MOTHERS' KNOWLEDGE ABOUT NEONATAL DANGER SIGNS AND HEALTH SEEKING ACTIONS DURING NEONATAL ILLNESS AT MUHIMBILI NATIONAL HOSPITAL.

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Department Of Community Health Nursing

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By

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A dissertation Submitted in (partial) Fulfillment of the Requirements for the Degree of Master of Midwifery and Women's Health in Nursing of

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CERTIFICATION

The undersigned certifies that he has read and hereby recommend for acceptance by the Muhimbili University of Health and Allied Sciences a dissertation entitled **"*Mothers' knowledge about neonatal danger signs and health seeking actions during neonatal illness at Muhimbili National Hospital"*** in (partial) fulfillment of the requirements for the degree of Master of Science (Midwifery and Women Health) of Muhimbili University of Health and Allied Sciences.

_____

Dr. A. Outwater (RN, PhD)

(Supervisor)

Date: _____

DECLARATION AND COPYRIGHT

I, **Joyce Clemence Rugemalila,** declare that this **dissertation** is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature……. Date……

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DEDICATION

This work is dedicated to my lovely daughters Lightness, Glory and Precious Stuart Kimea for tolerating my absence when I was late at home for studies and my beloved husband Stuart Kimea for his fully supports, understanding and tolerance of my busy academic schedule during the whole course of my masters studies, without forgetting my young sister Elizabeth Mmassy and to my parents especially my mother for their moral support during the entire study.

ABSTRACT

Background: Neonatal period is the most critical time for survival of an infant. Neonatal deaths account 45% of all under five deaths worldwide. Tanzania is among the countries to have reduced under five years' mortality but not neonatal mortality. This suggests the lack of timely and appropriate neonatal care intervention when danger signs are recognized.

Aim of the study: The study intended to determine the knowledge about neonatal danger signs and health seeking action among the mothers with neonates.

Methodology: This was a descriptive hospital based cross-sectional study, conducted at Muhimbili National Hospital. The study enrolled 216 women. The women were individually interviewed face to face using Swahili questionnaire. Simple random sampling method was used to select the women for the study. Data was coded, entered, cleaned and analyzed in SPSS for windows version 21. Chi-square test (p value) **and** Multivariate analysis used to define the significant association between dependent and independent variables..

Results

A total of 216 mothers' were interviewed between May and June 2017. Large proportion 156 (72.2%), of mothers had low knowledge on neonatal danger signs. Respondents with completed secondary education were more likely to have average knowledge by six (6) times more than those without formal education and the associations was statistically significant (p=0.018).The study confirmed that the higher the knowledge about neonatal danger signs the higher the appropriate health seeking actions among mothers, and the higher the decrease of in-appropriate actions among them by 9.3% however this association statistically insignificant (p=0.792).

Conclusion

There is low level of knowledge on danger signs of neonatal illness among the mothers with neonates in Dar es Salaam. Knowledge about neonatal danger signs need to be increased because it is associated with appropriate health seeking actions.

Recommendations

Low knowledge of danger signs of neonatal illness and in-appropriate health seeking actions can be improved by Midwives and other trained health care providers to educate pregnant women about danger signs of neonatal illness during antenatal visits and emphasize more after delivery before being discharge home.

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ACRONYMS

ANC	Antenatal Clinic.
IMNCI	Integrated Management of Newborn and Childhood Illness
MNH	Muhimbili National Hospital.
MDG	Millennium Development Goals.
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
RCHC	Reproductive and Child Health Clinic.
SPSS	Statistical Package for Social Sciences.
SVD	Spontaneous Vaginal Delivery.
SBA	Skilled Birth Attendant

DEFINITION OF TERMS

Mortality rate-Is a measure of the number of deaths (in general, or due to a specific cause) in a particular population (You et al., 2011).

Neonatal danger signs-Manifestation of neonatal complication which indicating that neonate needs immediate care (Khan, Das, & Khalique, 2014).

Operation definitions

Neonate-In his study means human life from birth to 28 days**.**

Knowledge-In this study means ability to list up neonatal danger signs.

Health seeking actions- In this study refers to the action taken or done by the mother after recognizing a danger sign from her neonate with the aim of improving the health of the baby.

Appropriate action - In this study refers immediately taking of neonate to the health facility soon after recognizing danger sign.

In-appropriate action-In this study refers to other interventions apart from immediate taking of neonate to the health facility after recognition of danger signs.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Neonatal period is the most critical time for survival of an infant. It is estimated 2.7 million neonatal deaths occur worldwide die each year. Half of the deaths occur within 24 hours of life and 75% of the deaths occur in the first week. Neonatal deaths account 45% of the under five deaths worldwide (Afnan-holmes et al., 2015).

Global neonatal mortality rate has declined by 47% between 1990 and 2015. The declines is slower compared with 53% decline of under five mortality rate over the same period; More strategies are needed to lower down neonatal deaths (You et al., 2011).

Most deaths have occurred in low income countries and are caused by diseases that can be prevented and treated with quality health care. Infectious diseases and neonatal complications take great role in most neonatal and child deaths globally (Afnan-holmes et al., 2015).

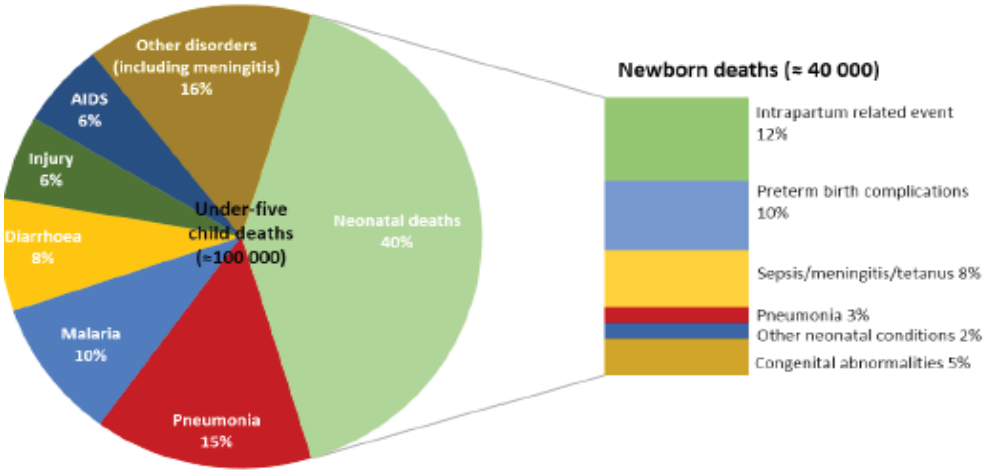
In Africa, neonatal deaths have declined by 38% from 46 deaths /1000 live births in 1990 to 29 deaths /1000 live births in 2015, neonatal deaths reported taking 35% of all under five deaths. There are three main conditions lead the newborn deaths in Africa; includes infections, birth asphyxia and prematurely (UNICEF, 2012).

The Majority of the newborn deaths in Africa occurred at home, indicating that many families had problem with recognition of danger signs of newborn illness and majority of the neonates are not taken to health facilities at appropriate time when they are sick (Sandberg, Pettersson, Asp, Kabakyenga, & Agardh, 2014).

Tanzania is among the countries to have reduced under five year's mortality and not for neonatal mortality. Under five mortality declined from 147deaths/1000 live births in 1999 to 67deaths /1000 per live births in 2015 and neonatal mortality fallen from

32deaths/1000 live births in 2010 to 26deaths/1000live births in 2015. Neonatal deaths account 40% of deaths among children under five .The most causes of neonatal death in Tanzania are birth asphyxia, premature, sepsis and congenital abnormalities (TDHS,2015/16).

Figure 1: Causes of Neonatal Mortality, Tanzania (National, Map, Plan, & Improve, 2016)



Neonatal health can be influenced by many factors including un-attending antenatal care, unsupervised or poorly supervised home deliveries, poor cord care, prematurely, low birth weight, unpracticed exclusive breastfeeding and delays in recognition of danger signs in both mothers and babies. Other factors like infrastructure and economical constrains contributes to high neonatal mortality (Khan, Das, & Khalique, 2014).

Danger signs of neonatal illness are signs of complication or bad indicator which arise during neonatal period, are life threatening and need immediately care. Strategies to facilitate identification of danger signs of neonatal illness have been introduced into health programs in several countries. Integrated Management of Newborn and Childhood Illness (IMNCI) developed by the World Health Organization (WHO) focuses on assessment of general danger signs in the examination of children presenting with illness at health care centers (Sandberg et al., 2014).

