, we did not use validated tools to assess the illness severity of the study participants. Thus, there might be misclassification of cases.
- The magnitude of previous painful procedures conducted on the neonates might under estimated due to recall bias. To reduce the recall bias, we have considered only painful procedures that were conducted on the study participants 24 hours before the initiation of the data collection.

9. Conclusion and Recommendations

9.1. Conclusion

In this study, we have showed that ten minutes of KMC can effectively reduce neonatal pain from adhesive tape removal and preterm neonates born between 28 and 36 completed weeks of gestation can be benefited from it. Yet, more researches should be conducted to determine the minimal duration of KMC required for optimal neonatal pain reduction.

9.2. Recommendations

9.2.1. Recommendations for health care providers

- Adhesive tape removal is a painful procedure for preterm neonates. Thus, it is recommended for health care providers to avoid unnecessary placement and removal of adhesive tape among preterm neonates.
- It is recommended for health care providers to assess preterm neonates for pain during and after adhesive tape removal and manage the pain accordingly.
- It is recommended for health care providers to educate and encourage mothers of preterm neonates to provide KMC for at least ten minutes during adhesive tape removal.

9.2.2. Recommendations for policy makers

- It is recommended for policy makers to prepare national neonatal pain assessment and management protocols and incorporate them in curriculums and newborn related trainings.
- Neonatal pain assessment and management methods are not well addressed in our health system. It is recommended for continuous trainings to be given for health care providers work in the health institutions of the country.
- When KMC related trainings are prepared, it is recommended to adequately address its pain alleviating benefits.

9.2.3. Recommendations for researchers

- For researchers who have planned to conduct similar studies in the future it is recommended to consider blinding to avoid biases among data collectors.

- The currently available neonatal illness severity assessment tools are not feasible to be used in Ethiopian context. Thus, it is recommended for similar tools that can be used in our settings to be developed and validated.
- In the future, it is recommended for researchers to record painful medical procedures conducted among preterm neonates on daily basis so that they can estimate their numbers more accurately. This will enable them to determine the effects of those procedures on the pain responses of preterm neonates.
- It is also recommended for researchers to determine the association between NICUs environment (noise, light, temperature) and neonatal pain responses. This will allow to point out modifications that needs to be made in the available NICUs.
- It is recommended for further researches to be conducted on tissue damaging painful medical procedures

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ANNEX

Annex I- Data collection tools (English Version)

Addis Ababa University

College Of Health sciences

School Of Public Health

Part I: Informed consent request form

I. Study information sheet

Introduction: Hello, my name is _____. I am collecting data for the study which is conducting among neonates born between 28 and 36 completed weeks of gestation. The study includes those newborns in need of needs adhesive tape removal due to different reasons. Your baby is also selected to participate in this study due to the same reason.

Objective of the study: The objective of the study is to assess the pain of preterm neonates during adhesive tape removal.

Data collection procedure: In this study there are two groups; KMC group and incubator care group. Your child will be allocated to one of the groups randomly. If your neonate is assigned to KMC group you will provide ten minute of KMC for your baby before tape removal. On the other hand, if your baby is assigned to the incubator care group, the adhesive tape will be removed while he/she is in the incubator. In all of the conditions the assigned nurse will measure the pain level of the neonate by observing his/her face and measuring HR and O₂ saturation using pulse oximeter which will be attached to the feet of your baby. During the study the different information concerning your child will be documented either from the medical chart or by asking you.

Rights and confidentiality: All of the procedures will be carried out by trained health professionals and you are allowed to stay at bedside until the data collection process is completed. Both your and your infant's medical information that are going to be accessed for this study remained confidential. The necessary data will be documented only using unique codes for each participant and no names or card numbers will be recorded. You have full right of accepting

or denying of participating in this study without being forced by someone. You are free to cease the procedure at any time if you feel discomfort or due to any other reasons. Failure to participate or withdrawing from the study will not prevent your child from receiving the medical care that the hospital provides. If you have any question regarding the information I gave you, please be free to ask me.

For further clarifications you can contact the coordinator of the research using the following phone number.

Research coordinator: Yemisrach Belete

Phone number- + 251910659371

Based on the information you were given regarding the study, are you volunteer to participate in the study?

A. Yes

B. No

If the answer is **“YES”** please continue to the informed consent form while if the answer is **“NO”** try to find the reasons for the refusal and record it.

II. Informed consent form

I agreed to voluntarily participate in this study after being told about the procedure of the data collection process.

Mother's Signature _____

Date _____

Part II: Identification

Code of Hospital	/___/___/
Identification code of the neonate	/___/___/___/
Code of Group	/___/___/
Names of data collector	_____
Date of data collection (dd/mm/yy)	/___/___/___/
Name of supervisor	_____
Date of supervision (dd/mm/yy)	/___/___/___/
Code for Hospital 01- Tikur Anbessa Specialized Hospital 02- Gandhi Memorial Hospital Code for Group 01- KMC Group 02- Incubator care group	

Part III- Characteristics of study participants

S. no	Questions	Responses	Skip
3.1.Demographic characteristics of the neonates			
301.	Sex	Male.....1 Female.....2	
302.	Gestational age	/____//____/ wks dd	
303.	Postnatal age	/____/____/ dd hrs	
304.	Mode of delivery	Spontaneous vaginal delivery.....1 Assisted vaginal delivery.....2 Cesarean section3	
305.	Apgar score	1 st minute score _____ 5 th minute score _____	
306.	Birth weight	_____grams	
307.	During data collection, how much time has passed since the neonate was being fed for the last time?	/____/____/ hrs min	
308.	What was the mode of feeding for the neonate before the initiation of data collection? (More than one answer is possible)	Breastfeeding.....1 Cup feeding.....2 NG tube feeding.....3 Maintenance fluid.....4	
309.	Did the neonate has been in KMC position before the time of data collection?	Yes.....1 No.....2	
3.2. Medical characteristics of the neonates			
310.	For how long had the neonate been stayed in health institutions since birth?	/____/____/ dd hrs	
311.	Did the neonate have the following signs during the time of admission? A. Apnea B. RR>60 bpm C. RR<40 bpm D. Granting	A. 1. Yes 2. No 3. Unknown B. 1. Yes 2. No 3. Unknown C. 1. Yes 2. No 3. Unknown D. 1. Yes 2. No 3. Unknown	

	E. Chest in drawing F. Retraction	E. 1. Yes 2. No 3. Unknown F. 1. Yes 2. No 3. Unknown	
312.	Had the neonate been treated with oxygen since he/she is admitted to hospital?	Yes.....1 No.....2	→ 313-315
313.	Which type of oxygen therapy is used to treat the neonate since he/she is admitted to hospital? (More than one answer is possible)	CPAP.....1 Prong oxygen support.....2 Intranasal oxygen support.....3	
314.	For how long had the neonate been on oxygen supportsince he/she is admitted to hospital?	/____//____/ dd hr	
315.	Is the neonate on intranasal oxygen support during the time of data collection?	Yes.....1 No.....2	
316.	Had the neonate been treated with analgesics withinthe previous 24 hours of data collection?	Yes.....1 No.....2	
317.	Did the neonate exposed to the following procedures within the previous 24 hours of the data collection? A. Drawing of blood sample B. IV medication administration C. IV cannula insertion D. IV cannula removal E. NG tube insertion F. Heel prick G. Lumbar puncture H. Blood exchange therapy (More than one answer is possible)	A. 1-Yes 2- No 3- Unknown B. 1-Yes 2- No 3- Unknown C. 1-Yes 2- No 3- Unknown D. 1-Yes 2- No 3- Unknown E. 1-Yes 2 - No 3- Unknown F. 1-Yes 2- No 3- Unknown G. 1- Yes 2- No 3- Unknown H. 1- Yes 2- No 3- Unknown	If “NO” or UNKNOWN” for all procedures , skipQ. no 318
318.	For how many times did the neonate exposed to the following procedures within the previous 24 hours of data collection?		

	A. Drawing of blood sample B. IV medication administration C. IV cannula insertion D. IV cannula removal E. NG tube insertion F. Heel prick G. Lumbar puncture H. Blood exchange therapy (Complete only for procedure selected in Q. no 317)	A. 1. Once 2. More than once B. 1. Once 2. More than once C. 1. Once 2. More than once D. 1. Once 2. More than once E. 1. Once 2. More than once F. 1. Once 2. More than once G. 1. Once 2. More than once H. 1. Once 2. More than once	
3.3.Characteristics of the plaster removed from the neonate			
319.	From which part of the body is the adhesive tape removed?	Scalp.....1 Face.....2 Abdomen.....3 Hand.....4 Leg5 Back.....6 Other _____	
320.	What is the reason of adhesive tape removal during the data collection?	To change/remove IV cannula.....1 To remove NG tube.....2 To remove oxygen tube.....3 To remove plaster which was placed to cease bleeding.....4 Other_____	
321.	Which type of adhesive tape is removed during data collection?	Paper plaster.....1 Cloth plaster.....2 Other_____	

Part V- premature Infant Pain Profile

Process	Indicator	0	1	2	3	Total score
Chart	Gestational age	36 weeks or more	32-35 weeks, 6 days	28-31 weeks, 6 days	Less than 28 weeks	
Observe the infant for 15 seconds	Behavioral state	Active awake (eyes open, facial movement)	Quite awake (eyes open, no facial movement)	Active sleep (eyes closed, facial movements)	Quiet sleep (eyes closed, no facial movements)	
Observe baseline heart rate and oxygen saturation for 30 seconds	Heart rate maximum _____	0 - beats per minute increase	5-15 beats per minute increase	15 - 24 beats per minute increase	25 beats per minute increase	
	Oxygen saturation minimum _____	92-100 %	89-91%	88-85 %	< 85 %	
Observe infant's facial actions for 30 seconds	Brow Bulge	None <3 sec	Minimum 3-10 sec	Moderate 10-20 sec	Maximum >20 sec	
	Eye Squeeze	None <3 sec	Minimum 3-10 sec	Moderate 10-20 sec	Maximum >20 sec	
	Naso-labial furrow	None <3 sec	Minimum 3-10 sec	Moderate 10-20 sec	Maximum >20 sec	

Part V: Supervision tool for neonates assigned in KMC group

Code of neonate: / __/__/__/

Group code: / __/__/__/

S.No	Components of the study	Done	Not done
	5. Components of KMC		
5.1.	Dress the neonate only with hat, socks and dipper		
5.2.	Place the neonate on the bare chest of the mother between her breasts in upright position		
5.3.	Extend the head of the neonate to the point eye to eye contact is possible		
5.4.	Place the neonate's abdomen at the level of the mother's epigastrium		
5.5.	Secure the neonate with "netela", "shema" or other cloth		
5.6.	Make sure the tight cloth is over the baby's chest		
5.7.	Make sure the neonate's abdomen is not constricted and is capable of breathing		
5.8.	Inform the mother that she is free to move, talk or do other activities		
5.9.	Make sure the mother is not breastfeeding her baby		
5.10.	Maintain this position for ten minutes before and during the adhesive tape is removed		

Part VI: Adverse Effect Reporting Form

601.Code of hospital: /_____/_____/_____/

602.Identification code of the neonate: /_____/_____/_____/

603.Medical Card number_____

604.Name of the neonate_____

605.Sex of the neonate_____

606.Date of birth (dd/mm/yy): /_____/_____/_____/

607.Gestational age of the neonate (wks/dd):/_____/_____/

608.Birth weight of the neonate (gram) _____

609.Date of admission (dd/mm/yy):/_____/_____/_____/

610.Date of adverse effect (dd/mm/yy):/_____/_____/_____/

611.Why it is important to report the adverse event/s?

1. Required senior doctor consultation
2. Life threatening adverse event
3. Death

612.Medical history of the neonate

613.At which phase of data collection is the adverse reaction/s occurred?

1. Before adhesive tape removal
2. During adhesive tape removal
3. After adhesive tape removal

614. Which of the following adverse reaction/s does the neonate experience? (**More than one answer is possible.**)

1. Irregular breathing
2. Apnea
3. Bradycardia
4. Tachycardia
5. Oxygen desaturation
6. Fall down injury
7. Others, please specify_____

615.What actions have been taken in order stabilize the neonates once the adverse effect is noticed?

616.After the adverse effect has occurred, what is the health status of the neonate?

1. Recovered
2. On medical support
3. Death

- Date of death (dd/mm/yy): / ____/ ____/ ____/
- Causes of death

Name of the individual who has report the adverse effect _____

Date of report (dd/mm/yy): / ____/ ____/ ____/

Annex II: Data collection tool (Amharic version)

ቅጽ 1: የስምምነት መግለጫ ቅጽ

አዲስ አበባ ዩኒቨርሲቲ

የጤና ሳይንስ ኮሌጅ

የሕብረተሰብ ጤና አጠባበቅ ትምህርት ቤት

ሀ. የጥናት መረጃ ቅጽ

መግቢያ: ጤና ይስጥልኝ _____ እባላለሁ። የመወለጃ ጊዜያቸው ሳይደርስ በተወለዱ ጨቅላ ህፃናት ላይ እየተሰራ ላለ ጥናት መረጃ በመስብሰብ ላይ እገኛለሁ። ጥናቱ የሚደረገው በተለያዩ ምክንያቶች ከሰውነታቸው ላይ ፕላስቲክ ለሚነሳላቸው ህፃናት ነው። የእርሶም ልጅ የተመረጠው/ችው በዚሁ ምክንያት ነው።

የጥናቱ ዓላማ: የዚህ ጥናት ዓላማ ከጊዜያቸው ቀድመው የተወለዱ ህፃናት ፕላስቲክ ከሰውነታቸው ላይ በሚነሳበት ወቅት ያለውን ህመም ለመለካት ነው።

የመረጃ መስብሰብ ሒደት: በዚህ ጥናት ውስጥ ሁለት ቡድኖች ማለትም የገላ ለገላ ንክኪ ቡድን እና የማሞቂያ ቡድን አሉ። ልጆች ከእነዚህ ሁለት ቡድኖች በአንዱ የሚመደብ/የምትመደብ ሲሆን ምደባውም የሚደረገው ሙሉ ለሙሉ በእድል ነው። ልጆች የተመደበው/ችው በገላ ለገላ ንክኪ ቡድን ውስጥ ከሆነ ፕላስቲክ ከመነሳቱ ከአስር ደቂቃ አስቀድሞ ለልጆች የገላ ለገላ ንክኪ እንዲያደርጉለት/ላት ይጠየቃሉ። ልጆች የተመደበው/ችው በማሞቂያ ቡድን ውስጥ ከሆነ ደግሞ ማሞቂያ ውስጥ እንዳለ/ች ጥናቱ ይደረጋል። በዚህ ሁኔታ የተመደቡት የጤና ባለሙያዎች የልጆችን ፊት በማየት እና የእግር ጣታቸው ላይ በሚደረግ መሳሪያ በመጠቀም የምችት ሁኔታውን ይመዘግባሉ። በተጨማሪም ልጆችን በተመለከተ አስፈላጊ መረጃዎች ከልጆች የህክምና ካርድ እና እርሶን በመጠየቅ እንዲመዘገቡ ይደረጋል።

መብት እና ምስጢራዊነት: በዚህ ጥናት ውስጥ ያለማንም አስገዳጅነት የመሳተፍ ወይም ያለመሳተፍ እንዲሁም ጥናቱ ውስጥ መሳተፍ ከጀመሩም በኋላ ምችት ካልተሰማዎት ወይም በሌላ በማንኛውም ምክንያት የማቋረጥ ሙሉ መብት አለዎት። ይህንን በማድረግም ሆስፒታሉ ለልጆች የሚሰጠው ማንኛውም ዓይነት ህክምና አይቋረጥም። በጥናቱ ውስጥ በመረጃ ሰብሳቢነት የሚሰሩት ሰዎች በጠቅላላ የሰለጠኑ የሆስፒታሉ የጤና ባለሙያዎች ሲሆኑ እርሶም የመረጃ መስብሰብ ሂደቱ ተጀምሮ እስኪያልቅ ድረስ ከልጆች አጠገብ የመሆን መብት አለዎት። ስለ ልጆች የሚወሰዱ ማንኛውም ዓይነት መረጃዎች በሙሉ በሚስጥራዊነት የሚጠበቅ ሲሆን ይህንንም ለማድረግ ሲባል የእርሶም ሆነ የልጆች ስም እንዳይመዘገብ ይደረጋል። እስከ አሁን ስለጥናቱ በነገርነት መረጃ ላይ ጥያቄ ካሎት እባኩን ከመጠየቅ ወደ ኋላ አይበሉ። እንዲሁም ጥናቱን የተመለከተ ተጨማሪ መረጃ ካስፈለጉት የጥናቱን አስተባባሪ በሚከተለው ስልክ ማግኘት ይችላሉ።

የጥናቱ አስተባባሪ: የምስራች በለጠ ስልክ: 0910659371

ከላይ ስለጥናቱ በተነገረት መረጃ መሰረት በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ ናት?

