The magnitude of self medication and associated factors among pregnant women attending antenatal clinic at Mbagala rangitatu Hospital, Temeke district in Dar es salaam, Tanzania

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THE MAGNITUDE OF SELF MEDICATION AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINIC AT MBAGALA RANGITATU HOSPITAL TEMEKE DISTRICT IN DAR ES SALAAM, TANZANIA

By

Joyce Iman Ngao, RNM)

"A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Midwifery of the

Muhimbili University of Health and Allied Sciences''

October 2020

CERTIFICATION

The undersigned certifies that they have read and hereby recommend for examination by the Muhimbili University of Health and Allied Sciences a dissertation entitled; **"*The magnitude of self-medication and associated factors among pregnant women attending antenatal clinicat Mbagala Rangitatu Hospital Temeke District in Dar esSalaam, Tanzania''*** in (Partial) fulfillment of the requirements for the degree of Master of Midwifery (Midwifery and Women's Health) of Muhimbili University of Health and Allied Sciences.

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Date

DECLARATION AND COPYRIGHT

I, **Joyce Iman Ngao**, declare that this **dissertation** is my 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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First and foremost I am greatly thankful to the Almighty God for granting me this opportunity and good health to be able to finish this work.

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DEDICATION

This dissertation work is affectionately dedicated to my husband (Sunday Shio), my beloved mother (Veronica Haule), my sons (Emmanuel and Blesser's), and my daughter Brightness Shio.

ABSTRACT

Background: Medication in pregnancy particularly in the first trimester is of great concern due to the possible health effect to the mother and the unborn baby. Self-medication practices during pregnancy remains a major problem in low-income countries. During pregnancy, some medication can lead to serious health problems including abortion, stillbirth, low birth weight, premature birth, and congenital anomalies. Despite these reported health impacts, yet very few studies assessing self-medication practices during pregnancy exist in Tanzania.

Broad objective: This study assessed the magnitude, types, and factors associated with self-medication practices among pregnant women attending RCH Mbagala Rangitatu Hospital Dar es Salaam.

Methods: A cross-sectional study was undertaken among 383 pregnant women aged 18 years to 45 years attending antenatal clinic at Mbagala Rangitatu Hospital. Face to face interview was done to collect data using a structured questionnaire. Data analysis was done by using SPSS version 23. Descriptive statistics were used to summarize the obtained data. Chi-square test, t-test, and logistic regression analysis were performed to determine factors that affected the outcome variable (self-medication practices). A p-value < 0.05 was considered statistically significant at the 95% confidence level.

Results: The prevalence of self-medication practices among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam was 51.4%. The most prevalence practice was done during the first trimester of pregnancy (32.9%). The commonest drug self-medicated was analgesics (39.2%). Factors associated with self-medication practices were a distance of > 1 km to heath facilities AOR 2.871(95% CI, 1.38-5.97), using cash as a mode of payment method for medical expenses, AOR 2.171(95% CI, 1.28-5.77),easy access to private retail pharmacyAOR 13.17 (95% CI, 7.74-22.39), gravidity AOR 1.890 (95% CI, 1.014-3.195)and difficulty in accessing health services AOR 2.36(95% CI, 1.29-4.38).

Conclusion: More than half of the study participants were self-medicated themselves during the first and second trimester of their pregnancies. The commonest drug self-medicated was analgesics. The determinants for self-medication practices in this study are using cash for medical expenses, staying more than one kilometer to the health facility, and difficultness in accessing health services. Following this higher prevalence intervention should be done to minimize the practice among pregnant women.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ANC	Antenatal clinic
AOR	Adjusted Odds Ratio
DAS	District Administrative Secretary
DMO	District Medical Officer
HI	Alternative hypothesis
HO	Null hypothesis
MOHCDGEC	Ministry of Health Community Development Gender Elderly and Children
MUHAS	MuhimbiliUniversity of Health and Allied Sciences
RCH	Reproductive and Child Health
SPSS	Statistical Package for Social Sciences
USAID	United States Agency for International Development
WHO	World Health Organization

CONCEPTUAL DEFINITIONS

Medication is a substance that is taken into or placed on the body that does one of the following things to cure a disease, to treat a medical condition, to relieve symptoms of an illness, and to prevent diseases (Cambridge Dictionary, 2020)

Self-medicationis defined as the use of medications without prior medical consultation regarding indication, dosage, and duration of treatment (Esan *et al.*, 2018).