The “WHO recognized dangers signs” based on WHO definition are categorized as follows: hotness of the body/ temperature >38c, coldness of the body/low temperature <35.5c, redness, foul-smelling and discharging umbilical cord, unable to breastfeed, excessive crying, convulsions, non-response to sensory stimulus, central jaundiced, severe chest in-drawing, bulging anterior fontanel, bluish of some part of the body or the all body, failure to pass urine or stool (Ekwochi et al., 2015).

Healthy behaviors, recognition of neonatal danger signs, awareness of key newborn health packages and timely care seeking are among the critical strategies for reducing neonatal mortality in Tanzania (Manji, 2009). Tanzania Focus Antenatal Care (FANC) guidelines includes client education and counseling package for pregnancy women, therefore women are expected to be taught about danger signs of neonatal illness during their antenatal visits (FANC, 2014).

Education level, parity, age of the mother, place of living (urban or rural), place of birth (home based or hospital) and attendance of Antenatal clinic during pregnancy have a big impact in increasing maternal knowledge of neonatal danger signs (Okawa, Ansah, Nanishi, & Enuameh, 2015).Moreover Early recognition of neonatal danger signs linked with improved neonatal outcome (Alex-Hart, 2014).

1.2 Problem statement

Tanzania is among the countries with high neonatal mortality rates. The target to reduce neonatal mortality rate (NMR) to 19 per 1000 live births by 2015 was not met successfully (TDHS,2015/16). Most deaths occurring in neonatal period are related to late recognition of neonatal illness which leads to late intervention (Ekwochi et al., 2015). Literature show that 70% of newborn deaths can be avoided if the mother is equipped with knowledge about how to recognize danger signs of illness and seek appropriate health care (Alex-Hart, 2014).

Muhimbili National Hospital receives sick neonates from different parts of Tanzania. Six thousand and seven twenty six hundred (6726) neonates were admitted in 2015, among them 924 died. The majority of deaths were the re-admissions; the revelation suggests that something has gone wrong when neonates are at home after the discharge. In other words, more strategies are needed to lower these neonatal deaths. Therefore this study intended to determine the knowledge of mothers of neonatal danger signs and health seeking actions when neonates presented with danger signs at home.

1.3 Significance of the Study

Millions of neonatal deaths occur worldwide each year and more than a quarter of the deaths occur in the first week .Many of these life threatening neonatal complications are treatable if the baby receives timely and appropriate care (Afnan-holmes et al., 2015).

The findings from the study will inform health care workers especially the midwives on the achievement in the teaching of mothers regarding danger signs of neonatal illness and appropriate action to take whenever neonates presented with signs of disease. It will refine care practices from routine care to the evidenced care making sure women are receiving clear information about the neonatal illness. The findings will also enlighten institution and government of the prevailing situation. This will assist them to sharpen the policies regarding provision of precise information to the mothers about their neonates and set more strategies making sure awareness of neonatal danger signs in Dar

es Salaam and country wide. Ultimately, the study will contribute in reducing neonatal mortality caused by unawareness of the neonatal danger signs and unsafe health behaviors to neonates experienced danger signs.

Moreover the findings and recommendations from this study will be the starting point for another study, especially intervention study to address the remaining gaps about knowledge of neonatal danger signs and health seeking actions of mothers with sick neonates.

1.4 Research questions

What is the association between maternal socio-demographic characteristics and knowledge about neonatal danger signs?

What is the association between mothers' knowledge of neonatal danger signs and health seeking actions to the neonates presented danger signs?

1.5 Hypothesis

$H_{0:}$ There is no significant association between maternal socio-demographic characteristics and knowledge about neonatal danger signs.

$H_{0:}$ There is no significant association between mothers' knowledge of neonatal danger signs and health seeking actions to the neonates presented danger signs.

1.6.0. Research Objectives

1.6.1 Broad Objective

To determine mothers' knowledge of neonatal danger signs and health seeking actions during neonatal illness.

1.6.2 Specific Objectives

To determine association of maternal socio-demographic characteristics with knowledge about neonatal danger signs among the postnatal mother's who brought their neonates for neonatal check-up at neonatal clinic MNH.

To determine the association of mothers' knowledge of neonatal danger signs with health seeking actions to the neonates presented danger signs.

1.7 Conceptual Framework.

A conceptual framework is interrelated concept or abstraction assembled together in a same scheme by virtue of their relevance to a common theme (Polit & Beck, 2012).

The conceptual framework of this study describes knowledge on neonatal danger signs and health seeking actions concepts. The framework constructed from the concepts obtained from academic literatures review especially the related study done in Nigeria (Ekwochi et al., 2015) the framework formulated based on the study objectives and the variables in the study which are socio-demographics characters (independent variables), knowledge (independent), and health seeking actions (dependent variables). The study objectives focused on determining if maternal socio-demographics had influences on maternal knowledge of neonatal danger signs also how maternal knowledge can influence mothers' seeking actions when neonates presented with danger signs.

1.7.1 The association of knowledge and socio-demographical characteristics

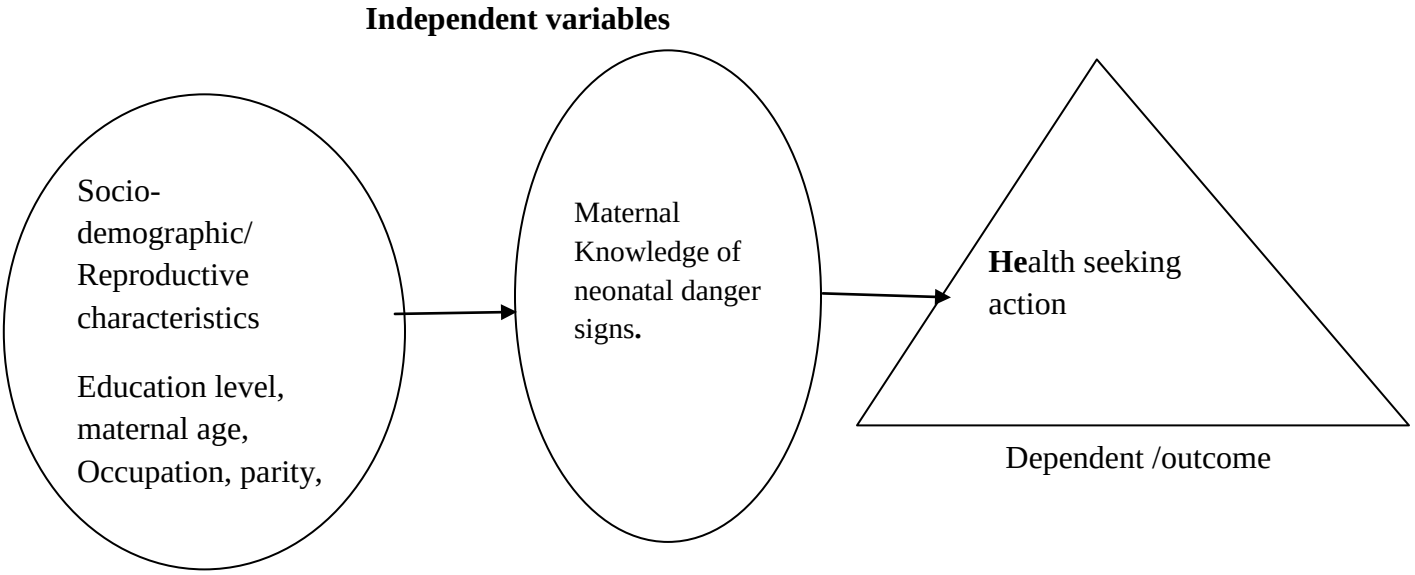
The association of knowledge and socio-demographical characteristics has been pointed out in studies does in Ethiopia, Uganda, Nigeria and Kenya as described below.

Education level of a mother can affects the understanding about danger signs in neonates because illiterate can affect mother ability to read or write and fail to understanding simple basic concepts of neonatal health. It has been found having higher education increased the chance of awareness of neonatal danger signs (Kuganab-lem & Yidana, 2014 & Nigatu et al., 2015). Moreover, the likelihood to have more awareness increased significantly with increasing age of mother, nature of work, place of delivery, number of delivery and whether informed about neonatal danger signs before delivery. Older women more likely to have more knowledge compared to younger ones. (Prajapati & Madhikarmi, 2016, Sandberg et al.,2014, Ekwochi et al., 2015 and Kibaru & Otara, 2016).