ሀ. አዎ

ለ. አይደለም

መልሳቸው “አዎ” ከሆነ ወደ የስምምነት መግለጫ ቅጽ ቀጥሎ “አይደለም” ከሆነ ደግሞ ምክንያታቸውን ጠይቀሽ ከመዘገብሽ በኋላ ተገቢውን የህክምና አገልግሎት እንዲያገኙ አድርጊ።

ሊያስምምነት መግለጫ ቅጽ

የዚህ ጥናት ዓላማ እና ሂደት በሚገባኝ ቋንቋ ተነቦልኝ እና ተረድቼ በጥናቱ ውስጥ በፍቃደኝነት ለመሳተፍ ተስማምቻለሁ።

የሀፃኑ እናት ፊርማ_____

ቀን_____

ቅጽ 2:መለያ

የሆስፒታሉ መለያ ቁጥር	/___/___/
የጥናቱ ተሳታፊ መለያ ቁጥር	/___/___/___/
የቡድን መለያ ቁጥር	/___/___/
መረጃውን የሞላው/ችው ሰው ስም	_____
መረጃው የተሰበሰበበት ቀን(ቀን/ ወር/ ዓ.ም)	/___/___/___/
የተቆጣጣሪው/ዋ ስም	_____
ቁጥጥር የተደረገበት ቀን (ቀን/ ወር/ ዓ.ም)	/___/___/___/
የሆስፒታል መለያ ቁጥር 01- ጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል 02- ጋንዲ መታሰቢያ ሆስፒታል የቡድን መለያ ቁጥር 01- የገላ ለገላ ንክኪ ቡድን 02- የማሞቂያ ቡድን	

ቅጽ 3፡ የጥናቱ ተሳታፊዎችን የተመለከቱ መረጃዎች

ተ.ቁ	ጥያቄ	መልስ	ይዘለል
ክፍል አንድ፡ የጨቅላ ህፃናት መሰረታዊ መረጃዎች			
301.	የታ	ወንድ.....1 ሴት.....2	
302.	የእርግዝና እድሜ	/_____/_____/ ሳምንት ቀን	
303.	እድሜ	/_____/_____/ ቀን ሰዓት	
304.	የአወላለድ ሁኔታ	በምጥ.....1 በመሳሪያ የታገዘ ምጥ.....2 በቀዶ ጥገና.....3	
305.	የአጥጋር ልኬት	የመጀመሪያው ደቂቃ ልኬት /_____/ የአምስተኛው ደቂቃ ልኬት /_____/	
306.	በውልደት ጊዜ የነበረው ክብደት	_____ ግራም	
307.	መረጃው በሚሰበሰብበት ወቅት ህፃኑ/ኗ ለመጨረሻ ጊዜ ምግብ ከተመገበ/ች ምን ያህል ጊዜ አልፎት/አልፏት ነበር?	/_____/_____/ ሰዓት ደቂቃ	
308.	መረጃው በሚሰበሰብበት ቀን ላይ ህፃኑ/ኗ ምግብ የሚወስደው /የምትወስደው በምን ዓይነት ዘዴ ነበር ? (ከአንድ በላይ መልስ ሊኖረው ይችላል)	ጡት በመጥባት.....1 ኩባያ በመጠቀም2 የምግብ ትቦ በመጠቀም3 በደም ስር በሚሰጥ ፈሳሽ መልክ.....4	
309.	ህፃኑ/ኗ መረጃ ከሚሰበሰብበት ቀን በፊት የገላ ለገላ ንክኪ ተደርጎለት/ላት ያውቃል?	አዎ.....1 አልተደረገም.....2	
ክፍል ሁለት፡ የጨቅላ ህፃናት የህክምና መረጃ			
310.	ህፃኑ/ኗ ከተወለደ/ች ጀምሮ ለምን ያህል ጊዜ በጤና ተቋማት ውስጥ ቆይቷል/ቆይታለች?	/_____/_____/ ቀን ሰዓት	
311.	ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ሲመጣ/ስትመጣክ ሚከተሉት ምልክቶች አንዱን አሳይቶ/ታነበር? ሀ. መተንፈስ ማቆም ለ. በደቂቃ ከ40 ያነሰ የአተነፋፈስ ፍጥነት ሐ. በደቂቃ ከ60 የበለጠ የአተነፋፈስ ፍጥነት መ. በጎድን አጥንቶች መሃል የመሰርጎድ ምልክት	ሀ. 1. አዎ 2. አልነበረም 3. አይታወቅም ለ. 1. አዎ 2. አልነበረም 3. አይታወቅም ሐ. 1. አዎ 2. አልነበረም 3. አይታወቅም	

	መፈጠር ሠ. በደረት እና በሆድ መካከል የመሰርጎድ ምልክት መፈጠር ረ. ማቃሰት	መ. 1. አዎ 2. አልነበረም 3. አይታወቅም ሠ. 1. አዎ 2. አልነበረም 3. አይታወቅም ረ. 1. አዎ 2. አልነበረም 3. አይታወቅም	
312.	ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባች ጀምሮ በአክሲጂን ህክምና ተደርጎለት/ላት ነበር?	አዎ.....1 አልነበረም.....2	→ 313-315
313.	ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባች ጀምሮ የአክሲጂን ህክምና የተደረገለት/ላት በየትኛው ዓይነት አክሲጂን ነበር? (ከአንድ በላይ መልስ ሊኖረው ይችላል)	በሲፕኦክስ.....1 በፕሮግ.....2 በኢንትራ-ናዛል.....3 ሌላ ካለ ይጠቀስ _____	
314.	ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባች ጀምሮ በአክሲጂን ህክምና ያህል ጊዜ ህክምና ተደርጎለት/ላት ነበር?	/_____/_____ ቀን ሰዓት	
315.	መረጃ በሚሰጠውበት ወቅት ህፃኑ/ኗ የኢንትራ-ናዛል አክሲጂን ህክምና ላይ ነበር/ች?	አዎ.....1 አልነበረም..... 2	
316.	መረጃው ከመሰብሰቡ በፊት ባሉት 24 ሰዓታት ውስጥ ለህፃኑ/ኗ የህመም ማስታገሻ መድሃኒቶች ተሰጥቶት/ቷቸው ነበር?	አዎ.....1 አልተሰጠም.....2 አይታወቅም.....3	
317.	መረጃ የመሰብሰቡ ሂደት ከመጀመሩ በፊት በነበሩት 24 ሰዓታት ውስጥ በህፃኑ/ኗ ላይ የሚከተሉት ተግባራት ተሰርተው ነበር? ሀ. ከደም ስር የደም ናሙና መውሰድ ለ. በደም ስር መድሃኒት መስጠት ሐ. አይቪ ካኑላ ማስገባት መ. አይቪ ካኑላ ማውጣት ሠ. የምግብ ትቦ ማስገባት ረ. ከተረከዝ ላይ የደም ናሙና መውሰድ ሰ. ከጀርባ አጥንት ላይ ናሙና መውሰድ	ሀ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ለ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ሐ. 1. አዎ 2. አልተሰራም 3. አይታወቅም መ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ሠ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ረ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ሰ. 1. አዎ 2. አልተሰራም 3. አይታወቅም	ለሁሉም አማራጮች መልሳቸው “አልተሰራም”/ “አይታወቅም” ከሆነ ጥያቄ ቁጥር 318 ይዘለል

	ሸ. የደም ቅያሪ ህክምና	ሸ. 1. አዎ 2. አልተሰራም 3. አይታወቅም	
318.	መረጃ የመሰብሰቡ ሂደት ከመጀመሩ በፊት በነበሩት 24 ሰዓታት ውስጥ በህፃኑ/ኗ ላይ የሚከተሉት ተግባራት ለምን ያህል ጊዜ ተሰርተውነበር? ሀ. ከደም ስር የደም ናሙና መውሰድ ለ. በደም ስር መድሃኒት መስጠት ሐ. አይቪ ካኑላ ማስገባት መ. አይቪ ካኑላ ማውጣት ሠ. የምግብ ትቦ ማስገባት ረ. ከተረከዝ ላይ ደም መውሰድ ሰ. ከጀርባ አጥንት ላይ ናሙና መውሰድ ሸ. የደም ቅያሪ ህክምና (በጥያቄ ቁጥር 317 ላይ ለተመረጠው ተግባር ብቻ ይሞላ)	ሀ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ለ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሐ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ መ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሠ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ረ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሰ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሸ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ	
ክፍል ሶስት፡ ምቹት የሚነሳውን ተግባር የተመለከተ መረጃ			
319.	መረጃው በሚሰበሰቡበት ወቅት ፕላስተር የተነሳው ከየትኛው የህፃኑ/ኗ የሰውነት ክፍል ላይ ነው?	ኮጮንቅላት.....1 ከፊት.....2 ከሆድ.....3 ከእጅ.....4 ከእግር5 ከጀርባ.....6 ሌላ ካለ ይጠቀስ_____	
320.	መረጃው በሚሰበሰቡበት ወቅት ፕላስተር የተነሳበት ምክንያት ምን ነበር?	አይቪ ካኑላ ለመቀየር.....1 የምግብ ትቦ ለማውጣት.....2 የአክሲጂን ትቦ ለማውጣት.....3 ህፃኑ እንዳይደማ የተለጠፈ ፕላስተርን ለማንሳት.....4 ሌላ ካለ ይጠቀስ_____	

321.	መረጃ በሚሰበሰብበት ወቅት ከህፃኑ/ኗ ሰውነት ላይ የተነሳው የፕላስቲክ ዓይነት የትኛው ነው?	የወረቀት ፕላስቲክ.....1 የጨርቅ ፕላስቲክ.....2 ሌላ ካለ ይጠቀስ_____	
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ቅጽ 4፡ ከጊዜያቸው ቀድመው የተወለዱ ጨቅላ ህፃናት የህመም መለኪያ ቅጽ

ሂደት	ጠቋሚ	0	1	2	3	አጠቃላይ ውጤት
የህክምና ካርድ ማየት	የእርግዝና እድሜ	ከ36 ሳምንታት በላይ	32-35 ሳምንታት ከ 6ቀን	28-31 ሳምንታት ከ 6ቀናት	ከ28 ሳምንታት በታች	
ህፃኑን ለ 15 ሴኮንዶች ማየት	የንቃት ሁኔታ	ንቁ (ዓይኖች ተከፍተው በተጨማሪ የፊት እንቅስቃሴ ካለ)	በከፊል ንቁ (ዓይኖች ተከፍተው ነገር ግን የፊት እንቅስቃሴ ከሌለ)	ሸለብ ያለ እንቅልፍ (ዓይኖች ተከፍተው ነገር ግን የፊት እንቅስቃሴ ካለ)	ጥልቅ እንቅልፍ (ዓይኖች ተከፍተው በተጨማሪ የፊት እንቅስቃሴ ከሌለ)	
የህፃኑን የፊት እንቅስቃሴ ለ 30 ሴኮንዶች በማየት የፊቱ እንቅስቃሴዎች ለምን ያህል ሴኮንዶች እንደቆዩ መገመት	የግንባር መኮሳተር	የለም (፣ 3 ሴኮ)	አነስተኛ (3-10 ሴኮ)	መካከለኛ (10-20 ሴኮ)	ከፍተኛ (፡20 ሴኮ)	
	ዓይንን በሃይል መጨፈን	የለም (፣ 3 ሴኮ)	አነስተኛ (3-10 ሴኮ)	መካከለኛ (10-20 ሴኮ)	ከፍተኛ (፡20 ሴኮ)	
	ከአፍንጫ ወደ ከንፈር የሚሄድ ጎድጓዳ የእጥፋት ምልክት መፈጠር	የለም (፣ 3 ሴኮ)	አነስተኛ (3-10 ሴኮ)	መካከለኛ (10-20 ሴኮ)	ከፍተኛ (፡20 ሴኮ)	
የልብ ምት ፍጥነትን እና የደም ውስጥ የአክሲጅን መጠንን መለካት	የልብ ምት ከፍተኛ _____	የ0 የልብ ምት ፍጥነት ጭማሪ	5-15 የልብ ምት ፍጥነት ጭማሪ	15-24 የልብ ምት ፍጥነት ጭማሪ	> 25 የልብ ምት ፍጥነት ጭማሪ	
	የደም ውስጥ አክሲጅን መጠን _____	92-100%	89-91%	88-85%	<85%	

ቅጽ 5፡ የመረጃ መሰብሰብ ሂደት መከታተያ ቅጽ

የጥናቱ ተሳታፊ መለያቁጥር፡/___/___/___

የቡድን መለያ ኮድ፡ /___/___

ተ.ቁ	ዋና የጥናቱ ይዘቶች	ተደርጓል	አልተደረገም
	5. የገላ ለገላ ንክኪ አደራረግ ይዘቶች		
5.1.	ህፃኑን ኮፍያ፣ካልሲ እና ዳይፐር ብቻ ማልበስ		
5.2.	ህፃኑ ቀጥ እንዳለ ከእናቱ ጡቶች መሃል በማድረግ ቆዳ ለቆዳ እንዲነካከ ማድረግ		
5.3.	የህፃኑን ጭንቅላት ከእናቱ ጋር አይን ለአይን መተያየት በሚችሉበት መጠን ቀና እንዲል ማድረግ		
5.4.	የህፃኑ ሆድ ከእናቱ የላይኛው የሆድ ክፍል ጋር እንዲነካካ ማድረግ		
5.5.	ህፃኑን በነጠላ፣በሽማ ወይም በሌላ ልብስ ከእናቱ ጋር አብሮ መጠቅለል		
5.6.	ልብሱ ሲጠቀለል የህፃኑ ደረት አካባቢ መጥበቁን ማረጋገጥ		
5.7.	ልብሱ ሲጠቀለል የህፃኑ የሆድ አካባቢ በጣም አለመጥበቁን እና ለመተንፈስ አለመቸገሩን ማረጋገጥ		
5.8.	የህፃኑ እናት ለመንቀሳቀስ፣ ለማውራት ወይም ሌሎች ተግባራትን ለማወከናወን ነፃ መሆኗን ማሳወቅ		
5.9.	የህፃኑ እናት ልጇን ጡት እያጠባቸው አለመሆኑን ማረጋገጥ		
5.10.	ህፃኑ በዚህ ሁኔታ ፕላስቲክ ከመነሳቱ በፊት ለአስር ደቂቃዎች በሚነሳበት እና ግዜ እንዲቆይ ማድረግ		

ቅጽ 6: የጎንዮሽ ጉዳት ሪፖርት ማድረጊያ ቅጽ

601. የሆስፒታሉ መለያ ቁጥር: /___ /___ /

602. የጥናቱ ተሳታፊ መለያ ቁጥር: /___ /___ /___ /

603. የህክምና ካርድ ቁጥር _____

604. የህፃኑ/ኗ ስም _____

605. ያታ _____

606. የተወለደበት ቀን (ቀን/ወር/ዓ.ም): /___ /___ /___ /

607. የእርግዝና እድሜ (ሳምንት/ቀን): /___ /___ /

608. በውልደት ጊዜ የነበረ ክብደት (ግራም) _____

609. ወደ ሆስፒታሉ የገባበት ቀን (ቀን/ወር/ዓ.ም): /___ /___ /___ /

610. የጎንዮሽ ጉዳቱ የተከሰተበት ቀን (ቀን/ወር/ዓ.ም): /___ /___ /___ /

611. የጎንዮሽ ጉዳቱን ማሳወቅ ለምን አስፈላጊ ሆኖ ተገኘ?

1. የጨቅላ ህፃናትን ዶክተር ማማከር አስፈላጊ ስለነበር
2. ለህይወት አስጊ የሆነ የጎንዮሽ ጉዳት ስለነበር
3. ሞት ያስከተለ የጎንዮሽ ጉዳት ስለነበር

612. የህፃኑ የህክምና መረጃዎች

613. የጎንዮሽ ጉዳቱ የተከሰተው በየትኛው የመረጃ መሰብሰቢያ ጊዜ ነው?

- | | |
|---------------------|-------------------|
| 1. ፕላስተሩ ከመነሳቱ በፊት | 3. ፕላስተሩ ከተነሳ በኋላ |
| 2. ፕላስተሩ በሚነሳበት ወቅት | |

614. ከሚከተሉት ውስጥ ህፃኑን/ኗን ያጋጠው/ ያጋጠማት የጎንዮሽ ጉዳት የትኛው ነው? (ከአንድ በላይ መልስ ሊኖረው ይችላል)

1. ያልተስተካከለ አተነፋፈስ
2. መተንፈስ ማቆም

3. ከልክ ቦታች የሆነ የልብ ምት ፍጥነት
4. ከልክ በላይ የሆነ የልብ ምት ፍጥነት
5. የደም ውስጥ የአክሲጅን መጠን ከልክ ቦታች ማነስ
6. የመውደቅ አደጋ
7. ሌላ ካለ ይገለፅ _____

615. የጎንዮሽ ጉዳቱ ከተከሰተ በኋላ ህፃኑ/ኗን ለመርዳት ምን አይነት እርምጃዎች ተወስዱ?

616. የጎንዮሽ ጉዳቱ ከተከሰተ በኋላ ህፃኑ/ኗ በምን ዓይነት የጤና ሁኔታ ላይ ይገኛል/ትገኛለች?

1. ከጎንዮሽ ጉዳቱ አገጣጥሟል/አገጣጥላለች
2. በህክምና እርዳታ ላይ ነው/ናት
3. ሞቷል/ሞታለች
 - ሞት የተከሰተበት ቀን (ቀን/ ወር/ ዓ.ም): ____/____/____/
 - የሞት መንስኤ

የጎንዮሽ ጉዳቱን ሪፖርት ያደረገው ሰው ሙሉ ስም: _____

የጎንዮሽ ጉዳቱ ሪፖርት የተደረገበት ቀን(ቀን/ወር/ዓ.ም): ____ / ____ / ____ /

Annex III: Training manual for data collectors (Amharic version)



አዲስ አበባ ዩኒቨርሲቲ

የጤና ሳይንስ ኮሌጅ

የሕብረተሰብ ጤና አጠባበቅ ትምህርት ቤት

የመረጃ ሰብሳቢዎች የስልጠና ማኑዋል

የጥናቱ አስተባባሪ-የምስራች በለጠ

የጥናቱ አማካሪዎች- አብይ ሰይፉ (B.Sc, MPH)

ዶ/ር ውብአዜር መኮንን (B.Sc, MA, PHD)

ዶ/ር አስራት ድምፄ (MD, Neonatologist)

**ሚያዝያ 2010 ዓ.ም
አዲስ አበባ፤ ኢትዮጵያ**

1. የስልጠናው ዓላማ

የዚህ ስልጠና ዋና ዓላማዎች የሚከተሉት ናቸው፤

- ለመረጃ ሰብሳቢዎች ስለ ጥናቱ አጠቃላይ መረጃ ለመስጠት
- ለመረጃ ሰብሳቢዎች በጥናቱ ውስጥ ጥቅም ላይ የሚውሉትን የመረጃ መሰብሰቢያ ቅጾች ለማስተዋወቅ
- የመረጃ አሰባሰብ ቅደም ተከተሉን ለመረጃ ሰብሳቢዎች ለማብራራት
- የመረጃ ሰብሳቢዎችን እና የጥናቱን ተመራማሪ ሀላፊዎች ለማብራራት

2. የስልጠናው ዘዴ

- አሳታፊ አቀራረብ
- የቡድን ውይይት
- የተግባር ልምምድ

የስልጠናው የጊዜ ሰንጠረዥ

መግቢያ

1ቀን

ስለመረጃው የአሰባሰብ ሂደት የሚደረግ ማብራሪያ

- ስለ መጠይቅ የሚደረግ ማብራሪያ 2 ሰዓት
- ስለመረጃ አሰባሰብ ቅደም ተከተል የሚደረግ ማብራሪያ 30-35 ደቂቃዎች
- በመረጃ መሰብሰብ ውስጥ የሚሳተፉ ሰዎችን ሀላፊነት ማብራራት 15-20 ደቂቃዎች

ከጊዜያቸው ቀድመው የተወለዱ ህፃናት የህመም መለኪያ ቅጽ መሙላትን መለማመድ

3 ቀን

በስልጠናው መጨረሻ ላይ ከመረጃ ሰብሳቢዎች ጋር የሚደረግ ውይይት

30 ደቂቃ

1. መግቢያ

እንደ የዓለም ጤና ድርጅት ትርጉም ከሰላሳ ሰባት ሙሉ የእርግዝና ሳምንታት በፊት የተወለዱ ህፃናት ከመወለጃ ጊዜያቸው ሳይደርስ የተወለዱ ጨቅላ ህፃናት ይባላሉ። በየዓመቱ እስከ 15 ሚሊዮን የሚደርሱ ህፃናት መወለድ ከነበረባቸው ጊዜ ቀድመው ይወለዳሉ። ከመወለጃ ጊዜ ቀድሞ መወለድ ጨቅላ ህፃናት ለሚያጋጥማቸው ሞት እና የረጅም ጊዜ ችግር ዋነኛ ምክንያት ሲሆን የጨቅላ ህፃናት ከሚያጋጥማቸው ሞት በአጠቃላይ ለ 35 በመቶ ምክንያት ነው። በተጨማሪ እድሜያቸው ከ አምስት አመት በታች በሆኑ ህፃናት ላይ በብዛት ሞት ከሚያስከትሉ መንስኤዎች ውስጥ ከሳንባ ምች በመቀጠል ሁለተኛው ነው።

ኢትዮጵያ በዓለም ላይ ከፍተኛ የጨቅላ ህፃናት ሞት ካለባቸው ሀገራት መካከል አንዷ ናት። ምንም እንኳን ሀገሪቱ ስለ ህፃናት ሞት የተመለከተውን የምዕተ ዓመቱን የልማትግብ ከ ሶስት ዓመት በፊት ቀድሞ ማሳካት ብትችልም የጨቅላ ህፃናት ሞት ቅነሳ ለግቡ መሳካት የነበረው አስተዋፆ አነስተኛ ነበር። በ2009ዓ.ም ይፋ የሆነው የኢትዮጵያ የስነ ህዝብ እና የጤና የዳሰሳ ጥናትም ባለፉት 16 ዓመታት በሀገሪቱ ውስጥ የነበረው የጨቅላ ህፃናት ሞት ቅነሳ አጥጋቢ እንዳልነበር ያሳያል።