Pregnancy is when a sperm fertilizes an egg after it's released from the ovary during ovulation and the fertilized egg travels and implant into the uterus as a result of pregnancy (Keats *et al.*, 2019).

A fetusis an unborn baby that develops and grows inside the uterus (womb). The fetal period begins 8 weeks after fertilization of an egg by a sperm and ends at the time of birth (MedlinePlus Medical Encyclopedia, 2011).

Preconceptionis the three months before pregnancy as this is the average time it takes for fertile couples to conceive(Dictionary, 2020).

Childbearing ageis an age when women can get pregnant and bear children from puberty when they start getting their menstrual period to menopause when they stop getting it. The average woman's reproductive years are between ages 12 and 51(Cambridge Dictionary, 2020).

Periconceptionis the period from before conception to early pregnancy(MedlinePlus Medical Encyclopedia, 2011).

OPERATIONAL DEFINITIONS

Self-medicationis when you take drugs without being written by the prescriber.

The first trimester is a period of the first three months of pregnancy from the last normalmenstrual period.

The second trimester is a period of the second three months of pregnancy from the last normal menstrual period.

Drug a substance used as a medication or a substance intended for use in the cure,treatment, or prevention of disease

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Medication in pregnancy particularly in the first trimester is of great concern due to the possible health effects to the motherand the developing fetus(WHO, 2015). Medication use during pregnancy is unavoidable especially in serious or chronic illness. Health education on medication use to women during pregnancy is crucial to create awareness of the potential risks of using either prescribed or non-prescribed medication during pregnancy(Eldalo et al., 2015).

The use of medications in pregnancy has been increasing over the years andreports showthat almost half of pregnant women in both high- income and low- income countriesuse four or more drugs at some point during their pregnancy(Mitchell *et al.*, 2011). Medication use during pregnancy is related to different factors like illness (e.gurinary tract infections, diabetes, asthma, and hypertension) (Eldalo, Siraj and Ma, 2015; Alrabiah *et al.*, 2017).

A study done in Sweden revealed that about 57.6% of prim gravida women used at least one prescribed drug during pregnancy including antibiotics, antacid, anddrug for diabetes (Stephansson *et al.*, 2011). Another study done in Saudi Arabia revealed that 9 out of 10 pregnant women usedat least one drug during pregnancy(Aljoher *et al.*, 2018).

Several studies indicate that pregnant women often take medicines without sufficient knowledge of the potential health risks of such drugs to their pregnancy(Kamuhabwa and Jalal, 2011; Kassaw and Wabe, 2012; Banzal *et al.*, 2017). A previous study(Kassaw and Wabe, 2012) which was done in Addis Ababa, Ethiopia revealed that women had inadequate knowledge of the potential risks of using drugs without prescriptions. This finding is similar to the study done in Surat, Gujarat, India where pregnant women were found to have low knowledge regarding the harmful effects of drugs during pregnancy (Banzal et al., 2017).

Regardless of education during ANC, the high prevalence in self- medicationpractices during pregnancy raise an inevitability need to increase awareness among pregnant women regarding

safe medicine use in Tanzania.The current study intends to assess the magnitude of self-medication practices and associated factors among pregnant women at MbagalaRangitatu hospital in Temeke district,Dar es Salaam.

1.2 Problem statement

Self-medication use during pregnancy presents a special concern due to the threat of potential structural and functional adverse effects of some drugs to the developing fetusincluding malformations, abortion, premature birth, respiratory problem, and cardiac problems(Mosha *et al.*, 2014).Malformation due to self-medication practices may happen as a result offolate antagonism, neural crest cell disruption, endocrine disruption, oxidative stress, vascular disruption, and specific receptor- or enzyme-mediated teratogens (Plotkin *et al.*, 2018). In Tanzania, it is estimated that 7% and 13.2% of neonatal death isa result of congenital malformation (Manji, 2009; Plotkin *et al.*, 2018; UNICEF, 2019).

A study that was done in Rufiji Tanzania revealed that self-medication of some drugs during the first trimester caused abortion (2.5%), stillbirth (3.5%), low birth weight (4.8%), premature birth (6.7%), and congenital anomalies at birth (1.3%) including club foot, genital defect, spinal bifida and cardiac defect(Mosha *et al.*, 2014). On the other hand, for many regularly used medicines, evidence for safe use in pregnancy have not been established because of their exclusion in clinical trials of medicines. Such inadequate medicine information has a significant impact on both the mother and the expected newborn.