1.7.2 The association of Mothers' knowledge with health seeking actions

Maternal knowledge has been highlighted to have positive impact on their health seeking action and neonatal health outcome (Alex-Hart et al., 2014); for example the study done Nigeria some neonatal danger signs like hypothermia were taken as normal issue also convulsion and excessive crying were perceived as being caused by evil spirit and were treated traditionally (Ekwochi et al., 2015). Having knowledge of neonatal danger signs was likely lead to more appropriate health seeking decision, reduce unnecessary delay and in-appropriate management of sick neonates.

Figure 2: Conceptual framework



Source; Ekwochi et al., 2015

CHAPTER TWO

2.0 LITERATURE REVIEW

This section will involve review of different studies which have been conducted about knowledge on neonatal danger signs. Literature review will be according to the study objectives.

2.1 Knowledge about neonatal danger signs

A study done in India assessing knowledge on neonatal danger signs among the pregnant women, the result showed pregnant women had poor knowledge regarding danger signs, most of the danger signs like those signs were cold to touch, loose stool, and yellow soles were not taken as the danger signs but as the usual illness, as a result there were delayed in seeking care (Khan et al., 2014).

A study on knowledge about danger signs of neonatal illness was conducted in Mbarara region located in southwestern part of Uganda, 58.3% of mothers participated in the study were aware of only one danger sign of neonatal illness, 14.8% able to define two danger signs of neonatal illness. Moreover, the study reported significant statistical association between women knowledge about danger signs of neonatal illness and birth preparedness, number of visits in ANC and delivering by skilled birth attendant (Sandberg et al., 2014). The study recommended promotion of birth preparedness is also encouraged as it has been shown to alert women to newborn danger signs. Studies using intervention methods could further establish the connection with knowledge of a danger signs and newborn.

In another study done in East Maprusi District in Northern part of Ghana exploring women's knowledge about danger signs of neonatal illness, results show knowledge about neonatal danger signs among the respondents was very low. Out of the ten known newborn danger signs, only 28.1% (282) of respondents could mention at least four danger signs. Study suggested that as part of health education and sensitization, women should be taken through danger signs prior to their discharge from hospital so that they can easily detect signs and rush to health care facilities as and when necessary (Kuganab-lem & Yidana, 2014).

2.2 Association of maternal demographic with knowledge of neonatal danger signs.

Kuganab-lem & Yidana,(2014).Looks also at the association between educations level with the knowledge about neonatal danger signs and found association between level of education and knowledge on danger signs of neonatal illness. Women with higher education level have been found to have more knowledge on danger signs compared to those with no formal education. It has been found that having secondary education or more increased the likelihood of awareness of neonatal danger signs in comparison with no education at all.

More over a study done in Ethiopia showed mothers having secondary and above educational level increased the odds of their knowledge by nearly three times. The possible justification for this could be educated mothers acquire knowledge about disease and human health through their academic life (Nigatu et al., 2015). A study done in Enugu state in southern east of Nigeria found difference; there was no significant association between having education with knowledge of danger signs of neonatal illness (Ekwochi et al., 2015).

Furthermore a related study done in Mbarara region Uganda found lack of association between higher education and increased knowledge of newborn danger signs (Sandberg et al., 2014).

A study done at Dhulikhel hospital in Nepal, assessing knowledge of neonatal danger signs among the pregnant mothers, researcher also looked at the association age of the mothers with knowledge about neonatal danger signs; they found no significant association between maternal age with knowledge about neonatal danger signs (Prajapati& Madhikarmi, 2016).

Moreover a study done in Nigeria determining relationship between age and knowledge on recognizing danger signs of neonatal illness, found no significant association between increased age with knowledge of danger signs of neonatal illness, p-value was 0.799 (Ekwochi et al., 2015).

Prajapati & Madhikarmi (2016) also looked at the association of occupation with knowledge about neonatal danger signs among the pregnant women at Dhulikhel hospital in Nepal they found significant association between maternal occupation with

knowledge about neonatal danger signs. Employed pregnant women were knowledgeable (83.33%) compared to unemployed pregnant women (60.39%).

A study done in North West of Ethiopia confirmed that ANC and PNC follow up practice creates a good opportunity for the mother to have good knowledge towards neonatal danger sign. Antenatal care and PNC attendant mothers were two times more likely to mention at least three neonatal danger sign as compared to other counterparts (Nigatu et al., 2015). A study done in Mbarara region in southwestern part of Uganda assessing mothers knowledge on neonatal danger signs, found there's no significant change in knowledge of newborn danger signs following exposure to ANC and the delivery care of SBA (Sandberg et al., 2014).

Moreover study done in Nakuru Kenya it found no significant association of attending ANC and given care by skilled health care provider with the knowledge of danger signs of neonatal illness. The Majority of mothers 350 (84.5%) identified less than three neonatal danger signs regardless of attending ANC (Kibaru & Otara, 2016).

The same study done in Nakuru Kenya, researcher looked at the association of mother's parity with the knowledge about neonatal danger signs of illness as it expected women with more babies could have more awareness about neonatal danger signs compared to women with few babies but found no significant association of parity with the knowledge of danger signs of neonatal illness. The p-value was 0.5777 (Kibaru & Otara, 2016). Ekwochi et al., (2015) done study in Enugu state in southern east of Nigeria also looked at the association of mothers parity with knowledge about neonatal danger signs and found no significant association between parity with knowledge about danger signs of neonatal illness.

2.3 The association of maternal knowledge of neonatal danger signs with health seeking action during neonatal illness.

A study done in North West of Ethiopia determine association of education with health care seeking action; found educated mothers were more likely to made decision to look for quality health service compared to none educated (Nigatu et al., 2015). The same study done in Enugu, Nigeria also looked at the association of mothers knowledge with health care seeking action taken found there's no association of knowledge of danger signs of neonatal illness with health seeking action. Among the mothers who had

knowledge on recognizing danger sign of neonatal illness most of them did not visited at health facility on time for health care; consulted relative and self treatment untill they fail then they visit to health facilities (Ekwochi et al., 2015). Moreover a study done in Yenagoa Metropolis, Nigeria found mothers had poor knowledge on neonatal danger signs and they did not visit health facilities; Most used self-medication and home remedies (Alex-Hart, 2014).

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study design

The study was cross-sectional study design and employed quantitative approach. Cross-sectional studies are usually conducted to assess the occurrence of the outcome of interest for a given population, commonly used for the purposes of public health planning (Levin, 2006).

3.2 Study Setting

The study conducted at Neonatal clinic at New Pediatric Complex, Muhimbili National Hospital. MNH is a government referral and teaching hospital located at Ilala Municipal council in Dar-es-Salaam Region Tanzania. Study area chosen because since is a referral hospital it provide services to the great part of the population with different socio-demographical and social- economical in which they will provide adequate information regarding neonatal danger signs. Moreover the findings obtained will be useful to refine the health care provided**.**

3.3 Study population

The target population of this study was post-delivery mothers delivered at MNH within past 28 days and their neonates coming from home to neonatal clinic for neonatal check-up during the period of the study. Study participants chosen because are the ones who took care of their new babies at home, so they considered to have adequate information about neonatal danger signs and neonatal health at large. Therefore to determine their knowledge of neonatal danger signs and health care practices is significant.

3.4 Inclusion Criteria

The study included both; post caesarian section delivery mothers and post spontaneous vaginal delivery mothers delivered at MNH within past 28 days from the start of this research, having their neonates on hands and above 18 years old. All these because 18 yrs old considered matured enough, mode of delivery can not affect the response, and

are those delivered with past 28 days because the researcher needed recent information regarding neonatal period.

3.5 Exclusion Criteria

Mentally and physically incapable women were excluded because they could not provide expected responses also excluded those who were unable to understand Swahili or English language because it could be difficult to translate other language. Further, we excluded women whose babies were older than one month so that recent data can be obtained and women who had delivered in hospitals other than Muhimbili because there some information needed specific for Muhimbili only.

3.6 Sample size

The sample size for the study is calculated using Kish Leslie formula as follows.

n = z2pq/d2

Where:

n – The desired sample size

z – The standard normal deviate at the required confidence interval (1.96)

p – The proportion of women with knowledge on neonatal danger signs =14.8% (Sandberg et al., 2014) related study done in Uganda

q – 1-p

d- The level of statistical significance set.