የገላ ለገላ ንክኪ ለመጀመሪያ ጊዜ ጥቅም ላይ የዋለው በኮሎምቢያ ቦንታ ነው። የገላ ለገላ ንክኪ በውስጡ በእናት እና በተወለደው ጨቅላ ህፃን የሚደረግ ረጅም እና ያልተቆራረጠ የቆዳ ለ ቆዳ ንክኪ እንዲሁም ተደጋጋሚ የሆነ ጡት ማጥባትን ይይዛል። የገላ ለገላ ንክኪ የተደራጀ የጨቅላ ህፃናት የከፍተኛ ህክምና ከትትል ክፍል በሌላባቸው እንደ ኢትዮጵያ ባሉ ሀገራት ውስጥ ከጊዜያቸው ቀድመው ለሚወለዱ ጨቅላ ህፃናት ከፍተኛ ጥቅም ያለው አገልግሎት ነው። እ.ኤ.አ በ 2015 የዓለም የጤና ድርጅት በሚወለዱበት ጊዜ 2000 ግራም እና ከዛ በታች ክብደት ያላቸው ጨቅላ ህፃናት ቀጣይነት ያለው የገላ ለ ገላ ንክኪ እንዲያገኙ መከራል።

በኢትዮጵያ ጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል እ.ኤ.አ በ 1996 የገላ ለገላ ንክኪ አገልግሎትን መስጠት የጀመረ ሲሆን በመቀጠልም አገልግሎቱ በሀገሪቱ ወደሚገኙ ሰባት የማስተማሪያ ሆስፒታሎች ተስፋፋ። እ.ኤ.አ በ 2015 የሀገሪቱ የጨቅላ ህፃናት እና ህፃናት ሞት ቅነሳ ስትራቴጂ እ.ኤ.አ 2020 የገላ ለገላ ንክኪ ሽፋንን ከሚገኝበት 10 በመቶ ወደ 90 በመቶ ለማድረስ እቅድ ይዟል። ይሁን እንጂ በኢትዮጵያ የገላ ለገላ ንክኪ ሙቀት ከመስጠት ባለፈ ለህፃናቱ የሚሰጠው ጥቅሞች ላይ ብዙ ምርምሮች አልተሰሩም። የአሁኑ ጥናት የገላ ለገላ ንክኪ ለጨቅላ ህፃናት የሚሰጠውን ምችት ለማወቅ ይረዳ ዘንድ የታቀደ ነው።

1.1. የጥናቱ ዓይነት (study design)

የዚህ ጥናት ዓይነት randomized controlled trial (RCT) ነው። ይህ የጥናት ዓይነት ጥቅም ላይ የሚውለው የተለያዩ ሳይንሳዊ መላምቶች በእውነተኛው ዓለም ላይ ሲተገበሩ የሚኖራቸውን ውጤት ከተለመደው የጤና አገልግሎት ጋር በማወዳደር የጤና አገልግሎቱ እንዲቀየር፣ እንዲሻሻል ወይም ባለበት እንዲቀጥል ለመወሰን የሚያስችሉ የጥናት ውጤቶችን ለማስገኘት ነው።

በዚህ የጥናት ዓይነት ውስጥ ጥናቱን በሚያደርገው ሰው በቡድን ተከፍለው ሆኖ ተብለው የሚደረጉ የተለያዩ ጣልቃ ጉብነቶች (interventions) ሲኖሩ በጥናቱ ውስጥ ለመሳተፍ የሚመረጡት ተሳታፊዎች ወደ እነዚህ ቡድኖች ሙሉ በሙሉ የሚመደቡት በዕድል ነው።

1.2. የጥናቱ ተሳታፊዎች

በዚህ ጥናት ውስጥ የሚሳተፉት ከሚያዚያ 2010 ዓ.ም እስከ ሰኔ 2010 ዓ.ም ባሉት ወራት ውስጥ ከ 28 እስከ 36 ባሉት ሙሉ የእርግዝና ሳምንታት ውስጥ ተወልደው በጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል እና በጋንዲ መታሰቢያ ሆስፒታል ውስጥ ተኝተው ለመታከም የገቡ ጊዜያቸው ሳይደርስ የተወለዱ ጨቅላ ህፃናት ናቸው፡፡

1.2.1. የጥናቱ ተሳታፊዎች ሊያሟሏቸው የሚገቡ መስፈርቶች

ከላይ በተጠቀሰው የጊዜ ገደብ ውስጥ ወደ ሁለቱ ሆስፒታሎች የሚገቡት ጨቅላ ህፃናት ሁሉ የዚህ ጥናት እጩ ተሳታፊዎች ቢሆኑም በጥናቱ ውስጥ ለመሳተፍ የሚችሉት ግን የሚከተለውን መስፈርት ያሟሉ ጨቅላ ህፃናት ብቻ ናቸው፤

- ከ 28 እስከ 36 ባሉት ሙሉ የእርግዝና ሳምንታት መካከል የተወለዱ
- መረጃው በሚሰበሰብበት ወቅት የሲፕኦር ወይም ፕሮግራም የአክሲድን ህክምና ላይ ያልሆኑ
- መረጃው በሚሰበሰብበት ወቅት የሲፕኦር እና የፕሮግራም አክሲድን ህክምና ላይ ያልሆኑ
- እናቶቻቸው በጥናቱ ውስጥ ለመሳተፍ ፍቃዳቸውን መስጠት እና የገላ ለገላ ንክኪ ማድረግ የሚችሉ

1.2.2. በጥናቱ ውስጥ የማይሳተፉ ህፃናት

- ከሰውነታቸው ላይ ፕላስቲክ መነሳት የማያስፈልጋቸው ህፃናት
- በምርመራ የተረጋገጠ የጭንቅላት ውስጥ ደም መፍሰስ ያላጋጠማቸው
- በምርመራ የተረጋገጠ ወይም በዓይን የሚታይ አብሮ የተወለደ በሽታ ወይም የነርቭ ችግር ያለባቸው
- መረጃ ከመሰብሰቡ በፊት ቀደም የቀዶ ጥገና ህክምና የተደረገላቸው
- መረጃው በሚሰበሰብበት ወቅት ቀጣይነት ያለው (continuous type of KMC) የገላ ለገላ ንክኪ የጀመሩ

1.3. የጥናቱ ጣልቃ ገብነት (intervention of the study)

በዚህ ጥናት ውስጥ እንደ ጣልቃ ገብነት የሚያገለግለው የገላ ለገላ ንክኪ ወይም የካንጋሮ እናት የአያያዝ ዘዴ ነው፡፡ በጥናቱ ውስጥ በጨቅላ ህፃናት ከፍተኛ ህክምና ክትትል ከፍል ውስጥ ተኝተው ለሚታከሙ ጨቅላ ህፃናት በማሞቂያ ውስጥ ከሚሰጠው ህክምና በተለየ መልኩ ፕላስቲክ ከመነሳቱ ከአስር ደቂቃዎች አስቀድሞ እና በሚነሳበት ጊዜ የገላ ለገላ ንክኪ ላይ እንዲሆኑ ይደረጋል፡፡

1.3.1. የገላ ለገላ ንክኪ ቡድን የገላ ለገላ ንክኪ አደራረግ ይዘቶች

1. ህፃኑን ኮፍያ፣ ካልሲ እና ዳይፐር ብቻ ማልበስ
2. ህፃኑ ቀጥ እንዳለ የህፃኑ እናት ጡቶች መሃል በማድረግ ቆዳ ለቆዳ እንዲነካኩ ማድረግ
3. ህፃኑ እንዳይወድቅ በእናቱ ደረት መደገፍ
4. የህፃኑን ጭንቅላት ከእናቱ ጋር አይን ለአይን መተያየት በሚችሉበት መጠን ቀና እንዲል ማድረግ
5. የህፃኑ ጭኖችን ከፊት ብለው እንዲታጠፉ በማድረግ “የእንቁራሪት ዓይነት” አቀማመጥ እንዲኖረው ማድረግ
6. የህፃኑ እጆች እንዲታጠፉ ማድረግ
7. የህፃኑ ሆድ ከእናቱ የላይኛው የሆድ ክፍል ጋር እንዲነካካ ማድረግ
8. የህፃኑ እናት ህፃኑን በእጆቿ ደገፍ እንድታደርገው ማድረግ

9. ህፃኑን በነጠላ፣ በሽማ ወይም በሌላ ልብስ ከእናቱ ጋር አብሮ መጠቅለል
10. የልብሱ የላይኛው ክፍል ከህፃኑ ጆሮዎች በታች እንዲሆን ማድረግ
11. የልብሱን የታችኛውን ክፍል ከህፃኑ መቀመጫ ስር መሸጎጥ/መጠቅጠቅ እና በደንብ ማሰር
12. ልብሱ ሲጠቀለል የህፃኑ ደረት አካባቢ መጥበቁን ማረጋገጥ
13. ልብሱ ሲጠቀለል የህፃኑ የሆድ አካባቢ በጣም አለመጥበቁን እና ለመተንፈስ አለመቸገሩን ማረጋገጥ
14. የህፃኑ እናት ህፃኑን ጡት እያጠባችው አለመሆኑን ማረጋገጥ
15. የህፃኑ እናት ለመንቀሳቀስ፣ ለማውራት ወይም ሌሎች ተግባራትን ለማወከናወን ነፃ መሆኗን ማሳወቅ
16. ህፃኑ በዚህ ሁኔታ ፕላስተር ከመነሳቱ በፊት ለአስር ደቂቃዎች፣ በሚነሳበት ጊዜ እና ከተነሳ በኋላ እንዲቆይ ማድረግ

1.4. የጥናቱ የሥነ ምግባር ሁኔታ

ይህ ጥናት የሚደረገው ከአዲስ አበባ ዩኒቨርሲቲ የሕብረተሰብ ጤና አጠባበቅ ት/ቤት እና ከአዲስ አበባ ጤና ቢሮ የጥናት እና ምርምር ስነምግባር ኮሚቴ ፍቃድ ካገኘ በኋላ ነው። በተጨማሪም ከጥቁር አንበሳ ስፔሻላይዝድ እና ከጋንዲ መታሰቢያ ሆስፒታሎች የህፃናት ህክምና ክፍል ጥናቱ እንዲካሄድ ፈቃድ አግኝቷል። የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ የሚሳተፉት ያለ ማንም አስገዳጅነት በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ መሆናቸውን በፈርማቸው ካረጋገጡ ብቻ ነው። በጥናቱ ውስጥ እንዲሳተፉ የተመረጡ ሰዎች በጥናቱ ውስጥ መሳተፍ ባይፈልጉ ወይም መሳተፍ ከጀመሩ በኋላ በተለያዩ ምክንያት በጥናቱ መሳተፋቸውን ቢያቋርጡ ሆስፒታሎቹ ለልጆቻቸውም ሆነ ለእነርሱ የሚሰጡት የህክምና አገልግሎት በፍጹም አይቋረጥም። በተጨማሪም የጨቅላ ህፃናቶች ከአድሎ በፀዳ መልኩ በጥናቱ ቡድኖች ውስጥ መመደብ እንዲችሉ የእድል ቁጥሮች ጥቅም ላይ ይውላሉ። ከህፃናቱ ሰውነት ላይ ፕላስተር የሚነሳው እንደ አንድ የተለመደ የህክምና አገልግሎት ነው እንጂ ለጥናቱ ዓላማ የታሰበ አይደለም። የገላ ለገላ ንክኪ ለህፃናቱ ጤንነት ጠቃሚ እና አስፈላጊ ሲሆን ለጥናቱ በተመረጡት ሆስፒታሎች ውስጥም እንደ አንድ መደበኛ የጤና አገልግሎት በእናቶችም ሆነ በሌሎች ሴቶች አማካኝነት ይሰጣል። በዚህ ጥናት ውስጥ መረጃ ለመሰብሰብ የተመረጡት ሰዎች በጠቅላላ ለገላ ለገላ ንክኪ ስልጠና የወሰዱ እና የጨቅላ ህፃናትንም በሚገባ መያዝ የሚችሉ የጤና ባለሙያዎች ናቸው። በዚህ ጥናት ውስጥ የገላ ለገላ ንክኪ በማድረግ የሚሳተፉትን እናቶችን ግላዊነት ለመጠበቅ ሲባል የዚህ ጥናት መረጃ ስብሰቢዎች በዋነኝነት ሴት የጤና ባለሙያዎች እንዲሆኑ ይደረጋል። በዚህ ጥናት ውስጥ የሚሳተፉ የጨቅላ ህፃናት የህክምና መረጃ እንዲመዘገብ ቢደረግም ነገርግን የመረጃዎቹን ምስጢራዊነት ለመጠበቅ ሲባል የተሳታፊዎቹ ስም እንዳይመዘገብ ይደረጋል።

2. መረጃውን ለመሰብሰብ የሚያስፈልጉ ዶክመንቶች እና መሳሪያዎች

የዚህን ጥናት መረጃ ለመሰብሰብ የሚያስፈልጉ ዶክመንቶች እና መሳሪያዎች የሚከተሉት ናቸው

- የመጠይቅ ቅፅ
- ፐልስ ኦክሲሜትር (pulse oximeter)
- የእድል ቁጥሮች (randomization numbers)
- ሰዓቶች
- እክሲቢርቶዎች

የጥናቱ ዋና ተመራማሪ እነዚህን መሳሪያዎች ለጥናቱ ተቆጣጣሪዎች የምታስረክብ ሲሆን ተቆጣጣሪዎች መሳሪያዎቹን ባስፈለጉ ጊዜ ለመረጃ ሰብሳቢዎች በአግባቡ ያስረክባሉ።

3. የጥናቱ መለኪያዎች (Study Measurements)

3.1. የመረጃ መሰብሰቢያ ቅጾች

በዚህ ጥናት ውስጥ መረጃ ሰብሳቢዎች ብቻ የሚጠቀሙባቸው አራት የመረጃ መሰብሰቢያ ቅጾች አሉ።

ቅጽ 1፡ የስምምነት መግለጫ

ይህ ቅጽ ለጥናቱ የተመረጡ ህጻናት እናቶች በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ መሆናቸው የሚጠየቅበት ቅጽ ነው። የስምምነት መግለጫ ቅጹ ሁለት ክፍሎች ያሉት ሲሆን የመጀመሪያው ለተሳታፊዎች ስለ ጥናቱ መረጃ የሚሰጥበት ቅጽ ነው። ይህ ቅጽ የጥናቱን ዓላማ፣ ህፃኑ/ኗ በጥናት ውስጥ ለመሳተፍ የተመረጠበት/የተመረጠችበት ምክንያት፣ የመረጃ አሰባሰቡ ቅደም ተከተል ምን እንደሚመስል እና ለጥናቱ የሚያስፈልጉ መረጃዎችን ያጠቃልላል። የዚህ ቅጽ ሁለተኛ ክፍል የስምምነት መግለጫ ቅጽ ሲሆን የህፃናቱ እናቶች በጥናቱ ውስጥ በፈቃደኝነት ለመሳተፍ ስምምነታቸውን በፊርማቸው ወይም በጣት አሻራቸው የሚያረጋግጡበት ክፍል ነው። የጥናቱን ተሳታፊዎች በጥናቱ ውስጥ በፈቃደኝነት እንዲሳተፉ በሚጠየቁበት ጊዜ የሚከተሉትን ነገሮች ማድረግ ተገቢ ነው።

- ለተሳታፊዎች ሰላምታ ካቀረቡ በኋላ እራስን ማስተዋወቅ
- ተሳታፊዎች ተረጋግተው የጥናቱን መረጃ ለመስጠት አመቺ ሁኔታ እስኪፈጠር መጠበቅ
- በጥናት መረጃ ቅጽ ላይ የሰፈረውን ሁሉንም ጥናቱን የተመለከተ መረጃ ለተሳታፊዎች ማንበብ
- የጥናቱ ተሳታፊዎች ስለ ጥናቱ እና ስለ መረጃ አሰባሰቡ ሒደት በሚገባ መረዳታቸውን ማረጋገጥ
- የጥናቱ ተሳታፊዎች ጥናቱን አስመልክቶ ለሚያነሱባቸው ጥያቄዎች በትህትና እና በአግባቡ መልስ መስጠት
- የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ እንዲሳተፉ ያለማስገደድ
- የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ ለመሳተፍ ከተስማሙ ፍቃደኝነታቸውን በፊርማቸው ወይም በጣት አሻራቸው እንዲያሰውቁ ማድረግ
- የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ ለመሳተፍ ካልተስማሙ ተገቢውን የህክምና አገልገሎት እንዲያገኙ ማድረግ

የተቃውሞ አያያዝ

የጥናቱን መስፈርት ያሟሉ ተሳታፊዎች ሁሉ በጥናቱ ውስጥ ለመሳተፍ ይስማማሉ ተብሎ አይጠበቅም። በዚህ ጊዜ ማድረግ የሚገባው የመጀመሪያው ነገር እነዚህ ተሳታፊዎች በጥናቱ ውስጥ ለመሳተፍ ያልፈለጉበትን ምክንያት ለመረዳት መሞከር ነው። ተሳታፊዎቹ በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ ያልሆኑት በመረጃ እጥረት ከሆነ ተገቢውን መረጃ መስጠት ያስፈልጋል። ነገር ግን ተሳታፊዎቹ በግድ እንዲሳተፉ ማድረግ ተገቢ አይደለም። ተሳታፊዎቹ በጥናቱ ውስጥ ላለመሳተፍ ከወሰኑ የህፃኑን/ኗን የመለያ ቁጥር በመፃፍ ህፃኑን/ኗን በተመለከተ በህክምና ካርዱ ላይ የሚገኙት መረጃዎች በሙሉ በቅጽ 3 ላይ መመዝገብ ይኖርባቸዋል።

ቅጽ 2፡ መለያ

ይህ ክፍል የጥናቱ ተሳታፊን መለያ ቁጥር፤ ጥናቱ የተደረገባቸውን ሆስፒታሎች መለያ ቁጥር ፤ የጨቅላ ህፃናቱን የጥናት ቡድን መለያ ቁጥር፤ የመረጃ ሰብሳቢዎችን እና የተቆጣጣሪዎችን ስም ለመመዝገብ ያገለግላል፡፡ ይህ ክፍል በጥናቱ ውስጥ የሚሰበሰቡትን መረጃዎች በአግባቡ ለማድረጅ እንዲሁም ለመረጃ ሰብሳቢዎች እና ተቆጣጣሪዎች ተገቢውን ክፍያ ለመፈፀም ያገለግላል፡፡ በመሆኑም በዚህ ቅጽ ውስጥ የሚገኙ መረጃዎች በሙሉ መሞላት ይኖርበታል፡፡ የጥናቱ ተሳታፊዎች የጥናቱን መስፈርት እንዳሟሉ ከተረጋገጠ እና በጥናቱ ውስጥ ለመሳተፍ ፍቃድኝነታቸው ከተጠየቀ በኋላ ቀጣዩ ስራ ይህንን ቅጽ መሙላት ነው፡፡

የሆስፒታሉ መለያ ቁጥር- ጥናቱ ለሚደረግባቸው ሆስፒታሎች ሁለት ዓይነት የመለያ ቁጥሮች አሉ፡፡ 01- ለጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል እና 02- ለጋንዲ መታሰቢያ ሆስፒታል፡፡ መረጃው ለተሰበሰበበት ሆስፒታል ተገቢውን የመለያ ቁጥር በተገቢው ቦታ ላይ መፃፍ ይኖርበታል፡፡

በጥናቱ ውስጥ የሚሳተፉ ጨቅላ ህፃናት መለያ ቁጥር- በዚህ ጥናት ውስጥ የሚሳተፉ ሁሉም ጨቅላ ህፃናት ልዩ የሆነ የራሳቸው የመለያ ቁጥር ይኖራቸዋል፡፡ ይህ ማለት ሁለት ህፃናት ተመሳሳይ የሆነ የመለያ ቁጥር ሊኖራቸው አይችልም ማለት ነው፡፡ የህፃናቱን የመለያ ቁጥር የታሸጉት ፖስታዎች ውስጥ በሚገኙት ትንንሽ ወረቀቶች ላይ ተጽፈው የሚገኙ ሲሆን እነዚህ ቁጥሮች በፖስታዎቹ ላይ ተጽፈው ከሚገኙት ቁጥሮች የተለዩ ናቸው፡፡ የህፃናቱ የመለያ ቁጥሮች ተብለው የሚፃፉት ቁጥሮች በወረቀቶቹ ላይ ተጽፈው የሚገኙት ቁጥሮች ብቻ ናቸው፡፡

የጨቅላ ህፃናት የጥናት ቡድን መለያ ቁጥር-ይህ የሚያሳየው ህፃናቱ በጥናቱ ውስጥ ከሚገኙት ሁለት ቡድኖች መሀል በየትኛው እንደተመደቡ ነው፡፡ ቡድኖቹ ሁለት ኮዶች ያሉዋቸው ሲሆን 01- የገላ ለገላ ንክኪ ቡድን ሲሆን 02- የማሞቂያ ቡድን ናቸው፡፡ ቅጹ ላይ ከሁለቱ የአንዱ ኮድ ይፃፋል፡፡

ቅጽ 3፡ የጥናቱን ተሳታፊዎች የተመለከቱ መሰረታዊ መረጃዎች

ይህ ቅጽ ሶስት ክፍሎች ያሉት ሲሆን የመጀመሪያው ክፍል ስለ ጨቅላ ህፃናቱ መሰረታዊ መረጃዎች የሚፃፉበት ሁለተኛው የህፃናቱ የህክምና መረጃዎች የሚመዘገቡበት እና ሶስተኛው ከህፃናቱ ሰውነት ላይ የተነሳውን ፕላስተርን የተመለከተ መረጃ የሚመዘግብበት ክፍል ነው፡፡

ክፍል 1፡ የጨቅላ ህፃናቱ መሰረታዊ መረጃዎች

ጥያቄ ቁጥር 301፡ ፆታ

ከሁለቱ ምርጫዎች አንዱ ብቻ ይከበብ

ጥያቄ ቁጥር 302፡ የእርግዝና እድሜ (Gestational age)

ህፃኑ የተወለደበት የእርግዝና እድሜን በቅድመ ወሊድ ወቅት የነበረ የአልትራሳውንድ ውጤት፣ የህፃኑ እናት ለመጨረሻ ጊዜ የወር አባባ መቼ እንዳየች በመጠየቅ ወይም ባላርድ ስኮርን (Ballard's score) በመጠቀም ማወቅ ይቻላል፡፡ የባላርድ

ስኮርን በመጠቀም የህፃናቱን የእርግዝና እድሜ ለማወቅ በሚሞከርበት ጊዜ የህፃናቱ የእርግዝና እድሜ በሁለት የእርግዝና እድሜ መካከል ከመጣ የሁለቱ እርግዝና እድሜዎች አማካይ ይወሰዳል። ለምሳሌ- በባላርድ ስኮር መሰረት የህፃኑ የእርግዝና እድሜ 32-34 ሳምንት ቢሆን በመጠይቁ ላይ የሚፃፈው የእርግዝና እድሜ 33 ሳምንት ይሆናል ማለት ነው። ህፃኑ የተወለደበትን የእርግዝና ሳምንታት ለመመዝገብ የሚያገለግለው ቦታ ሁለት ክፍተቶች ያሉት ሲሆን የመጀመሪያው ክፍተት ላይ የእርግዝናውን እድሜ በሳምንታት ያገለግላል። ሁለተኛው ክፍት ቦታ ደግሞ ተጨማሪ ቀናትን ለመፃፍ ያገለግላል። ለምሳሌ ህፃኑ በ 35 ሳምንታት እና 4 ቀናት የእርግዝና እድሜ ላይ ቢወለድ ሲመዘገብ /35 ሳምንት/4ቀን/ ይሆናል።

ሁለተኛው አስፈላጊ ጉዳይ የህፃኑ የእርግዝና እድሜ በሚፃፍበት ጊዜ የእርግዝናው ሳምንታት እና ቀናት ሳይጠጋጉ መፃፍ ይኖርባቸዋል። የህፃኑ የእርግዝና እድሜ ወደሚቀርበው የእርግዝና እድሜ መጠጋጋት የለበትም። ለምሳሌ የህፃኑ የእርግዝና እድሜ 28 ሳምንታት እና 1 ቀን ቢሆን ወደ 28 ሳምንታት ሳይጠጋጋ /28ሳምንት/1ቀን/ ተብሎ መፃፍ ይኖርበታል። የህፃኑ የእርግዝና እድሜ 36 ሳምንታት እና 6 ቀናት ቢሆን ወደ 37 ሳምንታት ሳይጠጋጋ /36 ሳምንት/6 ቀን/ ተብሎ መፃፍ ይኖርበታል።

ጥያቄ ቁጥር 303: እድሜ

ይህ እድሜ ህፃኑ ከተወለደ ጀምሮ እስከ መረጃ የሚሰበሰብበት ቀን ያለው የህፃኑ እድሜ ነው። የዚህን ጥያቄ መልስ ለመፃፍ የሚያገለግሉ ሁለት ክፍት ቦታዎች አሉት። የመጀመሪያው ክፍት ቦታ የህፃናቱን እድሜ በቀናት ለመፃፍ የሚያገለግል ሲሆን ሁለተኛው ክፍት ቦታ ደግሞ የህፃናቱን እድሜ በሰዓት ለመግለፅ የሚያገለግል ነው። ከእርግዝና እድሜ ጋር ተመሳሳይ በሆነ መልኩ የህፃኑ ትክክለኛ እድሜ ሳይጠጋጋ መፃፍ ይኖርበታል።

ጥያቄ ቁጥር 304: የአወላለድ ሁኔታ

ይህ ጥያቄ ሶስት ሶስት ምርጫዎች ያሉት ሲሆን የሚመረጠው አንዱ ምርጫ ብቻ ነው።

- 01- በምጥ (spontaneous vaginal delivery)
- 02- በመሳሪያ የታዘዘ ምጥ(assisted vaginal delivery)
- 03- በቀዶ ጥገና(cesarean section)

ጥያቄ ቁጥር 305: የአፕጋር ልኬት(Apgar score)

የመጀመሪያ ደቂቃ እና የአምስተኛው ደቂቃ አፕጋር ልኬት ይፃፍ

ጥያቄ ቁጥር 306: ህፃኑ ሲወለድ የነበረው ክብደት

ህፃኑ ሲወለድ የነበረው የክብደት መጠን መገለፅ የሚገባው በግራም ብቻ ነው።

ጥያቄ ቁጥር 307: መረጃ በሚሰበሰብበት ወቅት ህፃኑ ለመጨረሻ ጊዜ ከተመገበ በግምት ምን ያህል ጊዜ አልፎት ነበር?

ይህ ጥያቄ ህፃኑ ለመጨረሻ ጊዜ ከተመገበበት ጊዜ አንስቶ መረጃው እስከተሰበሰበበት ጊዜ ያለውን የጊዜ ልዩነት ለማወቅ የሚረዳ ጥያቄ ነው። ጥያቄው ሁለት ክፍት ቦታዎች ሲኖሩት ጊዜውን በሰዓት እና በደቂቃ ለመፃፍ ያገለግላሉ። ህፃኑ

ለመጨረሻ ግዜ መቼ እንደተመገበ መረጃ ከሌለ የህፃኑን አሳዳጊ መጠየቅ ይቻላል። የህፃኑን አሳዳጊ በሚከተሉት መልኩ መጠየቅ ይቻላል።

“ህፃኑን ለመጨረሻ ግዜ ስትመግቢው በግምት ስንት ሰዓት ነበር?”

“ልጅሽን ለመጨረሻ ግዜ ከመገባቸው በግምት ምን ያህል ሰዓታት ወይም ደቂቃዎች አልፈዋል?”

ከዚህ በተጨማሪ የህፃኑን አሳዳጊ ለመጨረሻ ግዜ መቼ እንደመገቡት ሊያስታውሰቸው የሚችሉ ነገሮች ካሉ እነሱን በመጠቀም ሰዓቱን እንዲያስታውሱ መርዳት ይቻላል። ለምሳሌ

“ህፃኑን ለመጨረሻ ግዜ የመገባቸው መድሃኒቱን ከመውሰዱ በፊት ነው ወይስ ከወሰደ በኋላ?”

ጥያቄ ቁጥር 308: ህፃኑ/ኗ ምግብ የሚወስደው /የምትወስደው በምን ዓይነት ዘዴ ነው?

ለዚህ ጥያቄ ከተዘረዘሩት አማራጮች ውስጥ ከአንድ በላይ መልሶች ሊኖሩት ይችላሉ።

ጥያቄ ቁጥር 309: ህፃኑ/ኗ መረጃ ከሚሰበሰብበት ቀን በፊት የገላ ለገላ ንክኪ ተደርጎለት/ላት ያውቃል?

ይህንን ጥያቄ የተመለከተ መረጃ የመረጃ ሰብሳቢው ከሌለው የህፃኑን እናት መጠየቅ ይቻላል። በሚጠየቅበትም ግዜ እንደሚከተለው ይነበባል፤

“ለልጅሽ ከዚህ በፊት አንቺ ወይም ሌላ ሰው የገላ ለገላ ንክኪ አድርጋችሁለት ታውቃላችሁ?”

ክፍል 2: የጨቅላ ህፃናት የህክምና መረጃ

ጥያቄ ቁጥር 310: ህፃኑ ከተወለደ ጀምሮ ለምን ያህል ግዜ በጤና ተቋማት ውስጥ ቆይቷል?

ይህ ጥያቄ ህፃኑ ከተወለደ በኋላ ለጥናቱ በተመረጡት ሆስፒታሎች ውስጥ ወይም በሌላ የጤና ተቋማት ውስጥ ለምን ያህል ግዜ (ቀናት/ሰዓታት) እንደቆዩ ለማወቅ የሚጠየቅ ጥያቄ ነው። ይህም ማለት ህፃኑ ለጥናት ወደተመረጡት ሆስፒታሎች ከመዘዋወሩ በፊት ሌላ የህክምና ተቋም ውስጥ የህክምና አገልግሎት አግኝቶ ከሆነ፣ ለጥናቱ በተመረጡት ሆስፒታሎች ውስጥ ከዚህ በፊት ህክምና አግኝቶ ከወጣ በኋላ በድጋሚ ተኝቶ ለመታከም ገብቶ ከሆነ ወይም ወደ ጤና ተቋማት ሲገባ ይኼኛው የመጀመሪያው ከሆነ እነዚህ ግዜያት ሁሉ በጠቅላላ መመዝገብ አለባቸው። ጥያቄውን ለመመለስ የህፃኑን የህክምና ካርድ መጠቀም ወይም የህክምና ካርዱ ላይ መረጃው ከሌለ የህፃኑን እናት መጠየቅ ይቻላል።

ጥያቄ ቁጥር 311: ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ሲመጣ/ስትመጣ ከሚከተሉት ምልክቶች አንዱን አሳይቶ/ታ ነበር?

ይህ ጥያቄ የሚጠየቀው ህፃናቱ ወደ ሆስፒታሉ ሲገቡ የነበራቸውን የጤንነት ሁኔታ ለማወቅ ሲሆን ለእያንዳንዱ አማራጭ መልስ ይከበብለታል።

ሀ. መተንፈስ ማቆም

ለ. በደቂቃ 40 ያነሰ የአተነፋፈስ ፍጥነት

ሐ. በደቂቃ 60 የበለጠ የአተነፋፈስ ፍጥነት

መ. በጎድን አጥንቶች መሃል የመሰርጎ ድምል ከትመፈጠር

ሠ. በደረት እና በሆድ መካከል የመሰርጎ ድምል ከትመፈጠር

ረ. ማቃሰት

ጥያቄ ቁጥር 312፡ ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባ/ች ጀምሮ በአክሲጅን ህክምና ተደርጎለት/ላት ነበር?

ይህ ጥያቄ የሚጠይቀው ህፃኑ አሁን ለጥናቱ የተመረጡት ሆስፒታሎች ውስጥ ለመታከም ከገባ በኋላ የአክሲጅን ህክምና ማግኘት እና አለማግኘቱን ነው። የጥያቄው መልስ “አዎ” ወይም “አልተደረገም” የሚሉ አማራጮች ያሉት ሲሆን የጥያቄው መልስ “አልተደረገም” ከሆነ ጥያቄ ቁጥር 313፣ 314 እና 315 ይዘለላሉ።

ጥያቄ ቁጥር 313፡ ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባ/ች ጀምሮ የአክሲጅን ህክምና የተሰጣው/ት በየትኛው ዓይነት አክሲጅን ነበር?

ይህ ጥያቄ ሶስት አማራጮች ያሉት ሲሆን ከአንድ በላይ መልስ ሊኖረው ይችላል። ነገር ግን ለህፃኑ የተሰጠው የአክሲጅን ህክምና ዓይነት ከተዘረዘሩት አማራጮች ውጪ ከሆነ የተሰጠው የአክሲጅን ህክምና ዓይነት ሌላ ካለ ይጠቀስ በሚለው ቦታ ላይ ይፃፋል።

ጥያቄ ቁጥር 314፡ ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባ/ች ጀምሮ በአክሲጅን ህክምና የተደረገላት ለምን ያህል ጊዜ ነበር?

በተቀመጡት ቦታዎች ላይ ተገቢው ጊዜ ይፃፍ።

ጥያቄ ቁጥር 315፡ መረጃ በሚሰበሰብበት ወቅት ህፃኑ/ኗ የኢንትራናዛል አክሲጅን ህክምና ላይ ነበር/ች?

ከሁለቱ ምርጫዎች አንዱ ይመረጥ።

ጥያቄ ቁጥር 316፡ መረጃው ከመሰብሰቡ በፊት ባሉት 24 ሰዓታት ውስጥ ለህፃኑ/ኗ የህመም ማስታገሻ መድሃኒቶች ተሰጥቶት/ቷዋት ነበር?

ከሶስቱ አማራጮች አንዱ ይመረጥ

ማስታወሻ፡ ይህ ጥያቄ የመረጃ መሰብሰብ ሂደቱ ከመጀመሩ ከ 24 ሰዓታት በፊት ለህፃናቱ የህመም ማስታገሻ መድሃኒቶች ተሰጥቷቸው ከነበር የሚጠይቅ መሆኑን ማስታወስ ያስፈልጋል። ይህም ማለት መረጃ የመሰብሰብ ሂደቱ የተከናወነው ከሰዓት ላይ ከነበረ ጥያቄው የሚጠይቀው የመረጃ መሰብሰብ ሂደቱ ከሚደረግበት ቀን ቀድሞ ካለው ቀን ከሰዓት ጀምሮ ተሰጥተው የነበሩ የህመም ማስታገሻ መድሃኒቶችን ነው። ለምሳሌ፡ የመረጃ መሰብሰቡ የሚከናወነው ቅዳሜ ከሰዓት 8:00

ሰዓት ላይ ከሆነ ጥያቄው የሚጠይቀው ከዓርብ ከሰዓት 8:00 ሰዓት ጀምሮ የተሰጡትን የህመም ማስታገሻ መድሃኒቶችን ነው፡፡

ጥያቄ ቁጥር 317፡ መረጃ የመሰብሰቡ ሂደት ከመጀመሩ በፊት በነበሩት 24 ሰዓታት ውስጥ በህፃኑ/ኗ ላይ የሚከተሉት ተግባራት ተሰርተው ነበር?

ይህ ጥያቄ የመረጃ መሰብሰብሂደቱ ከመጀመሩ በፊት ባሉት 24 ሰዓታት ውስጥ ህፃኑ ህመም ላላቸው ተግባራት ተጋልጦ እንደነበር ለማወቅ የሚጠየቅ ጥያቄ ነው፡፡ ጥያቄው ለእያንዳንዱ አማራጮች መመለስ ይኖርበታል፡፡ የሁሉም አማራጮች መልስ “አልተሰራም” ወይም “አይታወቅም” ከሆነ ጥያቄ ቁጥር 318 ይዘለላል፡፡

ጥያቄ ቁጥር 318፡ መረጃ የመሰብሰቡ ሂደት ከመጀመሩ በፊት በነበሩት 24 ሰዓታት ውስጥ የሚከተሉት ተግባራት በህፃኑ/ኗ ላይ ለስንት ጊዜ ተሰርተው ነበር?

ይህ ጥያቄ ህፃኑ በጥያቄ ቁጥር 317 ላይ ለተመረጡት ተግባራት ለስንት ጊዜ እንደተጋለጠ ለማወቅ የሚጠየቅ ጥያቄ ነው፡፡ ይህ ጥያቄ መመለስ የሚገባው በጥያቄ ቁጥር 317 ለተመረጠው ተግባር ብቻ ነው፡፡

ክፍል ሶስት፡ ፕላስተር የተነሳበት የሰውነት ክፍል

ጥያቄ ቁጥር 319፡ መረጃ በሚሰበሰብበት ወቅት ፕላስተር የተነሳው ከየትኛው የህፃኑ/ኗ የሰውነት ክፍል ላይ ነው?

ከተዘረዘሩት ስድስት አማራጮች ውስጥ አንዱ ብቻ ይመረጥ፡፡

ጥያቄ ቁጥር 320፡ መረጃው በሚሰበሰብበት ወቅት ፕላስተር የተነሳበት ምክንያት ምን ነበር?

ይህ ጥያቄ ከህፃናቱ ሰውነት ላይ ፕላስተሩን ለማንሳት ምክንያት ይሆናሉ ተብለው የሚታሰቡ አራት አማራጮችን የያዘ ሲሆን ፕላስተሩን ከህፃናቱ ሰውነት ላይ ማንሳት ለምን እንዳስፈለገ ለማወቅ የሚጠየቅ ጥያቄ ነው፡፡ ፕላስተሩ የተነሳው ፕላስተሩን ለማንሳት ምክንያት ሊሆኑ ይችላሉ ተብለው ከተዘረዘሩት አማራጮች ውጪ በሆነ ምክንያት ከሆነ ሌላ ይጠቀስ የሚለው ቦታ ላይ ምክንያቱ ይፃፍ፡፡

ጥያቄ ቁጥር 321፡ መረጃው በሚሰበሰብበት ወቅት ከህፃኑ/ኗ ሰውነት ላይ የተነሳው ፕላስተር ዓይነት የትኛው ነው?