Therefore,

n= (1.96) 2(0.148) (1-0.148)/(0.05)2

n = **196**

Therefore sample size was 196 postnatal mothers

To adjust for non response will be 10% .The formula for calculating adjusted sample size was

N=n*(100%/100% - 10%)

Adjusted sample size was 216

3.7 Sampling procedure

Simple random sampling method was used to select mother for the questionnaire interviews. Mother's was requested to choose a piece of paper in a box which written two different words; Yes or No, those got Yes enrolled in the study, and those who got No does not participated in the study. Based on the eligibility criteria, mothers enrolled into the study until the required sample size achieved**.**

3.8 Data collection procedure and Instrument

Individually face to face interview using questionnaire used to collect data from the mothers about knowledge of danger signs of neonatal illness and action taken by the mother to neonates presented with danger signs during neonatal period. A tool was formed by the insights from the literature reviewed. The tool translated in Swahili language, comprised of four section; socio-demographic and obstetric information section; the knowledge section and health seeking action part. In assessing the knowledge, mothers asked to list up signs they considered severe health issues that could potentially cause danger to the lives of theirnewborns. The danger signs listed by mothers were organized and grouped according to the classifications of the World Health Organization:i) Unable to breastfeeding; ii) Convulsion; iii) Severe chest in drawing (difficulty in breathing); iv) Temperature of ≥ 37.5degree centigrade (fever); v) Temperature ≤ 35.5 degree centigrade (hypothermia); vi) Only moves when stimulated or not even when stimulated (lethargy/lose of consciousness); vii) Yellow soles (sign of jaundice); viii) Umbilicus redness or draining pus, skin boils, or eyes draining pus (sign of local infection); ix)Excessive crying; x) Central cyanosis.Based on these, mothers were further categorized into the maximum number of WHO recognized danger signs known and correctly listed. In examining the "seeking action", the mothers were requested to report the danger signs of illness they had personally observed from their neonates among the listed danger signs and to tell their initial actions.

Data collected for the period of one month during normal working hours from Monday to Friday. The interviews were conducted inside rooms within the clinics to ensure privacy and confidentiality. Each interview lastedabout 30 minutes.

3.9 Validity and Reliability

Validity is the degree to which an instrument measures what it is intended to measure and Reliability means consistency and accuracy of information obtained from the study (Polit & Beck, 2008). This is how the tool measures the attributes or variable under investigation.

To ensure validity, extensive literature review has been conducted on recent literature on knowledge of women towards neonatal danger signs. Maternal and Child Health experts and research supervisor examined the questions to determine whether they would elicit the desired responses on the variables to be measured so that conclusions would be drawn. In addition, the questions were constructed in a simple, clear and precise way in order to give respondents chance to give clear and precise answers.

To ensure reliability, a variety of open ended questions were used in the interview schedule to allow for spontaneous responses which give more valid answers. All questions were asked to each participant in the same sequence, with probes and prompts made at the same points. Pre tested prior to data collection done to verify the adequate collection of desired information as well as ensuring consistence of the questions.

Adjustments to the data collection tool were then made appropriately.

From field data, Cronbach's Alpha computed is 0.72. As it was noted from Saunders et al., (2009), that triangulation refers to the use of different data collection techniques within one study in order to ensure that the data are telling what one thinks they are telling. The data from the interview were useful in supplementing or collaborating results collected by the questionnaire**.**

3.10 Measurement of variables

The variables of this study are:

Independent variable: Socio-demographic characteristics and reproductive characteristics (age, education level, occupation, parity and ANC visits) and maternal knowledge

Dependent variable: Health seeking actions.

Though, during statistical test of the association between socio-demographics with maternal knowledge the independent variables were socio-demographics and the dependent variable was the knowledge. Statistical test of the association between health seeking action with maternal knowledge; knowledge was also an independent variable.

3.11 Data Analysis

Data was checked for its completeness and consistency, cleaned and analyzed using Statistical Package for Social Sciences (SPSS) software version 21 The statistical analysis was done through descriptive and inferential analysis. In descriptive analysis; frequency table for selected variables such as age group, marital status, education, occupation, parity, and number of antenatal clinic visits made to study the characteristics of the respondents. In inferential analysis; the Chi Square test at 5% level of significance was used to examine the association between the dependent variable and the independent variables and multivariate analysis done to assess the strength of association and control of confounders among variables.

A list of 10 common neonatal danger sign from WHO recognized danger signs used to quantify knowledge of women about neonatal danger signs. Women categorized into three groups, those mentioned more than seven signs of neonatal danger signs considered having high knowledge and those mentioned four to six danger signs considered having average knowledge and those mentioned less than three neonatal danger signs considered having low knowledge. The health seeking action looks on initial action taken by the mother after identifying danger signs of neonatal illness, here asked if consult health care facility or not. For those who does not consulted health facility their responses grouped into four groups; self treatment, consulted traditional healer and others.

3.12 Ethical consideration

The ethical clearance was sought from the MUHAS Directorate of Research and Publications. Permission to conduct the study was obtained from Executive Director of MNH, Director of Clinical Services MNH, and finally the Manager of New Pediatric Block at MNH. The study explained clearly to the participants. Participation in the study was voluntary, no harm occurred and information obtained kept confidential. Privacy was maintained during the data collection. ID number and signature was used instead of a participant's name in order to ensure anonymity. Only mothers with age greater than 18 years were required to sign a consent form which will be in Swahili version as an agreement to participate in the study.

3.13 Dissemination Plan.

The study findings will be disseminated to MUHAS School of nursing, MUHAS library and MNH administration. Furthermore the result are expected to be published in midwifery journals and presented in scientific conferences and workshops for the aim of spreading knowledge.

CHAPTER FOUR

4.0 RESULTS

4.1: Socio-demographic description of the study participants

A total of 216 postnatal mothers were interviewed between May 2017 and June 2017 at Muhimbili National Hospital. Their age ranged from 18 to 40 years with the mean age of 27years (Std. Dev=5.94). Large proportion, 68(31.5%) of participants were aged between 24 to 29 years old, and very few 3 (1.4%) were aged 40 years old and above. Large proportion 137(63.4%) of postnatal mothers were Married, a few 7 (3.2%) were Single and the rest were Cohabiting. About their education, most postnatal mothers 81(37.5%) were completed Primary School and about the same proportion 79 (36.6%) were completed Secondary School education. However, a few proportion 18 (8.3%) of them had attended College education. Large proportion 93 (43.1%) of these participants were House wives, and a few 14 (6.5%) were Peasants as summarized in Table 1.

Table 1: Socio-Demographic Characteristics of the Study Sample (n=216)

Age group (years)	Frequency	Percent
≤23	64	29.6
24 - 29	68	31.5
30 - 34	55	25.5
35 - 39	26	12.0
≥40	3	1.4
Total	216	100.0
Marital Status		
Married	137	63.4
Cohabitating	72	33.3
Single	7	3.2
Total	216	100.0
Education		
None	6	2.8
Not completed primary education	12	5.6
Completed Primary education	81	37.5
Not Completed secondary education	20	9.3
Completed secondary education	79	36.6
College education	18	8.3
Total	216	100.0
Occupation		
Employed	30	13.9
House wife	93	43.1
Self-employed	79	36.6
Peasants	14	6.5
Total	216	100.0

4.2: Reproductive characteristics among postnatal mothers during their last pregnancy.

Large proportion, 89 (41.2%) of mothers were para two followed by prime para, 77(35.6%). The least proportion, 3(1.4%) of mothers' parity were para 5, followed by Para 4 whose proportion was 8(3.7%). Among the mothers attended ANC, more than a half 115(53.2%) had 4 antenatal visits (53.2%). Most mothers had started their antenatal clinic at four to five months of pregnant 175 (81.1%), as summarized in Table 2.