ይህ ጥያቄ ሁለት አማራጮች ማለትም የወረቀት ፕላስተር እና የጨርቅ ፕላስተር የሚሉ ናቸው፡፡ ከሁለቱ ፕላስተር የተለየ ፕላስተር አገልግሎት ላይ ከዋለ ሌላ ካለ ይጠቀስ የሚለው ላይ የፕላስተሩ ዓይነት ይገለጻል፡፡

ክፍል 4፡ ከጊዜያቸው ቀድመው የተወለዱ ጨቅላ ህፃናት የህመም መለኪያ ቅጽ

ሂደት	ጠቋሚ	0	1	2	3	አጠቃላይ ውጤት
የህክምና ካርድ ማየት	የእርግዝና እድሜ	ከ36 ሳምንታት በላይ	32-35 ሳምንታት ከ 6ቀን	28-31 ሳምንታት ከ 6ቀናት	ከ28 ሳምንታት በታች	
ህፃኑን ለ 15 ሰከንዶች ማየት	የንቃትሁኔታ	ንቁ (ዓይኖች ተከፍተው በተጨማሪ የፊት እንቅስቃሴ ካለ)	በከፊል ንቁ (ዓይኖች ተከፍተው ነገር ግን የፊት እንቅስቃሴ ከሌለ)	ሸለብ ያለ እንቅልፍ (ዓይኖች ተከድነው ነገር ግን የፊት እንቅስቃሴ ካለ)	ጥልቅ እንቅልፍ (ዓይኖች ተከድነው በተጨማሪ የፊት እንቅስቃሴ ከሌለ)	
መነሻ ላይ የነበረውን የልብ ምት እና የአክሲኛን መጠን ለ 30 ሰከንዶች ማየት	የልብ ምት ከፍተኛ	በደቂቃ የ 0 ምት ጭማሪ	በደቂቃ ከ 5-15 ምት ጭማሪ	በደቂቃ ከ 15-24 ምት ጭማሪ	በደቂቃ ከ 25 ምት በላይ ጭማሪ	
	የአክሲኛን መጠን አነስተኛ	92-100 %	89-91%	88-85 %	< 85 %	
የህፃኑን የፊት እንቅስቃሴ ለ 30 ሰከንዶች ማየት	የግንባር መኮሳተር	የለም	አነስተኛ	መካከለኛ	ከፍተኛ	
	ዓይንን በሃይል መጨፈን	የለም	አነስተኛ	መካከለኛ	ከፍተኛ	
	ከአፍንጫ ወደ ከንፈር የሚሄድ ጎድጓዳ የእጥፋት ምልክት መፈጠር	የለም	አነስተኛ	መካከለኛ	ከፍተኛ	

የጨቅላ ህፃናት የህመም መለኪያ ቅጽ ሰባት ጠቋሚዎች ያሉት ሲሆን ፕላስተሩ ከመነሳቱ በፊት እና ከተነሳ በኋላ ህፃናቱ የሚኖራቸውን የህመም መጠን ለመለካት ያገለግላል። የህፃናቱ ህመም ፕላስተሩ ከመነሳቱ በፊት እና ከተነሳ በኋላ መለካት ይኖርበታል። የቅጹ አሞላል ቅደም ተከተል እንደሚከተለው ነው።

ሀ. የገላ ለገላ ንክኪ ቡድን የጨቅላ ህፃናት የህመም መለኪያ ቅጽ አሞላል ቅደም ተከተል

ይህ ቅደም ተከተል የገላ ለገላ ንክኪ ቡድን ውስጥ ለሚመደቡ ጨቅላ ህፃናት ያገለግላል።

1. በመጀመሪያ የህፃኑን የእርግዝና እድሜ ቅጽ ላይ ባሉት የቁጥር መለኪያዎች መሰረት ውጤት መስጠት
 - 0- ከ36 የእርግዝና ሳምንታት በኋላ ለተወለዱ ህፃናት
 - 1- በ 32 እና 35 ሳምንታት እና 6 ቀናት ባሉት የእርግዝና ሳምንታት መካከል ለተወለዱ ህፃናት
 - 2- በ 28 እና 31 እና ሳምንታት እና 6 ቀናት ባሉት የእርግዝና ሳምንታት መካከል ለተወለዱ ህፃናት
 - 3- ከ 28 የእርግዝና ሳምንታት በፊት ለተወለዱ ህፃናት (በጥናቱ ውስጥ የማይካተቱ)
2. የገላ ለገላ ንክኪው ተጀምሮ አስር ደቂቃ ሲሞላ የገላ ለገላ ንክኪ የምታደርገውን ሴት እንድትቀመጥ በማድረግ ፕላስተሩ ከመነሳቱ በፊት ከተራ ቁጥር 3-5 ያሉትን ተግባራት ማከናወን
3. የህፃኑን ፊት ለ 15 ሴኮንዶች በማየት ህፃኑ ያለበትን የንቃትሁኔታ መመዝገብ

በቅጹ ላይ የህፃኑን የንቃት ደረጃ ለማወቅ የሚረዱ አራት ደረጃዎች ሲኖሩ ልጁ እንዳለበት የንቃት ደረጃ ከ 0-3 ውጤት ይሰጣቸዋል።

 - 0- ንቁ(active awake)- የህፃኑ አይኖች ተከፍተው ፊቱ የሚንቀሳቀስ ከሆነ
 - 1- በከፊል ንቁ (quite awake)- የህፃኑ አይኖች ተከፍተው ፊቱ ላይ እንቅስቃሴ የማይታይ ከሆነ
 - 2- ሸለብ ያለ እንቅልፍ(active sleep)- የህፃኑ አይኖች ተዘግተው ፊቱ የሚንቀሳቀስ ከሆነ
 - 3- ጥልቅ እንቅልፍ(quite sleep)- የህፃኑ አይኖች ተዘግተው ፊታቸው ላይ ምንም አይነት እንቅስቃሴ የማይታይ ከሆነ
4. የህፃኑን ፊት ለ 30 ሴኮንዶች በማየት የፊቱን እንቅስቃሴዎች ለምን ያህል ሴኮንዶች እንደሚቆዩ በመገመት ውጤት መስጠት

በቅጹ ላይ የሚመዘገቡ ሶስት ዓይነት የፊት እንቅስቃሴዎች አሉ። እነርሱም የግንባር መኮሳተር፣ የዓይን በሃይል መጨፈን እና ከአፍንጫ ወደ ከንፈር የሚሄድ ጎድጓዳ የእጥፋት ምልክት መፈጠር ናቸው። እያንዳንዳቸው በሚቆዩበት ጊዜ ልክ 0-3 ውጤት ይሞላላቸዋል።የውጤቱም አሞላል በሚከተለው መልኩ ነው።

የግንባር መኮሳተር

- 0(የለም) - ህፃኑ ግንባሩን አኮሳትሮ የቆየው ከ3 ሴኮንዶች ላልበለጠ ጊዜ ከነበር
- 1 (አነስተኛ)-ህፃኑ ግንባሩን አኮሳትሮ የቆየው ከ3-10 ሴኮንዶች ከነበር
- 2(መካከለኛ) - ህፃኑ ግንባሩን አኮሳትሮ የቆየው ከ10-20 ሴኮንዶች ከነበር
- 3(ከፍተኛ) - ህፃኑ ግንባሩን አኮሳትሮ የቆየው ከ20 ሴኮንዶች በላይ ከነበር

ዓይነት በሃይል መጨፈን

- 0(የለም) - ህፃኑ ዓይኖቹን በሃይል ጨፍኖ የቆየው ከ3 ሴኮንዶች ላልበለጠ ጊዜ ከነበር
- 1 (አነስተኛ)-ህፃኑ ዓይኖቹን በሃይል ጨፍኖ የቆየው ከ3-10 ሴኮንዶች ከነበር
- 2(መካከለኛ) - ህፃኑ ዓይኖቹን በሃይል ጨፍኖ የቆየው ከ10-20 ሴኮንዶች ከነበር
- 3(ከፍተኛ) - ህፃኑ ዓይኖቹን በሃይል ጨፍኖ የቆየው ከ20 ሴኮንዶች በላይ ከነበር

ከአፍንጫ ወደ ከንፈር የሚሄድ ጎድጓዳ የእጥፋት ምልክት መፈጠር

- 0(የለም) - እጥፋቱ የቆየው ከ3 ሴኮንዶች ላልበለጠ ጊዜ ከነበር
- 1 (አነስተኛ)-እጥፋቱ የቆየው ከ3-10 ሴኮንዶች ከነበር
- 2(መካከለኛ) - እጥፋቱ የቆየው ከ10-20 ሴኮንዶች ከነበር
- 3(ከፍተኛ) - እጥፋቱ የቆየው ከ20 ሴኮንዶች በላይ ከነበር
- 5. ለጥናቱ ታስቦ የተዘጋጀውን ፕልስ አክሲሜትር በህፃኑ የእግር ጣት ላይ በማድረግ የልብ ምት ፍጥነትን እና የደም ውስጥ የአክሲጅን መጠንን መለካት፡፡ ፕላስተሩ ያለው በህፃኑ እግር ላይ ከሆነ ፕልስ አክሲሜትሩ ፕላስተሩ በሌለበት እግር ጣትበኩል መደረግ ይኖርበታል፡፡
- 6. ህፃኑ የገላ ለገላ ንክኪ ላይ እንዳለ ፕላስተሩን ማንሳት
- 7. ፕላስተሩ ተነስቶ እንዳለቀ በጨቅላ ህፃናት የምጽት ሁኔታ መለኪያ ቅጽ ላይለህፃናቱ የፊት እንቅስቃሴ፣ የልብ ምት ፍጥነት እና የደም ውስጥ የአክሲጅን መጠን ውጤት መመላት
- 8. ህፃኑ እንዳለበት የጤንነት ሁኔታ እና የገላ ለገላ ንክኪውን የምታደርገው ሴት የገላ ለገላ ንክኪውን ለመቀጥል እንደሚኖራት ፍላጎት የገላ ለገላ ንክኪው እንዲቀጥል ወይም እንዲቋረጥ ማድረግ

ለ. የማሞቂያ ቡድን የጨቅላ ህፃናት የህመም መለኪያ ቅጽ አሞላል ቅደም ተከተል

በዚህ ቡድን ውስጥ ለሚመደቡ ህፃናት ከተለመደው የህክምና አሰጣጥ ውጪ በጥናቱ የሚደረግ ጣልቃ ገብነት አይኖርም፡፡ የማሞቂያ ቡድን ውስጥ ለተመደቡት ህፃናት የጨቅላ ህፃናት የምጽት መለኪያ የሚሞላው የሚከተለውን ቅደም ተከተል በመከተል ሲሆን ከተራ ቁጥር 1-3 ያሉት ተግባራት ፕላስተሩ ከመነሳቱ በፊት ይከናወናሉ፡፡

1. ህፃኑ በማሞቂያ ውስጥ እንደተኛ የህፃኑን ፊት ለ 15 ሴኮንዶች በማየት ህፃኑ ያለበትን የንቃት ሁኔታ ከገላ ለገላ ንክኪ ቡድኖች ጋር ተመሳሳይ በሆነ መልኩ ውጤት መመላት
2. የህፃኑን ፊት ለ 30 ሴኮንዶች በማየት የፊቱን እንቅስቃሴዎች ለምን ያህል ጊዜ እንደሚቆዩ በማየት ከገላ ለገላ ንክኪ ቡድኖች ጋር ተመሳሳይ በሆነ መልኩ ውጤት መስጠት
3. ለጥናቱ ታስቦ የተዘጋጀውን ፕልስ አክሲሜትር በህፃኑ የእግር ጣት ላይ በማድረግ የልብ ምት ፍጥነትን እና የደም ውስጥ የአክሲጅን መጠንን መለካት፡፡ ፕላስተሩ ያለው በህፃኑ እግር ላይ ከሆነ ፕልስ አክሲሜትሩ ፕላስተሩ በሌለበት እግር ጣትበኩል መደረግ ይኖርበታል፡፡
4. ህፃኑ ማሞቂያ ውስጥ እንዳለ ፕላስተሩን ማንሳት

5. ፕላስቲክ ተነስቶ እንዳለቀ በጨቅላ ህፃናት የምሾት ሁኔታ መለኪያ ቅጽ ላይ ለህፃናቱ የፊት እንቅስቃሴ፣ የልብ ምት ፍጥናት እና የደም ውስጥ የአክሲጅን መጠን ውጤት መመላት



የግንባር መኮሳተር

ዓይንን በሃይል መጨፈን

ከአፍንጫ ወደ ከንፈር የሚሄድ
የአጥፋት ምልክት መፈጠር

ምስል 1: የጨቅላ ህፃናት የህመም መለኪያ ቅጽ የፊት እንቅስቃሴ ጠቋሚዎች

5. የመረጃ አሰባሰብ ቅደም ተከተል

1. የጥናቱን መስፈርት የሚያሟሟሉትን ጨቅላ ህፃናት መምረጥ-ፕላስተር ማንሳት በሚያስፈልግበት ጊዜ የጥናቱን መስፈርቶች የሚያሟሉ ህፃናትን መምረጥ
2. የጥናቱ ተሳታፊዎችን ፈቃድ ማግኘት-በጥናቱ ውስጥ የሚሳተፉ ህፃናት ከተለዩ በኋላ የህፃናቱን እናቶች በመጥራት የጥናቱ መረጃ ቅጽ ላይ ያሉትን መረጃዎች በማንበብ በጥናቱ ውስጥ እንዲሳተፉ ፍቃደኝነታቸው ይጠየቃል፡፡ በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ ከሆኑ በስምምነት መግለጫ ቅጹ ላይ እንዲፈርሙ ወይም የጣት አሻራቸውን እንዲያደርጉ ይደረጋል፡፡ በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ ካልሆኑ ደግሞ የህፃናቱን የመለያ ቁጥር በመመዝገብ የህክምና መረጃቸው እንዲመዘገብ ይደረጋል፡፡
3. ህፃኑን በጥናቱ ውስጥ ከሚገኙት ቡድኖች በአንዱ መመደብ-ህፃናቱን በጥናቱ ውስጥ ከሚገኙት ሁለት ቡድኖች በአንዱ ውስጥ የሚመድቡት የመረጃ መሰብሰብ ሂደቱን የሚከታተሉት የጥናቱ ተቆጣጣሪዎች ናቸው፡፡
4. የገላ ለገላ ንክኪ ቡድን ውስጥ ለመመደብ ህፃናት የገላ ለገላ ንክኪውን ማድረግ
5. የጥናቱን ተለዋዋጮች(variables) መለካት፡ በጥናቱ ውስጥ መረጃ ለመሰብሰብ የሚያገለግሉትን ቅፃዊ መጠቀም አስፈላጊውን መረጃ መመላት

6. መረጃ በመሰብሰብ ሂደት ውስጥ የሚሳተፉ ሰዎች ሃላፊነቶች

6.1. የመረጃ ሰብሳቢዎች ሃላፊነቶች

- መረጃ መሰብሰብ ከመጀመሩ በፊት አስፈላጊውን ስልጠና መውሰድ
- በጥናቱ መስፈርት መሰረት በጥናቱ ውስጥ የሚሳተፉ ህፃናትን መለየት
- ከጥናቱ ተሳታፊዎች ፈቃደኝነታቸውን መቀበል
- ህፃናቱን የገላ ለገላ ንክኪ ላይ ማድረግ
- የጥናቱ ተሳታፊዎችን መሰረታዊ መረጃዎች መመዝገብ
- የጨቅላ ህፃናትን የምችት መለኪያ ቅጹን መመላት

6.2. የጥናቱ ዋና አስተባባሪ ሃላፊነቶች

- የመረጃ መሰብሰብ ሂደቱን ማስተባበር
- አስፈላጊ የሆኑ ስልጠናዎችን ለመረጃ ሰብሳቢዎች እና ተቆጣጣሪዎች መስጠት
- ለጥናቱ አስፈላጊ የሆኑ እቃዎችን ማቅረብ
- የመረጃ መሰብሰብ ሂደቱን በየሁለት ቀን መቆጣጠር
- ለመረጃ ሰብሳቢዎች እና ተቆጣጣሪዎች አስፈላጊውን ድጋፍ መስጠት
- ከመረጃ ሰብሳቢዎች እና ከተቆጣጣሪዎች ጋር ባለው ስምምነት መሰረት ክፍያ መፈፀም
- የጥናቱን ውጤት ማሰራጨት

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የመረጃ መሰብሰቢያ ቅጾች

ቅጽ 1: የስምምነት መግለጫ ቅጽ

አዲስ አበባ ዩኒቨርሲቲ

የጤና ሳይንስ ኮሌጅ

የሕብረተሰብ ጤና አጠባበቅ ትምህርት ቤት

ሀ. የጥናት መረጃ ቅጽ

መግቢያ: ጤና ይስጥልኝ _____ እባለሁ:: የመወለጃ ጊዜያቸው ሳይደርስ በተወለዱ ጨቅላ ህፃናት ላይ እየተሰራ ላለ ጥናት መረጃ በመሰብሰብ ላይ እገኛለሁ:: ጥናቱ የሚደረገው በተለያዩ ምክንያቶች ከሰውነታቸው ላይ ፕላስተር ለሚነሳላቸው ህፃናት ነው:: የእርሶም ልጅ የተመረጠው/ችው በዚሁ ምክንያት ነው::

የጥናቱ ዓላማ: የዚህ ጥናት ዓላማ ከጊዜያቸው ቀድመው የተወለዱ ህፃናት ፕላስተር ከሰውነታቸው ላይ በሚነሳበት ወቅት ያለውን ህመም ለመለካት ነው::

የመረጃ መሰብሰቢያ ሒደት: በዚህ ጥናት ውስጥ ሁለት ቡድኖች ማለትም የገላ ለገላ ንክኪ ቡድን እና የማሞቂያ ቡድን አሉ:: ልጆች ከእነዚህ ሁለት ቡድኖች በአንዱ የሚመደቡ/የምትመደቡ ሲሆን ምደባውም የሚደረገው ሙሉ ለሙሉ በእድል ነው:: ልጆች የተመደበው/ችው በገላ ለገላ ንክኪ ቡድን ውስጥ ከሆነ ፕላስተሩ ከመነሳቱ ከአስር ደቂቃ አስቀድሞ ለልጆች የገላ ለገላ ንክኪ እንዲያደርጉለት/ላት ይጠየቃሉ:: ልጆች የተመደበው/ችው በማሞቂያ ቡድን ውስጥ ከሆነ ደግሞ ማሞቂያ ውስጥ እንዳለ/ች ጥናቱ ይደረጋል:: በዚህ ሁኔታ የተመደቡት የጤና ባለሙያዎች የልጆችን ፊት በማየት እና የእግር ጣታቸው ላይ በሚደረግ መሳሪያ በመጠቀም የምችት ሁኔታውን ይመዘግባሉ:: በተጨማሪም ልጆችን በተመለከተ አስፈላጊ መረጃዎች ከልጆች የህክምና ካርድ እና እርሶን በመጠየቅ እንዲመዘገቡ ይደረጋል::

መብት እና ምስጢራዊነት: በዚህ ጥናት ውስጥ ያለማንም አስገዳጅነት የመሳተፍ ወይም ያለመሳተፍ እንዲሁም ጥናቱ ውስጥ መሳተፍ ከጀመሩም በኋላ ምችት ካልተሰማዎት ወይም በሌላ በማንኛውም ምክንያት የማቋረጥ ሙሉ መብት አለዎት:: ይህንን በማድረግም ሆስፒታሉ ለልጆች የሚሰጠው ማንኛውም ዓይነት ህክምና አይቋረጥም:: በጥናቱ ውስጥ በመረጃ ሰብሳቢነት የሚሰሩት ሰዎች በጠቅላላ የሰለጠኑ የሆስፒታሉ የጤና ባለሙያዎች ሲሆኑ እርሶም የመረጃ መሰብሰብ ሂደቱ ተጀምሮ እስኪያልቅ ድረስ ከልጆች አጠገብ የመሆን መብት አለዎት:: ስለ ልጆች የሚወሰዱ ማንኛውም ዓይነት መረጃዎች በሙሉ በሚስጥራዊነት የሚጠበቅ ሲሆን ይህንንም ለማድረግ ሲባል የእርሶም ሆነ የልጆች ስም እንዳይመዘገብ ይደረጋል::

እስከ አሁን ስለጥናቱ በነገርኮት መረጃ ላይ ጥያቄ ካሎት እባኩትን ከመጠየቅ ወደ ኋላ አይበሉ:: እንዲሁም ጥናቱን የተመለከተ ተጨማሪ መረጃ ካስፈለጉት የጥናቱን አስተባባሪ በሚከተለው ስልክ ማግኘት ይችላሉ::

የጥናቱ አስተባባሪ: የምስራች በለጠ

ስልክ፡ 0910659371

ከላይ ስለጥናቱ በተነገሮት መረጃ መሰረት በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ ኖት?

ሀ. አዎ

ለ. አይደለሁም

መልሳቸው “አዎ” ከሆነ ወደ የስምምነት መግለጫ ቅጽ ቀጥሎ “አይደለም” ከሆነ ደግሞ ምክንያታቸውን ጠይቀሽ ከመዘገብሽ በኋላ ተገቢውን የህክምና አገልግሎት እንዲያገኙ አድርገዋል፡፡

ሊያስምምነት መግለጫ ቅጽ

የዚህ ጥናት ዓላማ እና ሂደት በሚገባኝ ቋንቋ ተነቦልኝ እና ተረድቼ በጥናቱ ውስጥ በፍቃደኝነት ለመሳተፍ ተስማምቻለሁ።

የሀፃኑ እናት ፊርማ_____

ቀን_____

ቅጽ 2:መለያ

የሆስፒታሉ መለያ ቁጥር	/___/___/
የጥናቱ ተሳታፊ መለያ ቁጥር	/___/___/___/
የቡድን መለያ ቁጥር	/___/___/
መረጃውን የሞላው/ችው ሰው ስም	_____
መረጃው የተሰበሰበበት ቀን(ቀን/ ወር/ ዓ.ም)	/___/___/___/
የተቆጣጣሪው/ዋ ስም	_____
ቁጥጥር የተደረገበት ቀን (ቀን/ ወር/ ዓ.ም)	/___/___/___/
የሆስፒታል መለያ ቁጥር 01- ጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል 02- ጋንዲ መታሰቢያ ሆስፒታል የቡድን መለያ ቁጥር 01- የገላ ለገላ ንክኪ ቡድን 02- የማሞቂያ ቡድን	

ቅጽ 3፡ የጥናቱ ተሳታፊዎችን የተመለከቱ መረጃዎች

ተ.ቁ	ጥያቄ	መልስ	ይዘለል
ክፍል አንድ፡የጨቅላ ህፃናትመሰረታዊ መረጃዎች			
301.	የታ	ወንድ.....1 ሴት.....2	
302.	የእርግዝና እድሜ	/_____/_____ ሳምንት ቀን	
303.	እድሜ	/_____/_____ ቀን ሰዓት	
304.	የአወላለድ ሁኔታ	በምጥ.....1 በመሳሪያ የታገዘ ምጥ.....2 በቀዶ ጥገና.....3	
305.	የአጥጋር ልኬት	የመጀመሪያው ደቂቃ ልኬት /_____/ የአምስተኛው ደቂቃ ልኬት /_____/	
306.	በውልደት ጊዜ የነበረው ክብደት	_____ ግራም	
307.	መረጃው በሚሰበሰብበት ወቅት ህፃኑ/ኗ ለመጨረሻ ጊዜ ምግብ ከተመገበ/ች ምን ያህል ጊዜ አልፎት/አልፏት ነበር?	/_____/_____ ሰዓት ደቂቃ	
308.	መረጃው በሚሰበሰብበት ቀን ላይ ህፃኑ/ኗ ምግብ የሚወስደው /የምትወስደው በምን ዓይነት ዘዴ ነበር ? (ከአንድ በላይ መልስ ሊኖረው ይችላል)	ጡት በመጥባት.....1 ኩባያ በመጠቀም2 የምግብ ትቦ በመጠቀም3 በደም ስር በሚሰጥ ፈሳሽ መልክ.....4	
309.	ህፃኑ/ኗ መረጃ ከሚሰበሰብበት ቀን በፊት የገላ ለገላ ንክኪ ተደርጎለት/ላት ያውቃል?	አዎ.....1 አልተደረገም.....2	
ክፍል ሁለት፡ የጨቅላ ህፃናት የህክምና መረጃ			
310.	ህፃኑ/ኗ ከተወለደ/ች ጀምሮ ለምን ያህል ጊዜ በጤና ተቋማት ውስጥ ቆይቷል/ቆይታለች?	/_____/_____ ቀን ሰዓት	
311.	ህፃኑ/ኗ ወደሆስፒታሉ ለመታከም ሲመጣ/ስትመጣክ ሚከተሉት ምልክቶች አንዱን አሳይቶ/ታነበር? ሀ. መተንፈስ ማቆም ለ. በደቂቃ ከ40 ያነሰ የአተነፋፈስ ፍጥነት ሐ. በደቂቃ ከ60 የበለጠ የአተነፋፈስ ፍጥነት መ. በጎድን አጥንቶች መሃል የመሰርጎድ ምልክት	ሀ. 1. አዎ 2. አልነበረም 3. አይታወቅም ለ. 1. አዎ 2. አልነበረም 3. አይታወቅም ሐ. 1. አዎ 2. አልነበረም 3. አይታወቅም	

	መፈጠር ሠ. በደረት እና በሆድ መካከል የመሰርጎድ ምልክት መፈጠር ረ. ማቃሰት	መ. 1. አዎ 2. አልነበረም 3. አይታወቅም ሠ. 1. አዎ 2. አልነበረም 3. አይታወቅም ረ. 1. አዎ 2. አልነበረም 3. አይታወቅም	
312.	ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባች ጀምሮ በአክሲጂን ህክምና ተደርጎለት/ላት ነበር?	አዎ.....1 አልነበረም.....2	→ 313-315
313.	ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባች ጀምሮ የአክሲጂን ህክምና የተደረገለት/ላት በየትኛው ዓይነት አክሲጂን ነበር? (ከአንድ በላይ መልስ ሊኖረው ይችላል)	በሲፕኦክፕ.....1 በፕሮግራም.....2 በኢንትራፍሃል.....3 ሌላ ካለ ይጠቀስ _____	
314.	ህፃኑ/ኗ ወደ ሆስፒታሉ ለመታከም ከገባች ጀምሮ በአክሲጂን ህክምና ያህል ጊዜ ህክምና ተደርጎለት/ላት ነበር?	/_____/_____ ቀን ሰዓት	
315.	መረጃ በሚሰጠውበት ወቅት ህፃኑ/ኗ የኢንትራፍሃል አክሲጂን ህክምና ላይ ነበር/ች?	አዎ.....1 አልነበረም..... 2	
316.	መረጃው ከመሰብሰቡ በፊት ባሉት 24 ሰዓታት ውስጥ ለህፃኑ/ኗ የህመም ማስታገሻ መድሃኒቶች ተሰጥቶት/ቷቸው ነበር?	አዎ.....1 አልተሰጠም.....2 አይታወቅም.....3	
317.	መረጃ የመሰብሰቡ ሂደት ከመጀመሩ በፊት በነበሩት 24 ሰዓታት ውስጥ በህፃኑ/ኗ ላይ የሚከተሉት ተግባራት ተሰርተው ነበር? ሀ. ከደም ስር የደም ናሙና መውሰድ ለ. በደም ስር መድሃኒት መስጠት ሐ. አይቪ ካኑላ ማስገባት መ. አይቪ ካኑላ ማውጣት ሠ. የምግብ ትቦ ማስገባት ረ. ከተረከዝ ላይ የደም ናሙና መውሰድ ሰ. ከጀርባ አጥንት ላይ ናሙና መውሰድ	ሀ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ለ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ሐ. 1. አዎ 2. አልተሰራም 3. አይታወቅም መ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ሠ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ረ. 1. አዎ 2. አልተሰራም 3. አይታወቅም ሰ. 1. አዎ 2. አልተሰራም 3. አይታወቅም	ለሁሉም አማራጮች መልሳቸው “አልተሰራም”/ “አይታወቅም” ከሆነ ጥያቄ ቁጥር 318 ይዘለል

	ሸ. የደም ቅያሪ ህክምና	ሸ. 1. አዎ 2. አልተሰራም 3. አይታወቅም	
318.	መረጃ የመሰብሰቡ ሂደት ከመጀመሩ በፊት በነበሩት 24 ሰዓታት ውስጥ በህፃኑ/ኗ ላይ የሚከተሉት ተግባራት ለምን ያህል ጊዜ ተሰርተው ነበር? ሀ. ከደም ስር የደም ናሙና መውሰድ ለ. በደም ስር መድሃኒት መስጠት ሐ. አይቪ ካኑላ ማስገባት መ. አይቪ ካኑላ ማውጣት ሠ. የምግብ ትቦ ማስገባት ረ. ከተረከዝ ላይ ደም መውሰድ ሰ. ከጀርባ አጥንት ላይ ናሙና መውሰድ ሸ. የደም ቅያሪ ህክምና (በጥያቄ ቁጥር 317 ላይ ለተመረጠው ተግባር ብቻ ይሞላ)	ሀ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ለ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሐ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ መ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሠ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ረ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሰ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ ሸ. 1. አንድ ጊዜ 2. ከአንድ ጊዜ በላይ	
ክፍል ሶስት፡ ምቹት የሚነሳውን ተግባር የተመለከተ መረጃ			
319.	መረጃው በሚሰበሰቡበት ወቅት ፕላስተር የተነሳው ከየትኛው የህፃኑ/ኗ የሰውነት ክፍል ላይ ነው?	ከጭንቅላት.....1 ከፊት.....2 ከሆድ.....3 ከእጅ.....4 ከእግር5 ከጀርባ.....6 ሌላ ካለ ይጠቀስ_____	
320.	መረጃው በሚሰበሰቡበት ወቅት ፕላስተር የተነሳበት ምክንያት ምን ነበር?	አይቪ ካኑላ ለመቀየር.....1 የምግብ ትቦ ለማውጣት.....2 የአክሲጂን ትቦ ለማውጣት.....3 ህፃኑ እንዳይደማ የተለጠፈ ፕላስተርን ለማንሳት.....4 ሌላ ካለ ይጠቀስ_____	

321.	መረጃ በሚሰበሰብበት ወቅት ከህፃኑ/ኗ ሰውነት ላይ የተነሳው የፕላስቲክ ዓይነት የትኛው ነው?	የወረቀት ፕላስቲክ.....1 የጨርቅ ፕላስቲክ.....2 ሌላ ካለ ይጠቀስ_____	
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ቅጽ 4፡ የጨቅላ ህፃናት የህመም መለኪያ ቅጽ

2.1. ፕላስተር ከመነሳቱ በፊት የነበረው የጨቅላ ህፃናት የምችት ሁኔታ ልኬት

ሂደት	ጠቋሚ	0	1	2	3	አጠቃላይ ውጤት
የህክምና ካርድ ማየት	የእርግዝና እድሜ	ከ36 ሳምንታት በላይ	32-35 ሳምንታት ከ 6ቀን	28-31 ሳምንታት ከ 6ቀናት	ከ28 ሳምንታት በታች ¹	
ህፃኑን ለ 15 ሴኮንዶች ማየት	የንቃት ሁኔታ	ንቁ (ዓይኖች ተከፍተው በተጨማሪ የፊት እንቅስቃሴ ካለ)	በከፊል ንቁ (ዓይኖች ተከፍተው ነገር ግን የፊት እንቅስቃሴ ከሌለ)	ሸለብ ያለ እንቅልፍ (ዓይኖች ተከድነው ነገር ግን የፊት እንቅስቃሴ ካለ)	ጥልቅ እንቅልፍ (ዓይኖች ተከድነው በተጨማሪ የፊት እንቅስቃሴ ከሌለ)	
የህፃኑን የፊት እንቅስቃሴ ለ 30 ሴኮንዶች በማየት የፊቱ እንቅስቃሴዎች ለምን ያህል ሴኮንዶች እንደቆዩ መገመት	የግንባር መኮሳተር	የለም (፣ 3 ሴኮ)	አነስተኛ (3-10 ሴኮ)	መካከለኛ (10-20 ሴኮ)	ከፍተኛ (፡20 ሴኮ)	
	ዓይንን በሃይል መጨፈን	የለም (፣ 3 ሴኮ)	አነስተኛ (3-10 ሴኮ)	መካከለኛ (10-20 ሴኮ)	ከፍተኛ (፡20 ሴኮ)	
	ከአፍንጫ ወደ ከንፈር የሚሄድ ጎድጓዳ የእጥፋት ምልክት መፈጠር	የለም (፣ 3 ሴኮ)	አነስተኛ (3-10 ሴኮ)	መካከለኛ (10-20 ሴኮ)	ከፍተኛ (፡20 ሴኮ)	
የልብ ምት ፍጥነት	_____					
የደም ውስጥ አክሲጅን መጠን	_____					

¹ በጥናቱ ውስጥ የማይካተቱ

2.2. ፕላስተኛ ተነስቶ እንዳለቀ የነበረው የጨቅላ ህፃናት የህመም ሁኔታ ልኬት

ሂደት	ጠቋሚ	0	1	2	3	አጠቃላይ ውጤት
የህፃኑን የፊት እንቅስቃሴ ለ 30 ሴኮንዶች በማየት የፊቱ እንቅስቃሴዎች ለምን ያህል ሴኮንዶች እንደቆዩ መገመት	የግንባር መኮላተር ዓይንን በሃይል መጨፈን ከአፍንጫ ወደ ከንፈር የሚሄድ ጎድጓዳ የእጥፋት ምልክት መፈጠር	የለም (፣ 3 ሴኮ)	አነስተኛ (3-10 ሴኮ)	መካከለኛ (10-20 ሴኮ)	ከፍተኛ (፡20 ሴኮ)	
የልብ ምት ፍጥነት/በደቂቃ	_____					
የደም ውስጥ አክሲጅን መጠን	_____					

Annex IV: Training manual for supervisors (Amharic version)



አዲስ አበባ ዩኒቨርሲቲ

የጤና ሳይንስ ኮሌጅ

የሕብረተሰብ ጤና አጠባበቅ ትምህርት ቤት

የመረጃ መስብሰብ ሂደት ተቆጣጣሪዎች የስልጠና ማኑዋል

የጥናቱ አስተባባሪ-የምስራች በለጠ

የጥናቱ አማካሪዎች- አብይ ሰይፉ (B.Sc, MPH)

ዶ/ር ውብእዜር መኮንን (B.Sc, MA, PHD)

ዶ/ር አስራት ድምፄ (MD, Neonatologist)

**ሚያዝያ 2010 ዓ.ም
አዲስ አበባ፤ ኢትዮጵያ**

1. የስልጠናው ዓላማ

የዚህ ስልጠና ዓላማዎች የሚከተሉት ናቸው፤

- ለጥናቱ ተቆጣጣሪዎች ስለጥናቱ አጠቃላይ የሆነ መረጃ መስጠት
- ለጥናቱ ተቆጣጣሪዎች በጥናቱ ውስጥ የሚደረገውን ክትትል ዓላማ ለማስገንዘብ
- ለጥናቱ ተቆጣጣሪዎች በጥናቱ ውስጥ ክትትል ሊደረግባቸው ስለሚገቡ ሂደቶች ማብራሪያ ለመስጠት
- በጥናቱ ውስጥ የተቆጣጣሪዎችን እና የጥናቱን አስተባባሪ ሃላፊነቶች ለማብራራት

2. የስልጠናው ዘዴ

- አሳታፊ አቀራረብ
- የቡድን ውይይት

3. የስልጠናው የጊዜ ሰንጠረዥ

መግቢያ	1ቀን
በጥናቱ ውስጥ ስለሚኖረው ክትትል ማብራሪያ መስጠት	1 ቀን
▪ በጥናቱ ውስጥ ቁጥጥር ሊደረግባቸው የሚገቡ ሂደቶችን ማብራራት	2-3 ሰዓት
▪ መረጃ በመሰብሰብ ሂደት ውስጥ የሚሳተፉ ሰዎችን ሃላፊነት ማብራራት	30-40 ደቂቃ
▪ የተግባር ልምምድ	3 ቀን
በስልጠናው መጨረሻ ላይ ከተቆጣጣሪዎች ጋር የሚደረግ ውይይት	30 ደቂቃ

1. መግቢያ

እንደ የዓለም ጤና ድርጅት ትርጉም ከሰላሳ ሰባት የእርግዝና ሳምንታት በፊት የተወለዱ ህፃናት ከመወለጃ ጊዜያቸው ቀድሞ የተወለዱ ጨቅላ ህፃናት ይባላሉ። በየዓመቱ እስከ 15 ሚሊዮን የሚደርሱ ህፃናት መወለድ ከነበረባቸው ጊዜ ቀድመው ይወለዳሉ። ከመወለጃ ጊዜ ቀድሞ መወለድ ጨቅላ ህፃናት ለሚያጋጥማቸው ሞት እና የረጅም ጊዜ ችግር ዋነኛ ምክንያት ሲሆን የጨቅላ ህፃናት ከሚያጋጥማቸው ሞት በአጠቃላይ ለ35 በመቶው ምክንያት ነው። በተጨማሪ እድሜያቸው ከአምስት አመት በታች በሆኑ ህፃናት ላይ በብዛት ሞት ከሚያስከትሉ መንስኤዎች ውስጥ ከሳንባ ምች በመቀጠል ሁለተኛው ነው።

ኢትዮጵያ በዓለም ላይ ከፍተኛ የጨቅላ ህፃናት ሞት ካለባቸው ሀገራት መካከል አንዷ ናት። ምንም እንኳን ሀገሪቱ ስለህፃናት ሞት የተመለከተውን የምዕተ ዓመቱን የልማት ግብ ከሶስት ዓመት በፊት ቀድሞ ማሳካት ብትችልም የጨቅላ ህፃናት ሞት ቅነሳ ለግቡ መሳካት የነበረው አስተዋፆ አነስተኛ ነበር። በ2009ዓ.ም ይፋ የሆነው የኢትዮጵያ የስነህዝብ እና የጤና የዳሰሳ ጥናትም ባለፉት 16 ዓመታት በሀገሪቱ ውስጥ የነበረው የጨቅላ ህፃናት ሞት ቅነሳ አጥጋቢ እንዳልነበር ያሳያል።

የገላ ለገላ ንክኪ ለመጀመሪያ ጊዜ ጥቅም ላይ የዋለው በኮሎምቢያ ቦጎታ ነው። የገላ ለገላ ንክኪ በውስጡ በእናት እና በተወለደው ጨቅላ ህፃን የሚደረግ ረጅም እና ያልተቆራረጠ የቆዳ ለቆዳ ንክኪ እንዲሁም ተደጋጋሚ የሆነ ጡት ማጥባትን ይይዛል። የገላ ለገላ ንክኪ የተደራጀ የጨቅላ ህፃናት የከፍተኛ ህክምና ክትትል ክፍል በሌሉባቸው ሀገራት ውስጥ ከጊዜያቸው ቀድመው ለሚወለዱ ጨቅላ ህፃናት ከፍተኛ ጥቅም ያለው አገልግሎት ነው። እ.ኤ.አ በ2015 የዓለም የጤና ድርጅት በሚወለዱበት ጊዜ 2000 ግራም እና ከዛ በታች ክብደት ያላቸው ጨቅላ ህፃናት ቀጣይነት ያለው የገላ ለገላ ንክኪ እንዲያገኙ መከራከል።

በኢትዮጵያ ጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል እ.ኤ.አ በ1996 የገላ ለገላ ንክኪ አገልግሎትን መስጠት የጀመረ ሲሆን በመቀጠልም አገልግሎቱ በሀገሪቱ ወደ ሚገኙ ሰባት የማስተማሪያ ሆስፒታሎች ተስፋፋ። እ.ኤ.አ በ2015 የሀገሪቱ የጨቅላ ህፃናት እና ህፃናት ሞት ቅነሳ ስትራቴጂ እ.ኤ.አ በ2020 የገላ ለገላ ንክኪ ሽፋንን ከሚገኝበት 10 በመቶ ወደ 90 በመቶ ለማድረስ እቅድ ይዟል። ይሁን እንጂ በኢትዮጵያ የገላ ለገላ ንክኪ ሙቀት ከመስጠት ባለፈ ለህፃናቱ የሚሰጠው ጥቅሞች ላይ ብዙ ምርምሮች አልተሰሩም። የአሁኑ ጥናት የገላ ለገላ ንክኪ ለጨቅላ ህፃናት የሚሰጠውን ምቹት ለማወቅ ይረዳ ዘንድ የታቀደ ነው።

1.1. የጥናቱ ዓይነት (study design)