Table 2: Proportions of Parity and ANC number of visits (n=216)

Parity	**Frequency**	**Percentage**
Para 1	77	35.6
Para 2	89	41.2
Para 3	39	18.1
Para 4	8	3.7
Para 5	3	1.4
Total	216	100.0
ANC number of visits		
Below 4visits	39	18.1
4 visits	115	53.2
More than 4 visits	62	28.7
Total	216	100.0

From Table 3, large proportion 147(68.1%) of mothers had not received education about neonatal danger signs during their ANC visits. After delivery before discharged home more than a half 147(57.4%) had not received education about danger signs of neonatal illness**.**

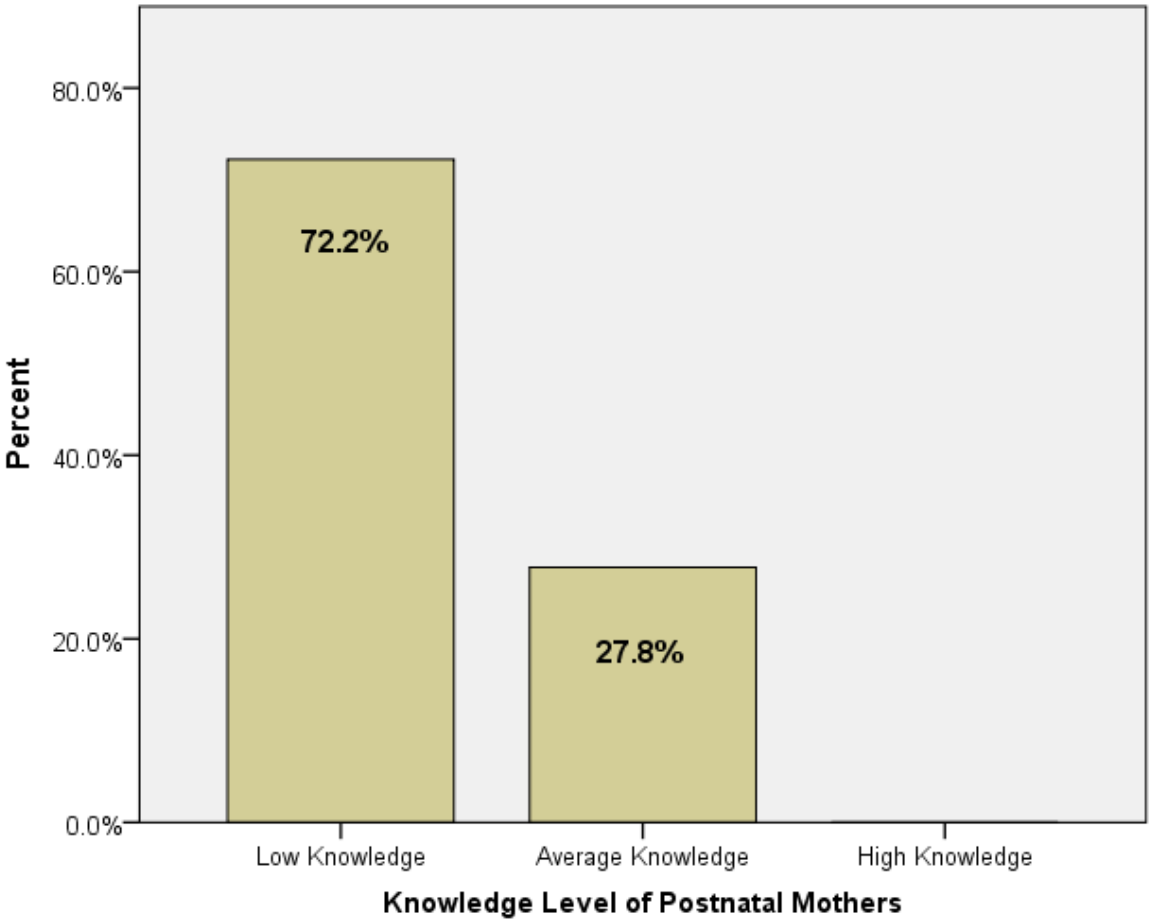
Table 3: Health education about neonatal danger signs during ANC and post-delivery

Education on danger signs of neonatal illness during antenatal visits	**Frequency**	**Percentage**
Yes	69	31.9
No	147	68.1
Total	216	100.0
Education on danger signs of neonatal illness after delivery before discharged		
Yes	92	42.6
No	124	57.4
Total	216	100.0

4.3 Mothers Knowledge on Danger Signs of Neonatal Illness

Large proportion 156(72.2%), of mothers had low knowledge, and the rest of them had average knowledge, as shown in figure 3 below.

Figure 3: Mothers' Knowledge about Neonatal Danger Signs



Among 216 mothers, majority identified at least one danger sign to their neonates. Mothers reported hotness of the body compared to other danger signs (Table 4).

Table 4: Identified danger signs of neonatal illness during the past neonatal period

Danger sign of neonatal illness	Yes (%)	No (%)	Total (%)
Hotness of the body	75(34.7)	141(65.3)	216(100.0)
Excessive crying	34 (15.7)	182 (84.3)	216(100.0)
Jaundice	17 (7.9)	199 (92.1)	216(100.0)
Redness, foul-smelling and discharging umbilical	44 (20.4)	172 (79.6)	216(100.0)
Unable to breastfeed	28 (13.0)	188 (87.0)	216(100.0)
Convulsion	19 (8.8)	197 (91.2)	216(100.0)
Fast breathing/Difficulty in breathing	12 (5.6)	204 (94.4)	216(100.0)
Non response to stimulus/loose of consciousness	5 (2.3)	211 (97.7)	216(100.0)
Cyanosis	1 (0.5)	215(99.5)	216(100.0)
Low temperature	0 (0.0)	216(100)	216(100.0)

4.4: Determining association between maternal socio-demographics characteristics and knowledge about neonatal danger signs.

From Table 5 below, higher education level among postnatal Mothers was commonly associated to higher Knowledge about Neonatal Danger Signs. Those who have Completed Secondary Education is likely to have average knowledge by six (6) times compared to those who have none education, and the associations was statistically significant (p=0.018). The increase of Parity is associated to increase of knowledge by 31%. However, the association was not statistically significant (p=0.151). The increase in number of ANC visits is likely to increase the knowledge of mothers by 27.8%, but also the association is not statistically significant (p=0.197).

Table 5: Multivariate Analysis of association between mothers' socio-demographics with their knowledge of neonatal danger signs.

Education Level	Mothers' Knowledge			OR(95%CI)	P-value
	Frequency (%)				
	Low Knowledge	Average Knowledge	Total		
None	5(83.3)	1(16.7)	6(100.0)	Reference	
Not Completed Primary Education	10(83.3)	2(16.7)	12(100.0)	0.66(0.13-3.44)	0.618
Completed Primary Education	61(75.3)	20(24.7)	81(100.0)	0.929(0.44-0.95)	0.845
Not completed Secondary Education	14(70.0)	6(30.0)	20(100.0)	1.53(0.49-4.78)	0.464
Completed Secondary Education	60(75.9)	19(24.1)	79(100.0)	6.20(1.37-28.14)	0.018
College Education	6(33.3)	12(66.7)	18(100.0)	0.544(0.06-0.05)	0.592
Total	156(72.2)	60(27.8)	216(100.0)		
Parity					
1	61(79.2)	16(20.8)	77(100.0)	1.31(0.91-0.89)	0.151
2	60(67.4)	29(32.6)	89(100.0)		
3	26(66.7)	13(33.3)	39(100.0)		
4	7(87.5)	1(12.5)	8(100.0)		
5	2(66.7)	1(33.3)	3(100.0)		
Total	156(72.2)	60(27.8)	216(100.0)		
Occupation					
Formal employment	16(53.3)	14(46.7)	30(100.0)	Reference	
Self employed	58(73.4)	21(26.6)	79(100.0)	1.02(0.29-	0.976

				3.58)	
House wife	71(76.3)	22(23.7)	93(100.0)	0.95(0.29-3.39)	0.941
Peasant	11(78.6)	3(21.4)	14(100.0)	0.596(0.09-3.8)	0.584
Total	156(72.2)	60(27.8)	216(100.0)		
ANC number of visits					
1	1(100.0)	0(0.0)	1(100.0)	1.278(0.88-1.86)	0.197
2	6(85.7)	1(14.3)	7(100.0)		
3	28(90.3)	3(9.7)	31(100.0)		
4	81(70.4)	34(29.6)	115(100.0)		
5	32(60.4)	21(39.6)	53(100.0)		
6	6(85.7)	1(14.3)	7(100.0)		
7	2(100.0)	0(0.0)	2(100.0)		
Total	156(72.2)	60(27.8)	216(10.0)		

4.5. Identification of danger signs of neonatal illness and Health seeking actions among them

Among144 Mothers who had identified danger signs of illness to neonates with in past neonatal period, more than a half 82(56.9%) did not consult health facility, and less than a half 62(43.1%) took their neonates immediately to the health facility for treatment.

Table 6: Proportion of Mothers who identified danger signs of illness to their neonates, with their seeking actions.

Any danger signs of illness you identified to your baby within past neonatal period	Health seeking action					P-value
	Frequency (%)					
	Self-care/ treatment	Consulted traditional healer	Went to a health facility for treatment	Others	Total	
Yes	69(47.9)	5(3.5)	62(43.1)	8(5.6)	144(100.0)	.075
No	0(0.0)	0(0.0)	0(0.0)	0(0.0)	72(100.0)	
Total	69(47.9)	5(3.5)	62(43.1)	8(5.4)	216(100.0)	

4.6: To determine the association between mothers' knowledge of neonatal danger signs and health seeking actions.