የዚህ ጥናት ዓይነት randomized controlled trial (RCT) ነው። ይህ የጥናት ዓይነት ጥቅም ላይ የሚውለው የተለያዩ ሳይንሳዊ መለኪያዎች በአውነተኛው ዓለም ላይ ሲተገቡ የሚኖራቸውን ውጤት ከተለመደው የጤና አገልግሎት ጋር በማወዳደር የጤና አገልግሎቱ እንዲቀየር፣ እንዲሻሻል ወይም ባለበት እንዲቀጥል ለመወሰን የሚያስችሉ የጥናት ውጤቶችን ለማስገኘት ነው።

በዚህ የጥናት ዓይነት ውስጥ ጥናቱን በሚያደርገው ሰው በቡድን ተከፍለው ሆኑ ተብለው የሚደረጉ የተለያዩ ጣልቃ ገብነቶች (interventions) ሲኖሩ በጥናቱ ውስጥ ለመሳተፍ የሚመረጡት ተሳታፊዎች ወደ እነዚህ ቡድኖች ሙሉ በሙሉ የሚመደቡት በዕድል ነው፡፡

1.2. የጥናቱ ተሳታፊዎች

በዚህ ጥናት ውስጥ የሚሳተፉት ከሚያዚያ 2010 ዓ.ም እስከ ሰኔ 2010 ዓ.ም ባሉት ወራት ውስጥ ከ 28 እስከ 36 ባሉት ሙሉ የእርግዝና ሳምንታት ውስጥተወልደው በጥቁር አንበሳ ስፔሻላይዝድ ሆስፒታል እና ቢጋንዲ መታሰቢያ ሆስፒታል ውስጥ ተኝተው ለመታከም የገቡ ከጊዜያቸው ቀድመው የተወለዱ ጨቅላ ህፃናት ናቸው፡፡

1.3. የጥናቱ ተሳታፊዎች ሊያሟሏቸው የሚገቡ መስፈርቶች

ከላይ በተጠቀሰው የጊዜ ገደብ ውስጥ ወደ ሁለቱ ሆስፒታሎች የሚገቡት ጨቅላ ህፃናት ሁሉ የዚህ ጥናት እጩ ተሳታፊዎች ቢሆኑም በጥናቱ ውስጥ ለመሳተፍ የሚችሉት ግን የሚከተለውን መስፈርት ያሟሉ ጨቅላ ህፃናት ብቻ ናቸው፤

- ከ 28 እስከ 36 ባሉት ሙሉ የእርግዝና ሳምንታት መካከል የተወለዱ
- መረጃው በሚሰበሰብበት ወቅት የሲፕኦር ወይም ፕሮግ የአክሲድን ህክምና ላይ ያልሆኑ
- እናቶቻቸው በጥናቱ ውስጥ ለመሳተፍ ፍቃዳቸውን መስጠት እና የገላ ለገላ ንክኪ ማድረግ የሚችሉ

1.3.1. በጥናቱ ውስጥ የማይሳተፉ ህፃናት

- ከሰውነታቸው ላይ ፕላስቲክ መነሳት የማያስፈልጋቸው ህፃናት
- በምርመራ የተረጋገጠ የጭንቅላት ውስጥ ደም መፍሰስ ያላጋጠማቸው
- በምርመራ የተረጋገጠ ወይም በዓይን የሚታይ አብሮ የተወለደ በሽታ ወይም የነርቭ ችግር ያለባቸው
- መረጃ ከመሰብሰቡ በፊት ቀደም የቀዶ ጥገና ህክምና የተደረገላቸው
- መረጃው በሚሰበሰብበት ወቅት ቀጣይነት ያለው (continuous type of KMC) የገላ ለገላ ንክኪ የጀመሩ

1.4. የጥናቱ ጣልቃ ገብነት (intervention of the study)

በዚህ ጥናት ውስጥ እንደ ጣልቃ ገብነት የሚያገለግለው የገላ ለገላ ንክኪ ወይም የካንጋሮ እናት የአያያዝ ዘዴ ነው፡፡ በጥናቱ ውስጥ በጨቅላ ህፃናት ከፍተኛ ህክምና ከትትል ክፍል ውስጥ ተኝተው ለሚታከሙ ጨቅላ ህፃናት በማሞቂያ ውስጥ ከሚሰጠው ህክምና በተለየ መልኩ ፕላስቲክ ከመነሳቱ ከአስር ደቂቃዎች አስቀድሞ እና በሚነሳበት ጊዜ የገላ ለገላ ንክኪ ላይ እንዲሆኑ ይደረጋል፡፡

1.5. የጥናቱ የስነምግባር ሁኔታ

ይህ ጥናት የሚደረገው ከአዲስ አበባ ዩኒቨርሲቲ የሕብረተሰብ ጤና አጠባበቅ ት/ቤት እና ከአዲስ አበባ ጤና ቢሮ የጥናት እና ምርምር ስነምግባር ኮሚቴ ፍቃድ ካገኘ በኋላ ነው፡፡ በተጨማሪም ከጥቁር አንበሳ ስፔሻላይዝድ እና ከጋንዲ መታሰቢያ ሆስፒታሎች የህፃናት ህክምና ክፍል ጥናቱ እንዲካሄድ ፈቃድ አግኝቷል፡፡ የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ የሚሳተፉት ያለ ማንም አስገዳጅነት በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ መሆናቸውን በፈርማቸው ካረጋገጡ ብቻ ነው፡፡ በጥናቱ ውስጥ እንዲሳተፉ የተመረጡ ሰዎች በጥናቱ ውስጥ መሳተፍ ባይፈልጉ ወይም መሳተፍ ከጀመሩ በኋላ በተለያየ

ምክንያት በጥናቱ መሳተፋቸውን ቢያቋርጡ ሆስፒታሎች ለልጆቻቸውም ሆነ ለእነርሱ የሚሰጡት የህክምና አገልግሎት በፍጹም አይቋረጥም። በተጨማሪም የጨቅላ ህፃናቶች ከአድሎ በፀዳ መልኩ በጥናቱ ቡድኖች ውስጥ መመደብ እንዲችሉ የእድል ቁጥሮች ጥቅም ላይ ይውላሉ። ከህፃናቱ ሰውነት ላይ ጥላስተሩ የሚነሳው እንደ አንድ የተለመደ የህክምና አገልግሎት ነው እንጂ ለጥናቱ ዓላማ የታሰበ አይደለም። የገላ ለገላ ንክኪ ለህፃናቱ ጤንነት ጠቃሚ እና አስፈላጊ ሲሆን ለጥናቱ በተመረጡት ሆስፒታሎች ውስጥም እንደ አንድ መደበኛ የጤና አገልግሎት በእናቶችም ሆነ በሌሎች ሴቶች አማካኝነት ይሰጣል። በዚህ ጥናት ውስጥ መረጃ ለመሰብሰብ የተመረጡት ሰዎች በጠቅላላ ለገላ ለገላ ንክኪ ስልጠና የወሰዱ እና ጨቅላ ህፃናትንም በሚገባ መያዝ የሚችሉ የጤና ባለሙያዎች ናቸው። በዚህ ጥናት ውስጥ የገላ ለገላ ንክኪ በማድረግ የሚሳተፉትን እናቶችን ግላዊነት ለመጠበቅ ሲባል የዚህ ጥናት መረጃ ሰብሳቢዎች በዋነኝነት ሴት የጤና ባለሙያዎች እንዲሆኑ ይደረጋል። በዚህ ጥናት ውስጥ የሚሳተፉ ጨቅላ ህፃናት የህክምና መረጃ እንዲመዘገብ ቢደረግም ነገርግን የመረጃዎቹን ምስጢራዊነት ለመጠበቅ ሲባል የተሳታፊዎቹ ስም እንዳይመዘገብ ይደረጋል።

2. መረጃውን ለመሰብሰብ የሚያስፈልጉ ዶክመንቶች እና መሳሪያዎች

የዚህን ጥናት መረጃ ለመሰብሰብ የሚያስፈልጉ ዶክመንቶች እና መሳሪያዎች የሚከተሉት ናቸው

- የመጠይቅ ቅፅ
- ፐልስ አክሲሜትር (pulse oximeter)
- የእድል ቁጥሮች (randomization numbers)
- ሰዓቶች
- እክሲቢርቶዎች
- እርሳሶች

የጥናቱ ዋና ተመራማሪ እነዚህን መሳሪያዎች ለጥናቱ ተቆጣጣሪዎች የምታስረክብ ሲሆን ተቆጣጣሪዎች መሳሪያዎቹን ባስፈለጉ ጊዜ ለመረጃ ሰብሳቢዎች በአግባቡ ያስረክባሉ።

3. የመረጃ መሰብሰብ ሂደት ቁጥጥር አስፈላጊነት እና ዓላማ

እያንዳንዱ ጥናት እና ምርምር በሚደረግበት ወቅት የራሱ የሆኑ ግቦች እና ዓላማዎች ይኖሩታል። ነገር ግን ጥናቱ ምንም ያህል ቢታቀድ እና ጠንካራ የሆኑ ሳይንሳዊ ሀሳቦችን ይዞ ቢነሳም ከእያንዳንዱ የጥናቱ ተሳታፊ ጥራት ያለው መረጃ እስከ አልተሰበሰበ ድረስ ጥናቱ የሚኖረው ጥቅም እና ተአማኝነት አናሳ ነው። የመረጃ ጥራት በተለይም የተለያዩ ሳይንሳዊ ሀሳቦችን ይዞ በመነሳት በሙከራ ለማረጋገጥ ለሚሰሩ ጥናቶች ዋነኛው የጥናቱ አካል ነው። የዚህ ጥናት ዓላማ ጥናቱ በሚደረግበቸው ሆስፒታሎች ውስጥ የሚሰጠውን የጤና አገልግሎት ጥራት ወይም በሆስፒታሎቹ ውስጥ የሚሰሩትን ባለሙያዎች የብቃት ደረጃ ለመመዘን አይደለም። በዚህ ጥናት ውስጥ የስልጠናውም ሆነ በየቀኑ የሚደረጉት ክትትሎች እና የማስተካከያ እርምጃዎች በሙሉ ዓላማቸው ሁሉም ለጥናቱ የተመረጡ ህፃናት ተመሳሳይ የሆነ አገልግሎት እንዲያገኙ እና የጥናቱም ውጤት ተመሳሳይ በሆነ መልኩ እንዲለካ ለማስቻል ነው። ይህም በጥናቱ መጨረሻ ላይ ስለ ጥናቱ ይዞ በተነሳው ሀሳብ ላይ ለሚሰጠው መደምደሚያ ከፍተኛ የሆነ አስተዋፅኦ ይኖረዋል። በአጠቃላይ በዚህ ጥናት ውስጥ የሚደረግ ክትትል ዓላማዎች የሚከተሉት ናቸው፤

- በገላ ለገላ ንክኪ ቡድኖች ውስጥ የሚሳተፉ ሁሉም ህፃናት ተመሳሳይ በሆነ መልኩ የገላ ለገላ ንክኪ ማድረጋቸውን ለማረጋገጥ
- የጥናቱ ተለዋዋጮች (variables) ተመሳሳይ በሆነ መልኩ መለካታቸውን ለማረጋገጥ
- በእውነተኛው ዓለም ለመተግበር አስቸጋሪ የሆኑትን የጥናቱን ይዘቶች ለይቶ ለማውጣት
- የጥናቱ ተሳታፊዎች የጎንዮሽ ጉዳት ካጋጠማቸው ለማወቅ እና አስቸኳይ የሆነ የህክምና እርዳታ እንዲያገኙ ለማድረግ

4. መረጃ በሚሰበሰብበት ጊዜ ቁጥጥር ሊደረግባቸው የሚገቡ ሂደቶች

በዚህ ጥናት ውስጥ በተቆጣጣሪዎች ትኩረት ተሰጥቷቸው ቁጥጥር ሊደረግባቸው ከሚገቡ ሂደቶች መሃል የሚከተሉት ዋናዎቹ ናቸው፡፡

- የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ ወደ አሉት የጥናት ቡድኖች የሚመደቡበት ሂደት (randomization and allocation concealment)
- የጥናቱ ጣልቃ ገብነት ይዘቶች
- የህፃናት ምጽት መለኪያ ቅጽን የመሙላት ሂደት
- የጥናቱ ጣልቃ ገብነት በጨቅላ ህፃናቱ ላይሊያስከትለው የሚችለው የጎንዮሽ ጉዳት

የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ ወደ አሉት የጥናት ቡድኖች የሚመደቡበት ሂደት (randomization and allocation concealment)

ይህን ጥናት ከሌሎች ጥናቶች ከሚለዩት ነገሮች አንዱ የዚህን ጥናት መስፈርት ያሟሉ ጨቅላ ህፃናት በጥናቱ ውስጥ ካሉት ሁለት ቡድኖች በአንዱ ውስጥ የሚመደቡት ሙሉ በሙሉ በእድል በመሆኑ ነው፡፡ ይህም ማለት ህፃናቱ ከሁለቱ ቡድኖች በአንዱ ለመመደብ እኩል እድል አላቸው ማለት ነው፡፡ በዚህ ጥናት ውስጥ ይህንን ለማድረግ በኮምፒውተር ሶፍትዌር አማካኝነት የተዘጋጁ የእድል ቁጥሮች አገልግሎት ላይ ይውላሉ፡፡ ቁጥሮቹ በጥናቱ ውስጥ የሚሳተፉ እያንዳንዱ ህፃን በየትኛው ቡድን ውስጥ መሳተፍ እንዳለበት አድሎ በሌለበት መልኩ ለመወሰን የሚያገለግሉ ናቸው፡፡ እነዚህ ቁጥሮች ከተዘጋጁ በኋላ በማያሳዩ እና ቅደም ተከተሉን በጠበቀ መልኩ ቁጥር በተፃፈባቸው ፖስታዎች ውስጥ ታሽገው ተቀምጠዋል፡፡ የመረጃ መሰብሰብ ሂደት በሚጀመርበት ጊዜ ፖስታዎቹ ለጥናቱ ተቆጣጣሪዎች የሚሰጡ ሲሆን የጥናቱ ተቆጣጣሪዎችም ፖስታዎቹ ሰው በቀላሉ ሊያገኛቸው በማይችልበት ቦታ ማስቀመጥ ይኖርባቸዋል፡፡ የመረጃ ሰብሳቢዎች የጥናቱን መስፈርት የሚያሟሉ ህፃናትን ባሳወቁ ጊዜ ህፃናቱ በየትኛው ቡድን ውስጥ መመደብ እንዳለባቸው የማሳወቅ ሀላፊነት የተቆጣጣሪዎች ይሆናል፡፡

እነዚህ ፖስታዎች ለጥናቱ የተመረጡት ህፃናት እናቶች በጥናቱ ውስጥ ለመሳተፍ ፍቃደኛ መሆናቸውን እስኪያሳውቁ ድረስ በፍፁም መከፈት የለባቸውም፡፡ አንዲት እናት በጥናቱ ውስጥ ለመሳተፍ ስትስማማ ብቻ የታሸጉት ፖስታዎችን የቁጥር ቅደም ተከተል በመከተል እንዲከፈቱ ይደረጋል፡፡ የጥናቱ ተሳታፊዎች በጥናቱ ውስጥ ለመሳተፍ ስምምነታቸውን ከመግለፃቸው በፊት የጥናቱ መረጃ ሰብሳቢዎች፣ተቆጣጣሪዎችም ሆኑ የጥናቱ አስተባባሪ ህፃናቱ በየትኛው ቡድን መመደብ

እንዳለባቸው በፍጹም ማወቅ የለባቸውም፡፡ በተጨማሪም ፖስታዎቹ የቁጥር ቅደም ተከተላቸውን ባልጠበቀ መልኩ መከፈት የለባቸውም፡፡

4.2. የጥናቱ ጣልቃ ገብነት ይዘቶች

ከላይ ለመጥቀስ እንደተሞከረው በዚህ ጥናት ውስጥ እንደ ጣልቃ ገብነት የሚወሰደው ፕላስተር ከመነሳቱ በፊት እና በሚነሳበት ጊዜ ለህፃናቱ የሚደረግላቸው የገላ ለገላ ንክኪ ነው፡፡ የህፃናቱ እናቶች ለጥናቱ ሲባል ፕላስተር ከመነሳቱ በፊት ለአስር ደቂቃ እና በሚነሳበት ወቅት የገላ ለገላ ንክኪ ያደርጉላቸዋል፡፡ በጥናቱ ፕሮቶኮል መሰረት ለህፃናቱ የገላ ለገላ ንክኪው በዋነኝነት የሚደረገው የአለም የጤና ድርጅት ያወጣውን የገላ ለገላ ንክኪ አደራረግ ቅደም ተከተል መሰረት አድርጎ ይሆናል፡፡

4.2.1 የገላ ለገላ ንክኪ ቡድን የገላ ለገላ ንክኪ አደራረግ ይዘቶች

1. ህፃኑን ኮፍያ፣ ካልሲ እና ዳይፐር ብቻ ማልበስ
 2. ህፃኑ ቀጥ እንዳለ የህፃኑ እናት ጡቶች መሃል በማድረግ ቆዳ ለቆዳ እንዲነካኩ ማድረግ
 3. ህፃኑ እንዳይወድቅ በእናቱ ደረት መደገፍ
 4. የህፃኑን ጭንቅላት ከእናቱ ጋር አይን ለአይን መተያየት በሚችሉበት መጠን ቀና እንዲል ማድረግ
 5. የህፃኑ ጭኖችን ከፊት ብለው እንዲታጠፉ በማድረግ “የእንቁራሪት ዓይነት” አቀማመጥ እንዲኖረው ማድረግ
 6. የህፃኑ እጆች እንዲታጠፉ ማድረግ
 7. የህፃኑ ሆድ ከእናቱ የላይኛው የሆድ ክፍል ጋር እንዲነካካ ማድረግ
 8. የህፃኑ እናት ህፃኑን በእጆቿ ደገፍ እንድታደርገው ማድረግ
 9. ህፃኑን በነጠላ፣ በሽማ ወይም በሌላ ልብስ ከእናቱ ጋር አብሮመጠቅለል
 10. የልብሱ የላይኛው ክፍል ከህፃኑ ጆሮዎች በታች እንዲሆን ማድረግ
 11. የልብሱን የታችኛውን ክፍል ከህፃኑ መቀመጫ ስር መሸጎጥ/መጠቅጠቅ እና በደንብ ማሰር
 12. ልብሱ ሲጠቀለል የህፃኑ ደረት አካባቢ መጥበቁን ማረጋገጥ
 13. ልብሱ ሲጠቀለል የህፃኑ የሆድ አካባቢ በጣም አለመጥበቁን እና ለመተንፈስ አለመቸገሩን ማረጋገጥ
 14. የህፃኑ እናት ህፃኑን ጡት እያጠባችው አለመሆኑን ማረጋገጥ
 15. የህፃኑ እናት ለመንቀሳቀስ፣ ለማውራት ወይም ሌሎች ተግባራትን ለማወከናወን ነፃ መሆኗን ማሳወቅ
 16. ህፃኑ በዚህ ሁኔታ ፕላስተር ከመነሳቱ በፊት ለአስር ደቂቃዎች፣ በሚነሳበት ጊዜ እና ከተነሳ በኋላ እንዲቆይ ማድረግ
- የገላ ለገላ ንክኪ ቡድን መረጃ የመሰበሰብ ሂደት ለማከታተል የሚያገለግለው የመረጃ መስበሰቢያ ቅጽ ቅጽ 5 ነው፡፡