From table 7 below, the increase of knowledge about neonatal danger signs and health seeking actions among the Mothers is associated with a decrease of wrong seeking actions among them by 9.3%. However this association is not statistically significant (p=0.792) as summarized in table 7.

Table 7: Bivariate Analysis of Association between Mothers' knowledge of neonatal danger signs and Health seeking actions.

	Health seeking action			**OR(95%CI)**	**P-value**
	Frequency (%)				
Knowledge Level	**Consulted health care facilities**	**Not consulted health care facility**	**Total**		
Low Knowledge	44(41.5)	62(58.5)	106(100.0)	Reference	
Average Knowledge	18(43.9)	23(56.1)	41(100.0)	0.907(0.438-1.878)	0.792
	62(42.2)	85(57.8)	147(100.0)		

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.0 DISCUSSION

Knowledge of danger signs of neonatal illness is the first essential step for appropriate and timely health care intervention.

This chapter displays the interpretation of the findings that have presented in the previous chapter.

5.0.1 Knowledge of neonatal danger signs.

The findings of this study showed large proportion (72.2%) of mothers had low knowledge of danger signs of neonatal illness. These findings are not surprising as other study conducted at Enugu state in southern east of in Nigeria (95.2%), Mbarara region in southwestern part of Uganda (58.3%), and Nakuru Kenya (84.5%) found low knowledge of danger signs of neonatal illness (Ekwochi et al., 2015; Sandberg et al., 2014; Kibaru & Otara, 2016).The problem of low knowledge regarding neonatal danger signs not found in Africa only but also in Asia were by the study done in Dulkheli hospital-Nepal 60.8% of respondents had inadequate knowledge on sign and symptoms of newborn danger signs (Prajapati, R., & Madhikarmi, S. 2016).

Further, thestudy found that fever was commonly recognized by mothers (34.5%) as a danger sign than other danger signs. The findings corroborate a survey conducted in Nakuru Kenya, which established that 74.9% of the mothers new fever as danger signs (Kibaru & Otara, 2016). Hypothermia was not mentioned as a danger signs of neonate illness by the majority of the mothers. The same gap which was equally identified in the study by Sandberg et al., 2014 in Uganda were by hypothermia was mentioned by less than 5% of women only.

5.0.3 The association between socio- demographical characteristics with maternal knowledge of neonatal danger signs.

The present study discovered a significant association between the level of education and the mother's knowledge of danger sign of neonatal illness. Those who have completed secondary education was likely to have average knowledge by six (6) times

compared to those who have none education, and the association was statistically significant (p=0.018). The findings compared to those of the study conducted in Ethiopia by Nigatu et al,; The study reported mothers with secondary education and college level were three times (AOR = 3.05, 95% CI 1.43, 6.50) knowledgeable about neonatal danger signs compared to mothers at primary education level (Nigatu et al., 2015). However, the findings is in contrast with studies done in Ghana, Nigeria and Uganda. These reported that the lack of association between mothers' education and knowledge of danger signs of neonatal illness (Kuganab-lem & Yidana, 2014, Ekwochi et al., 2015, &Sandberg et al., 2014).

Employment was also showed statistical association with mothers' knowledge of danger signs of neonatal illness. Mothers who were self-employed were more likely to have average knowledge by 80% as compared to those without formal employed. However, the association was not statistically significant (p=0.976). This can be attributed to the fact that self-employed women can have more exposure in accessing information concerning neonates health compared formal employed-tight schedule of work and difficulties in accessing health information concerning neonatal illness seem to be thee factors.

In addition, the increase of parity associated to increase of knowledge by 31%. However, the association was not statistically significant (p=0.151). The study done in Nakuru Kenya and Nigeria (Kibaru & Otara, 2016 & Ekwochi et al., 2015) also observed that; no significant association of parity with mothers knowledge of danger signs of neonatal illness. This means mothers learn little from their experience. They may have missed clear information of neonatal illness in their past pregnancies and post deliveries.

Additionally, we established that the increase in the number of ANC visits was more likely to increase the knowledge of Mothers by 27.8%. Be that as it may, the association was not statistically significant (p=0.197). ANC visits among the mothers were high 99% but few mothers 31.9% had a chance to get education concerning neonatal danger signs and only 42.6% received education about neonatal danger signs after delivery before being discharged home. The related study done by Kibaru & Otara, 2016 detected

that weakness of providing health education about neonatal danger signs were by health education about neonatal danger signs given to 42.5% of women only attended ANC and there were no association of high number of ANC with maternal knowledge. Therefore it can give us the picture that we health care providers we are suppose to improve our care especially on providing the vital information like that mothers during pregnancy and after delivery.

5.0.2 Association of maternal knowledge with health seeking actions.

The findings of this study shows that most of the mothers (56.9%) did not consult health care facilities after identified danger signs to their neonates. A large proportion of the mothers utilized over counter medications as the initial seeking action after identification of neonatal danger signs. Poor understanding of both danger signs of neonatal illness and possible complications may cause the mother to seek care from inappropriate sources. Ekwochi et al., 2015 have observed that (50.5%) of mother's provided self-treatment to their neonate at home after identified danger signs of neonatal illness in Enugu state in southern east of in Nigeria. In their study, only 47.7% took their neonates immediately to hospital after recognizing signs of illness. A study conducted in South Africa also reported thathealth care facility was not the first point of care by the majority. The study report that most of the care givers utilized multiple sources of care including allopathic, indigenous and home treatments as the first point health care (Sharkey et al., 2012).

The increase of knowledge about neonatal danger signs and health-seeking actions among mothers were associatedwith the decrease of wrong seeking actions by 9.3%. However, this association was not statistically significant (p=0.792). The seeking actions of mothers were subjective by the severity illness of the neonates and the advice from people around. Health education on neonatal danger signs may help to remove the misunderstanding of neonatal complications and may change their actions

5.2 CONCLUSION

There is a low level of knowledge on danger signs of neonatal illness in the study area. Only 31.9% of mothers had received education about neonatal danger signs during their ANC visits. Further, only 42.6% had received such educationafter delivery, before they were dischargefrom the hospital. As a result, there is a high percentage of self – treatment than consultation of health care facilities by the mothers when danger signs detected from neonates. This underscores a need for raising the awareness of mothers on the neonatal danger signs associated with appropriate health seeking actions in the study area.

5.3 RECOMMENDATIONS:

Individual and Family

Low knowledge of danger signs of neonatal illness and in-appropriate health seeking action can be improved by educating women and families about danger signs of neonatal illness. Education should be given before pregnancy, during and after delivery through our reproductive health clinics, community fields and mass Medias**.**

Midwifery practice

Health education should be provided in simple way for easy understanding such as avoiding of jargon words and it should be within individualized birth plan.

Men involvement in reproductive health should be encouraged so that they can provide adequate social and financial support during events of neonatal illness.

Institution:

Midwives should be updated with latest information concerning newborn health especially newborn complication through department learning sessions and equipped with teaching aids like DVDs and different posters and banners that have messages of neonatal danger signs because people learn more by sight rather than hearing.

The quality of health education information provided should be evaluated by institution supervisors**.**

National/Policy:

Researcher recommends community outreach projects that are specifically targeting neonatal health including neonatal danger signs.

The government should increase the number of skilled health care workers at all levels of health care facilities so as to improve the availability of quality services.

Government should corroborate with Medias to spread the awareness of neonatal danger signs to the wide area of the country**.**

Future research:

Researcher recommends future study to be conducted in the community and should be intervention study which could be more beneficial for the heir knowledge as well as practices because pre and post intervention can be done at the same time of data collection.

Individual plan to address the problem in the study area.

- The findings will be disseminated to MNH administrators including Managers and in charges of Pediatric and Maternity blocks that will allow them to know the situation.
- Listen to them if there any constrains that lead to the problem and plan the way forward together on how mothers can be provided with quality health education regarding danger signs of neonatal illness and appropriate health care practices.
- Evaluate together the health teaching contents and the way the information provided to mother and assist them whenever changes it needed.
- Do follow-up to the agreed planned strategies.

5.4 STRENGTH OF THE STUDY

The sampling procedure of this study was simple random method which allows equal chance of mothers to participate in the study regarding their eligibility criteria. Moreover mothers were given clear information about danger signs of neonatal illness and appropriate action to take after interview which is beneficial for them.