4.3. የጨቅላ ህፃናት የህመም መለኪያ ቅፅ አሞላል ቅደም ተከተል

በዚህ ጥናት ውስጥ በዋነኝነት የምንጠቀምበት እና ትኩረት የሚያስፈልገው መሰረታዊ የመረጃ መሰብሰቢያ ቅጽ የጨቅላ ህፃናት የምችት መለኪያ ቅጽ ነው። የጨቅላ ህፃናት የምችት ሁኔታ መለኪያ ቅጽ ሰባት ጠቋሚዎች ያሉት ሲሆን ህፃናቱ ፕላስተሩ ከመነሳቱ በፊት እና ከተነሳ በኋላ የሚኖራቸውን የምችት መጠን ለመለካት ያገለግላል። ይህም ማለት በዚህ ጥናት ውስጥ ይህ ቅጽ ለሁለት ጊዜ ይሞላል ማለት ነው። የዚህ ቅጽ ጠቋሚዎች በሶስት የተከፈሉ ናቸው። እነዚህም የሁኔታ ጠቋሚዎች (የእርግዝና እድሜ እና የንቃት ሁኔታ)፣ የፀባይ ሁኔታ ጠቋሚዎች (የግንባር መኮሳተር፣ ዓይንን በሀይል መጨፈን እና ከአፍንጫ ወደ ከንፈር የሚሄድ ጎድጓዳ እጥፋት መፈጠር) እና የፊዚዮሎጂክ ሁኔታ ጠቋሚዎች (የልብ ምት ፍጥነት እና የደም ውስጥ የአክስጂን መጠን) ናቸው። እነዚህ ጠቋሚዎች በአጠቃላይ ከ 21 ውጤት የሚሰጣቸው ሲሆን እያንዳንዱ ጠቋሚ ከ 0-3 ባለው ልኬት ውጤት ይሰጠዋል። በጥናቱ ውስጥ የጨቅላ ህፃናቱን የምችት የቅጽ ሁኔታ የምትሞላው ነርስ ህፃናቱን የገላ ለገላ ንክኪ ላይ ከምታደርጋቸው ነርስ የተለየች ናት።

4.3.1. የገላለገላ ንክኪ ቡድን የጨቅላ ህፃናት የምችት ሁኔታ መለኪያ ቅጽ አሞላል ቅደም ተከተል

1. የገላ ለገላ ንክኪው ከተጀመረ ከአስር ደቂቃ በኋላ ይህንን ቅጽ ለመሙላት የተመደበቸው ነርስ የገላ ለገላ ንክኪ የምታደርገውን ሴት እንድትቀመጥ በማድረግ የህፃኑን ፊት ለ45 ሴኮንዶች በማየት የህፃኑን የንቃት ሁኔታ እና የፊት እንቅስቃሴ ትመዘግባለች።
2. የህፃኑ የንቃት ሁኔታ እና የፊት እንቅስቃሴ ከተመዘገበ በኋላ ለጥናቱ ዓላማ የተዘጋጀውን ፕላስተር አክሲሜትር በህፃናቱ የእግር ጣት ላይ በማድረግ የልብ ምት ፍጥነት እና የደም ውስጥ የአክስጂን መጠን ትለካለች።
3. በመቀጠል ፕላስተሩ ከህፃኑ ሰውነት ላይ እንዲነሳ ይደረጋል።
4. ፕላስተሩ ተነስቶ እንደ አለቀ የህፃናቱ የምችት ሁኔታ መለኪያ ቅጽ ፕላስተሩ ከመነሳቱ በፊት የነበረውን ተመሳሳይ ቅደም ተከተል በመከተል ይሞላል።

4.3.2. በማሞቂያ ቡድን ውስጥ የጨቅላ ህፃናት የምችት ሁኔታ መለኪያ ቅጽ አሞላል ቅደም ተከተል

1. አይቪ ካኑላውን ከህፃኑ ደም ስር ውስጥ የምታወጣው ነርስ ህፃኑ ማሞቂያ ውስጥ እንዳለ ፊቱን ለ 45 ሴኮንዶች በማየት የህፃኑን የንቃት ሁኔታ እና የፊት እንቅስቃሴ ትመዘግባለች።
2. የህፃኑ የንቃት ሁኔታ እና የፊት እንቅስቃሴ ከተመዘገበ በኋላ ለጥናቱ ዓላማ የተዘጋጀውን ፕላስተር አክሲሜትር በህፃናቱ የእግር ጣት ላይ በማድረግ የልብ ምት ፍጥነት እና የደም ውስጥ የአክስጂን መጠን ትለካለች።
3. በመቀጠል ፕላስተሩ ከህፃኑ ሰውነት ላይ እንዲነሳ ይደረጋል።
4. ፕላስተሩ ተነስቶ እንደ አለቀ የህፃናቱ የምችት ሁኔታ መለኪያ ቅጽ ፕላስተሩ ከመነሳቱ በፊት የነበረውን ተመሳሳይ ቅደም ተከተል በመከተል ይሞላል።

ማስተወጃ፡ ፕላስተሩ ያለው በህፃኑ እግር ላይ ከሆነ ፕላስተር አክሲሜትሩ ፕላስተሩ በሌለበት የእግር ጣት ላይ መደረግ ይኖርበታል።

4.4. የጥናቱ ጣልቃ ገብነት በጥናቱ ተሳታፊዎች ላይ ያስከተለው የጎንዮሽ ጉዳት

የገላ ለገላ ንክኪ በጨቅላ ህፃናት ላይ ሊያመጣ የሚችለው በጥናት የተረጋገጠ እና ሪፖርት የተደረገ የጎንዮሽ ጉዳት የለውም። እንደውም በተቃራኒው ለህፃናቱም ሆነ እናቶቻቸው የሚሰጠው በርካታ ጥቅሞች አሉት። ነገር ግን በድንገት

እንኳን የጎንዮሽ ጉዳት ቢያስከትል በፍጥነት ለማወቅ እና አስፈላጊውን የህክምና እርዳታ ለህፃናቱ መስጠት ያስችል ዘንድ በጥናቱ ውስጥ የሚሳተፉትን የጨቅላ ህፃናት የመረጃ መሰብሰብ ሂደቱ ተጀምሮ እስከሚያልቅ ድረስ ከትትል እንዲያገኙ ማድረግ አስፈላጊ ሆኖ ተገኝቷል። ይህ ከትትል የሚያስፈልገው በሁለቱ የገላ ለገላ ንክኪ ቡድኖች ማለትም በእናቶች የገላ ለገላ ንክኪ ቡድን እና በዘመድ ሴቶች የገላ ለገላ ንክኪ ቡድን ውስጥ ለሚሳተፉ ህፃናት ነው።

4.4.1. የጎንዮሽ ጉዳት ሪፖርት ማድረጊያ ቅጽ

በዚህ ጥናት ውስጥ የመጨረሻው እና ስድስተኛው የመረጃ መሰብሰቢያ ቅጽ የጎንዮሽ ጉዳት ሪፖርት ማድረጊያ ቅጽ ነው። ይህ ቅጽ የሚሞላው ህፃኑ የጎንዮሽ ጉዳት እንዳጋጠመው ከታሰበ ነው። ህፃናቱ የጎንዮሽ ጉዳት ሲያጋጥማቸው ለማወቅ እና አስፈላጊውን ህክምና ለመስጠት መረጃ የመሰብሰብ ሂደት ከተጀመረበት ጊዜ አንስቶ እስከሚጠናቀቅበት ጊዜ አጠገባቸው በመሆን በቅርበት መከታተል ያስፈልጋል። በዚህ ቅጽ ውስጥ የሚገኙት ሁሉም ጥያቄዎች በጥንቃቄ መሞላት ያለባቸው ሲሆን ይህ ቅጽ መሞላት ከመጀመሩ በፊት ህፃኑ አስፈላጊውን ህክምና አግኝቶ መረጋጋቱን ማረጋገጥ ያስፈልጋል። ከጥያቄ ቁጥር 601 እስከ 610 ያሉት ጥያቄዎች ጉዳቱ ስለ አጋጠመው ህፃን ማንነት ለማወቅ የሚጠይቁ ጥያቄዎች ናቸው።

ጥያቄ ቁጥር 611: የጎንዮሽ ጉዳቱን ሪፖርት ማድረግ ለምን አስፈለገ?

ይህ ጥያቄ የታየውን የህፃኑን ሁኔታ የጎንዮሽ ጉዳት እንደሆነ ሪፖርት ለማድረግ ለምን እንደ አስፈለገ ለማወቅ ይረዳል። ይህም ማለት የህፃኑ ሁኔታ ከተለመደው ውጪ ነው ለማለት ያስቻለውን ምክንያት ለማወቅ የሚጠየቅ ነው።

ጥያቄ ቁጥር 612: አስፈላጊ የህክምና መረጃ

ይህ ጥያቄ ህፃኑ ወደ ሆስፒታል ሲገባ የነበረውን የምርመራ ውጤት፣ የአካል እና የላብራቶሪ ምርመራ ውጤቶች፣ ህፃኑ ሲወስዳቸው የነበሩ መድሃኒቶች እና ከመረጃ መሰብሰቡ በፊት የነበረውን የጤና ሁኔታ ያጠቃልላል።

ጥያቄ ቁጥር 613: የጎንዮሽ ጉዳቱ በየትኛው የመረጃ መሰብሰቢያ ክፍል ነው?

አንዱን ምርጫ ብቻ ይመረጥ

ጥያቄ ቁጥር 614: ከሚከተሉት ውስጥ ህፃኑን/ኗን ያጋጠመ/ ያጋጠማት የጎንዮሽ ጉዳት የትኛው ነው?

ይህ ጥያቄ ህፃኑ ምን አይነት የጎንዮሽ ጉዳት እንዳጋጠመው ለማወቅ የሚጠየቅ ጥያቄ ነው። ይህ ጥያቄ በሚሞላበት ጊዜ ማስታወስ የሚገባው ነገር የጎንዮሽ ጉዳት የሚባለው በቀን ከቀን ስራ ላይ ያልተለመደ ወይም ከዚህ በፊት ታይቶ የማይታወቅ ነገር ሲሆን ነው። ህፃኑ በተሳሳይ ጊዜ የተለያየ ጎንዮሽ ጉዳቶች ሊያገጥሙት ስለሚችሉ ከአንድ በላይ መልስ መስጠት ይቻላል።

ጥያቄ 615: የጎንዮሽ ጉዳቶቹ ከተከሰቱ በኋላ ህፃኑን ለመርዳት ምን አይነት እርምጃዎች ተወስዱ?

ህፃኑን ለመርዳት የሚወስዱት እርምጃዎች በጠቅላላ በዝርዝር መመዝገብ ይኖርባቸዋል።

ጥያቄ ቁጥር 616: የጎንዮሽ ጉዳቱ ከተከሰተ በኋላ የህፃኑ/ኗ የጤና ሁኔታ ምን ዓይነት ሁኔታ ላይ ይገኛል?

ከተዘረዘሩት አማራጮች ውስጥ አንዱ ይመረጥ። ህፃኑ ከሞተ ህፃኑ የሞተ በት ቀን፣ወር እና ዓመተ ምህረት እንዲሁም የሞቱ መንስኤ በዝርዝር ይጻፍ።

4.5. መረጃ በመሰብሰብ ሂደት ውስጥ የሚሳተፉ ሰዎች ሀላፊነት

4.5.1. የመረጃ መሰብሰብ ሂደት ተቆጣጣሪዎች ሀላፊነት

- መረጃ መሰብሰብ ከመጀመሩ በፊት አስፈላጊውን ስልጠና መውሰድ
- መረጃ ሰብሳቢዎችን ማገዝ
- የህፃናቱን ቡድን ማሳወቅ
- የመረጃ መሰብሰብ ሒደቱን መከታተል
- የገላ ለገላ ንክኪ የተደረገላቸው ህፃናት የጎንዮሽ ጉዳት ካጋጠማቸው መከታተል እና ሪፖርት ማድረግ
- የመጠይቆቹን ሙሉነት ማረጋገጥ እና ሙሉ ያልሆኑትን መጠይቆች መረጃ ሰብሳቢዎቹ እንዲያሟሏቸው ማድረግ
- ተሞልተው ያለቁትን መጠይቆች በአግባቡ በመሰብሰብ ለጥናቱ አስተባባሪ ማስረከብ
- በጥናቱ ውስጥ ጥቅም ላይ የሚውሉ መጠይቆችን እና መሳሪያዎችን መረከብ

4.5.2. የጥናቱ አስተባባሪ ሀላፊነት

- የመረጃ መሰብሰብ ሂደቱን ማስተባበር
- አስፈላጊ የሆኑ ስልጠናዎችን ለመረጃ ሰብሳቢዎች እና ተቆጣጣሪዎች መስጠት
- ለጥናቱ አስፈላጊ የሆኑ እቃዎችን ማቅረብ
- የመረጃ መሰብሰብ ሂደቱን በየሶስት ቀን መቆጣጠር
- ለመረጃ ሰብሳቢዎች እና ተቆጣጣሪዎች አስፈላጊውን ድጋፍ መስጠት
- ከመረጃ ሰብሳቢዎች እና ከተቆጣጣሪዎች ጋር ባለው ስምምነት መሰረት ክፍያ መፈፀም
- የጥናቱን ውጤት ማሰራጨት

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የመረጃ መሰብሰብ ሂደት መከታተያ ቅጾች

ቅጽ 5: የገላ ለገላ ንክኪ ቡድን የመረጃ መሰብሰብ ሂደት መከታተያ ቅጽ

የጥናቱ ተሳታፊ መለያ ቁጥር: /___/___/___/

የቡድን መለያ ኮድ: /___/___/

ተ.ቁ	ዋና የጥናቱ ይዘቶች	ተደርጓል	አልተደረገም
	1. የገላ ለገላ ንክኪ አደራረግ ይዘቶች		
1.1.	ህፃኑን ኮፍያ፣ካልሲ እና ዳይፐር ብቻ ማልበስ		
1.2.	ህፃኑ ቀጥ እንዳለ ከእናቱ ጡቶች መሃል በማድረግ ቆዳ ለቆዳ እንዲነካከ ማድረግ		
1.3.	ህፃኑ እንዳይወድቅ በእናቱ ደረት መደገፍ		
1.4.	የህፃኑን ጭንቅላት ከእናቱ ጋር አይን ለአይን መተያየት በሚችሉበት መጠን ቀና እንዲል ማድረግ		
1.5.	የህፃኑ ጭኖችን ከፊት ብለው እንዲታጠፉ በማድረግ “የእንቁራሪት ዓይነት” አቀማመጥ እንዲኖረው ማድረግ		
1.6.	የህፃኑ እጆች እንዲታጠፉ ማድረግ		
1.7.	የህፃኑ ሆድ ከእናቱ የላይኛው የሆድ ክፍል ጋር እንዲነካካ ማድረግ		
1.8.	የህፃኑ እናት ህፃኑን በእጆቿ ደገፍ እንድታደርገው ማድረግ		
1.9.	ህፃኑን በነጠላ፣በሽማ ወይም በሌላ ልብስ ከእናቱ ጋር አብሮ መጠቅለል		
1.10.	የልብሱ የላይኛው ክፍል ከህፃኑ ጀሮዎች በታች እንዲሆን ማድረግ		
1.11.	የልብሱን የታችኛውን ክፍል ከህፃኑ መቀመጫ ስር መሸጎጥ/መጠቅጠቅ እና በደንብ ማሰር		
1.12.	ልብሱ ሲጠቀለል የህፃኑ ደረት አካባቢ መጥበቁን ማረጋገጥ		
1.13.	ልብሱ ሲጠቀለል የህፃኑ የሆድ አካባቢ በጣም አለመጥበቁን እና ለመተንፈስ አለመቸገሩን ማረጋገጥ		
1.14.	የህፃኑ እናት ለመንቀሳቀስ፣ ለማውራት ወይም ሌሎች ተግባራትን ለማወከናወን ነፃ መሆኗን ማሳወቅ		
1.15.	የህፃኑ እናት ልጇን እየመገበችው አለመሆኑን ማረጋገጥ		
1.16.	ህፃኑ በዚህ ሁኔታ ፕላስቲክ ከመነሳቱ በፊት ለአስር ደቂቃዎች እና በሚነሳበት ጊዜ እንዲቆይ ማድረግ		

ቅጽ 6: የጎንዮሽ ጉዳት ሪፖርት ማድረጊያ ቅጽ

601. የሆስፒታሉ መለያ ቁጥር: /___ /___ /

602. የጥናቱ ተሳታፊ መለያ ቁጥር: /___ /___ /___ /

603. የህክምና ካርድ ቁጥር _____

604. የህፃኑ/ኗ ስም _____

605. ያታ _____

606. የተወለደበት ቀን (ቀን/ወር/ዓ.ም): /___ /___ /___ /

607. የእርግዝና እድሜ (ዓመት/ቀን): /___ /___ /

608. በውልደት ጊዜ የነበረ ክብደት (ግራም) _____

609. ወደ ሆስፒታሉ የገባበት ቀን (ቀን/ወር/ዓ.ም): /___ /___ /___ /

610. የጎንዮሽ ጉዳቱ የተከሰተበት ቀን (ቀን/ወር/ዓ.ም): /___ /___ /___ /

611. የጎንዮሽ ጉዳቱን ማሳወቅ ለምን አስፈላጊ ሆኖ ተገኘ?

1. የጨቅላ ህፃናትን ዶክተር ማማከር አስፈላጊ ስለነበር
2. ለህይወት አስጊ የሆነ የጎንዮሽ ጉዳት ስለነበር
3. ሞት ያስከተለ የጎንዮሽ ጉዳት ስለነበር

612. የህፃኑ የህክምና መረጃዎች

613. የጎንዮሽ ጉዳቱ የተከሰተው በየትኛው የመረጃ መሰብሰቢያ ጊዜ ነው?

- | | |
|---------------------|-------------------|
| 1. ፕላስተሩ ከመነሳቱ በፊት | 3. ፕላስተሩ ከተነሳ በኋላ |
| 2. ፕላስተሩ በሚነሳበት ወቅት | |

614. ከሚከተሉት ውስጥ ህፃኑ/ኗን ያጋጠው/ ያጋጠማት የጎንዮሽ ጉዳት የትኛው ነው? (ከአንድ በላይ መልስ ሊኖረው ይችላል)

1. ያልተስተካከለ አተነፋፈሰ
2. መተንፈስ ማቆም
3. ከልክ ቢታች የሆነ የልብ ምት ፍጥነት
4. ከልክ በላይ የሆነ የልብ ምት ፍጥነት
5. የደም ውስጥ የአክሲድን መጠን ከልክ ቢታች ማነስ
6. የመውደቅ አደጋ
7. ሌላ ካለ ይገለፅ_____

615. የጎንዮሽ ጉዳቱ ከተከሰተ በኋላ ህፃኑ/ኗን ለመርዳት ምን አይነት እርምጃዎች ተወስዱ?

616. የጎንዮሽ ጉዳቱ ከተከሰተ በኋላ ህፃኑ/ኗ በምን ዓይነት የጤና ሁኔታ ላይ ይገኛል/ትገኛለች?

1. ከጎንዮሽ ጉዳቱ አገጣጥሟል/አገጣጥላለች
2. በህክምና እርዳታ ላይ ነው/ናት
3. ሞቷል/ሞታለች
 - ሞት የተከሰተበት ቀን (ቀን/ ወር/ ዓ.ም): /____/____/____/
 - የሞት መንስኤ

የጎንዮሽ ጉዳቱን ሪፖርት ያደረገው ሰው ሙሉ ስም: _____

የጎንዮሽ ጉዳቱ ሪፖርት የተደረገበት ቀን(ቀን/ወር/ዓ.ም): ____ / ____ / ____ /

Assurance by principal investigator and approval by primary advisor

Assurance by principal investigator

The undersigned agrees to accept responsibility for the scientific ethical and technical conduct of the research project and for provision of required progress reports as per terms and conditions of the Research Publications Office in effect at the time of grant is forwarded as the result of this application.

Name of the student: Yemisrach Belete

Date: Signature: _____

Approval by primary advisor

Name of primary advisor: _____

Date: Signature: _____