5.5 LIMITATIONS OF THE STUDY

The study was limited to only one hospital; this reduces the generalizability of the results to the regionally or nationally. Information obtained is based on the mothers' ability to recall past four weeks.

5.6 IMPLICATION FOR MIDWIFERY PRACTICES

The study findings have shown low level of knowledge of neonatal danger signs and large proportion of self treatment rather than consultation of health care facility during neonatal illness. Maternal knowledge level about neonatal danger signs is a key entry point to improve neonatal health. The study findings indicate mothers were more likely to delay treatment and care of their neonate; this can lead to increased neonatal morbidity and mortality within a country. Necessary measures are needed to increase the level of knowledge about danger signs of neonatal illness. This can be achieved by health care providers to be committed to educate mother's regarding neonatal illness during their ANC as well as after delivery. Furthermore health care providers need to update their knowledge several times so as to offer correct information to clients. Also telling mothers to come to the facilities in case of neonatal complication is not enough; adequate information about those risk neonatal complication and explaining to them in details why they are supposed to visit a health facility for care is very important. The environment should be as user friendly, so that mothers will not fear to take long time in waiting for services and high cost treatment.

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CHAPTER SIX

APPENDICES

Appendix A: Questionnaire (English Version)

The following questions will be asked by researcher/researcher assistance to woman delivered within the past 28 days at MNH, coming at neonatal clinic for neonatal check-up.

Questionnaire number……

Interview Date……

SECTION A: Socio-demographic Characteristics of participants.

1. How old are you?____

2. What is your current marital status?(circle the response)
    a) Married
    b) Not married but living with spouse
    c) Living alone.
3. What is education level? (Circle the response).
    a) None
    b) Not completed primary education
    c) Completed primary education
    d) Not completed secondary education
    e) Completed secondary education
    f) College education

4. What is your occupation?(circle the response)
    a) Formal employment
    b) Self employed
    c) House wife
    d) Peasant

SECTION B: Obstetric information

5 How many times have you given birth in your life time?

(Remember: A pregnancy equal or above 7 month regarded as a delivery?)

Number_____

6 Did you attend ANC visit during the last pregnancy?(circle the response)

a) Yes b) No

7 Number of visits……

8. Have you given health education about danger signs of neonatal illness regarding your expected baby during your ante-natal visits? (Circle the response)

a)Yes b) No

9. After delivery; before being discharged home did you get an opportunity to be advised about danger signs of neonatal illness? (Circle the response)

a. Yes
b. No

10. Who advised you...

11 Have you had a chance to have health education apart from health facility?

a) Yes b) No (if Yes where)

SECTION C: Knowledge on neonatal danger signs and health care practices to neonates presented with danger signs.

12. What signs of neonatal illness do you know? (Circle the response)

1. Hotness of the body
2. Coldness of the body
3. Redness, foul-smelling and discharging umbilical cord, skin rashes and eye draining
4. Unable to breastfeed
5. Excessive crying
6. Convulsions
7. Non-response to sensory stimulus

8. Jaundice
9. Lower chest wall in-drawing (fast breathing)
10. Central cyanosis

13**.** Have you identified any danger signs of illness to your baby within the past neonatal period? (Circle the response).

a) Yes b) No (If No go to question number 17)

16. Which signs have you identified among these?(Tick on agreed danger signs)

1. Hotness of the body
2. Coldness of the body
3. Redness, foul-smelling and discharging umbilical cord, skin rashes and eye draining
4. Unable to breastfeed
5. Excessive crying
6. Convulsions
7. Non-response to sensory stimulus
8. Jaundice
9. Lower chest wall in-drawing (fast breathing)
10. Central cyanosis

15. Had you taken your neonate immediately to the health facility?

a) Yes b) No (if not what action had you took and why) Actions apart from consulting h/care facility grouped into; i) **self-care;** ii) **consulted tradition healers**; iii) **others**

16 Does the baby improved?

a) Yes b) No

17. If your baby presented with one of stated danger signs, what would you done? (**for mothers who does not identify any signs neonatal illness during neonatal period**)

THANK YOU FOR PARTICIPATING

Appendix B: DODOSO

Maswali haya yataulizwa kwa mama aliyejifungua katika hospitali ya Muhimbili katika kipindi cha mwezi mmoja uliopita(siku 27-29) na sasa amekuja kliniki ya watoto kwa ajili ya uchunguzi wa afya ya mtoto.

Dodoso namba……

Tarehe ya mahojiano……

SEHEMU A: Taarifa binafsi

1. Umri wako ni miaka ……
2. Hali ya ndoa
   a) Umeolewa na unaishi na mume
   b) Hujaolewa ila unaishi na mwenza
   c) Unaishi bila mwenza.
3. Kiwango chako cha Elimu

   a) Hukufanikiwa kupata elimu yoyote

   b) Hukumaliza elimu ya msingi

   c) Umemaliza elimu ya msingi

   d) Hukumaliza elimu ya sekondari

   e) Umemaliza elimu ya secondary

   f) Chuo
4. Unajishughulisha na nini?….

   a) Umeajiriwa

   b) Umejiajiri/ujasilia mali

   c) Mama wa nyumbani

   d) Mkulima

SEHEMU B: Taarifa za uzazi

5 Umezaa mara ngapi?.....

6 Katika kipindi cha ujauzito wako wa mwisho ulihudhuria klinik? (zungushia kwenye jibu atakalotoa)

a) Ndio b) Hapana

7 Umehudhuria klinik mara ngapi?.....

8. Je ulipohudhuria klinik ya ujauzito ulipatiwa elimu kuhusiana na dalili za hatari kwa watoto wachanga? (zungushia kwenye jibu atakalotoa)

a) Ndio b) Hapana.

9. Je baada ya kujifungua, kabla ya kuruhusiwa kwenda nyumbani ulipatiwa elimu kuhusiana na dalili za hatari kwa watoto wachanga? (zungushia kwenye jibu atakalotoa)

a) Ndio b) Hapana.

10 . Ulipatiwa elimu na nani……..

11. Je ulishawahi kupata elimu kuhusiana na dalili hatarishi kwa watoto wachanga tofauti na kituo cha afya?

a)Ndio b) Hapana (Kama ndio ni wapi?)

SEHEMU C: Uelewa kuhusiana dalili hatarishi kwa mtoto mchanga na hatua aliyochukuwa mama kwa mtoto aliyeonyesha dalili hatarishi katika kipindi cha mwezi mmoja

12. Je ni dalili zipi za hatari kwa mtoto mchanga unazozi fahamu? (zungushia kwenye jibu atakalotoa)

1) Joto kali mwilini

2) Mwili kuwa baridi

3) Kitovu kuwa chekundu, kutoa harufu mbaya, usaha au majimaji,vipele kwenye ngozi au macho kutoa uchafu

4) Kushindwa kunyonya

5) Kulia sana

6) Degedege

7) Kutokuwa na hisia aguswapo (Kupoteza fahamu)

8) Kuwa njano

9) Kuhema harakaharaka

10) Kubadlika rangi na kuwa blue hasa sehemu za midomo

13 Je kuna dalili yoyote ya kuumwa iliyojitokeza kwa mtoto katika kipindi cha mwezi mmoja? (zungushia kwenye jibu atakalotoa)

a) Ndio b) Hapana (kama hapana nenda swali namba).

14.Ni dalili zipi ulioiziona kwa mtoto kati ya hizi?

1) Joto kali mwilini

2) Mwili kuwa baridi

3) Kitovu kuwa chekundu, kutoa harufu mbaya, usaha au majimaji,vipele kwenye ngozi au macho kutoa uchafu

4) Kushindwa kunyonya

5) Kulia sana

6) Degedege

7) Kutokuwa na hisia aguswapo (Kupoteza fahamu)

8) Kuwa njano

9) Kuhema harakaharaka

10) Kubadlika rangi na kuwa blue hasa sehemu za midomo

15. Je ulimpeleka hospitali baada ya kuona dalili hizo?

a) Ndio b) Hapana (kama hapana alichukua hatua gani ?) majibu yatakayotolewa yawekwe katika vifungu vifuatavyo; i) **Nilimtibu mwenyewe**; ii) **Nilimpeleka kwa tiba asili;** iii) **Mengineyo**

16. Mtoto aliendeleaje?

17. Ingetokea mtoto wako amepata dalili yoyote ya ugonjwa ungefanya nini?

ASANTE KWA KWA KUSHIRIKI!!

Appendix C: Ethical clearance Approval

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR OF POSTGRADUATE STUDIES

P.O. Box 65001
DAR ES SALAAM
TANZANIA
Web. www.muhas.ac.tz

Tel G/Line: +255-22-2150302/6 Ext. 1015
Direct Line: +255-22 2151378
Telefax: +255-22-2150465
E-mail: dpgs@muhas.ac.tz

Ref. No. MU/ PGS/SAEC/Vol. IX/

3rd May, 2017

Ms. Joyce Clement Rugamalila
MSc. Midwifery and Women's Health
MUHAS.

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "MOTHER'S KNOWLEGE OF NEONATAL DANGER SIGNS AND HEALTH CARE PRACTICES DURING THE NEONATAL PERIOD MUHIMBILI NATIONAL HOSPITAL"

Reference is made to the above heading.

I am pleased to inform you that, the Chairman has, on behalf of the Senate, approved ethical clearance for the above-mentioned study. Hence you may proceed with the planned study.

The ethical clearance is valid for one year only, from 2nd May, 2017 to 1st May, 2018. In case you do not complete data analysis and dissertation report writing by 1st May, 2018, you will have to apply for renewal of ethical clearance prior to the expiry date.

Prof. Andrea B. Pembe
DIRECTOR OF POSTGRADUATE STUDIES

cc: Director of Research and Publications
cc. Dean, School of Nursing

Appendix D: Permission letter to Conduct Research at MNH

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

MUHIMBILI NATIONAL HOSPITAL

Cables: "MUHIMBILI"
Telephones: +255-22-2151367-9

FAX: +255-22-2150534
Web: www.mnh.or.tz

Postal Address:
P.O. Box 65000

DAR ES SALAAM
Tanzania

In reply please quote:

MNH/TRC/Research/2016/173 10th May, 2017

Joyce Clemence Rugemalila
School of Nursing,
MUHAS

RE: PERMISSION TO COLLECT DATA AT MNH: 2017

Name of Student	Joyce Clemence Rugemalila
Title	"Mothers' knowledge of neonatal danger signs and health care practices during the neonatal period Muhimbili National Hospital".
Institution	Muhimbili University of Health and Allied Sciences
Supervisor	Anne Outwater
Period	2nd May, 2017 to 1st May, 2018

You have been permitted to collect data in respect to the undertaking of the above mentioned study.

Please ensure that you abide to the ethical principles or research and other conditional of your approval.

Sincerely,

Dr. Edna Majaliwa
For, Head of Teaching, Research and Consultancy Coordination Unit

Cc: Head,
Obstetric and Gynaecology,
Muhimbili National Hospital.

Appendix E: Informed consent (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

ID-NO: ……

Consent to participate in this study

I'm **Joyce Clemence Rugemalila** from the Muhimbili University of Health and Allied Sciences, Dar es Salaam. At the moment, I'm carrying out a study to **assess the Mother's knowledge of neonatal danger signs and health seeking action during neonatal illness**.

Purpose of the study

This study aims to collect information concerning awareness of danger signs of neonatal illness and appropriateness of health care practices done.

What participation involves

If you agree to participate in this study the following will occur

You will be required to answer a question asked by researcher or researcher assistant (interview) which has been prepared for the study in order to obtain the intended information to inform the Muhimbili Instution and Ministry of Health on how to improve health care services.

Confidentiality

I assure you that all the information collected from you will be kept confidential. Only people working in this research study will have the access to the information. We will ensure that any information included in your report does not identify you as respondent as we will not put your name or other identifying information on the records of the information you provide. Moreover the interview will be carried at privacy room.

Risks

No any risk is foreseen in this study. But at any moment if you feel uncomfortable you may refuse to answer any particular question..

Rights to withdraw and alternatives

Your participation in this study is completely voluntary. If you choose not to participate in the study or if you decide to stop participating in the study you will not get any harm. You can stop participating in this study at any time, even if you have already given your consent. Refusal to participate or withdraw from the study will not involve loss of any benefit to which you otherwise entitled.

Benefits

The information you provide to us is extremely important and valuable. It will help funders of the project and other health official at every level to improve circumstances in health service provision. There is no financial benefit but you will be given a knowledge of recognizing neonatal danger signs after the interview.

In case of injury

No any harm anticipated to occur as the result of your participation in this study

Compensation

There will be no compensation for time spent during the interview; however, your participation is highly appreciated.

Who to contact

If you ever have questions about this study, you should contact the Director of Research and Publication. **Dr Joyce Masalu,** Muhimbili University of Health and Allied Sciences (MUHAS). **P. O. Box 65001**, Dar es Salaam, Tel. no **2150302-6**.

Signature of Researcher/Phone number……../0715233092

CONSENT

I have read the content in this form, my questions have been answered, I agree to participate in this study

Signature of Participant/thumb print

……..…….

Signature of Researcher/Research Assistant…….…….

Date of signed consent……..…….

Appendix F: Informed consent (Swahili version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

Namba ya Utambulisho…….

Ridhaa ya kushiriki katika utafiti huu

Habari! Jina langu naitwa **Joyce Clemence Rugemalila** natoka Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili, Dar es Salaam. Ninafanya utafiti **kuangalia uelewa wa dalili za hatari kwa mtoto mchanga (umri wa mwezi mmoja) na hatua alizochukua mama kumsaidia mtoto aliyonesha dalili hizo katika kipindi cha mwezi mmoja uliopita.**

Malengo ya utafiti

Utafiti huu una lengo la kupata taarifa kuhusu kiwango cha uelewa kuhusu dalili za hatari kwa watoto wachanga, ilikuweka maboresho ya elimu ya afya kwa umma na kupunguza vifo vya watoto wachanga vinavyoweza kutokea kutokana nauelewa duni.

Ushiriki unahusisha nini?

Ukikubali kushiriki katika utafiti huu;

Utaulizwa maswali yahusuyo uelewa wako kuhusu dalili hatarishi kwa watoto wachanga na hatua zinachukuliwa kwa mtoto aliyepata dalili za hatari.

Usiri

Nakuakikishia kwamba taarifa zote utakazotoa zitakuwa ni siri, ni watu wanao fanyakazi katika utafiti huu tu ndio wanaweza kuziona taarifa hizi. Tunakuakikishia ya kwamba taarifa zitakazojumuishwa kwenye ripoti yetu hazitakuwa zinatoa utambulisho wako. Hatutaweka jina lako au taarifa yoyote ya utambulisho kwenye kumbukumbu ya taarifa utakazotupatia.

Madhara

Hamna madhara yeyote yanayotegemewa kutokana nakujumuika kwako katika utafiti huu. Baadhi ya maswali yanaweza kukufanya usijisikie vizuri hivyo unaweza kukataa kujibu swali lolote na unaweza kusimamisha usaili wakati wowote.

Haki ya kujitoa.

Ushiriki wako katika utafiti huu ni wa hiari. Kama utachagua kutoshiriki au utaamua kusimamisha ushiriki wako hautapata madhara yoyote.Unaweza kusimamisha ushiriki katika muda wowote hata kama ulisharidhia kushiriki. Kukataa kushiriki au kujitoa katika utafiti hakukufanyi upoteze stahili yoyote unayotakiwa kupata.

Faida

Taarifa utakayotu patia ni muhimu sana na yenye thamani kwa kuwa itasaadia wizara ya afya na kuboresha huduma za mama na mtoto. Hapatakuwa na malipo ya fedha bali utapatiwa uelewa sahihi kuhusia na dalili hatarishi kwa mtoto mchanga baada ya mahojiano.

Endapo utaumia

Hatutegemei madhara yoyote kutokea kwa kushiriki kwako katika utafiti huu.

Fidia ya muda

Hakutakuwa na fidia ya muda uliotumika wakati wa kufanya mahojiano au majadiliano katika utafiti huu, ijapokuwa ushirik iwako katika utafiti huu utashukuriwa.

Watu wa kuwasiliana nao

Kama kuna swali kuhusianan na utafiti huu itakubidi kuwasiliana na Mkurugenzi wa Utafiti na Uchapishaji **Dr Joyce Masalu** - Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili, Dar es Salaam. **S.L.P. 65001 DSM**. Simu namba **2150302-6.**

Asante

...../0715 233092

RIDHAA.

Nimesoma maelezo ya fomu hii, maswali yangu yamejibiwa na nimeridhika. Nakubali kushiriki katika utafiti huu.

Sahihi ya Mshiriki/Dole gumba……..

Sahihi ya Mtafiti msaidizi……..

Tarehe ya kutia sahihi ya kushiriki…….....