The global rate of self-medication practice during pregnancy has been recognized to increase and even higher in developing countries. However, the types, magnitude, and reasons for its practice are limited in Tanzania. Studies conducted in some parts of Africa including Ghana and Nigeria indicate significant use of self-medication(Emmanuel et al., 2014; (Nkrumah and Gbagbo, 2019). However, such results may not be applied under our context due to some variations including economy and culture.In Tanzania, one study was conducted in Mwanza Tanzania and found the magnitude of self-medication in pregnancy to be 46.2% (Marwa *et al.*, 2018).Therefore, there is a need for such studies to broaden the knowledge on the magnitude,

types, and factors associated with self-medication practicesin this population group especially during the first and second trimester.

1.3 Conceptual Model

The study will use a conceptual model from (McLeroy *et al.*, 1988)which explains the five factors of influence for health-related behaviors and conditions. The factors are intrapersonal factors which are knowledge, attitudes, behaviors, self-concept, skill, developmental and history; Interpersonal processes and primary groups which compriseformal and informal social network and social support systems including family, workgroup and friendships, networks; The institutional factors include social institutions and organization characteristics, and formal (and informal) rules and regulations for operations; Community which comprises of institutional, community, and public factors and public policy which includes local, state and national laws and policies.

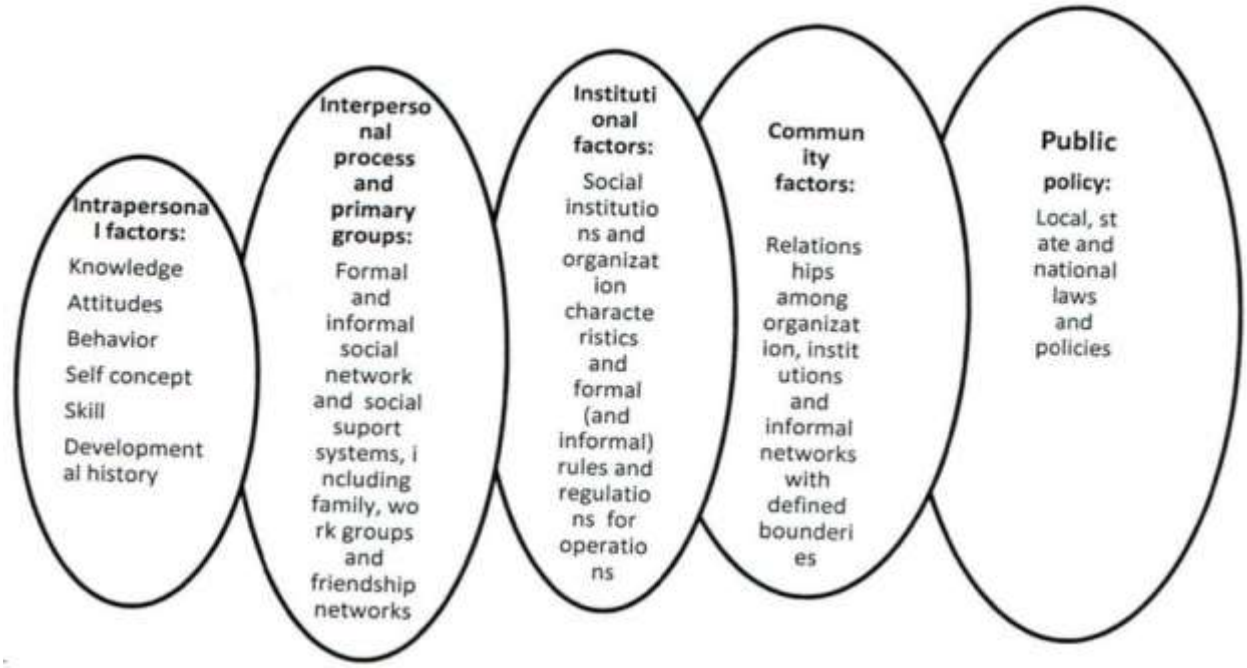

Figure 1: Original ecological model for health promotion (Mc Leroy and colleagues 1988)

The ecological model for health promotion is a framework for understanding the key factors that contribute to certain problems/risks. The model underscores the fact that to develop strategies for reducing and/or eliminating problems through broad-based prevention programming, it is critical to developing an understanding of the complex interplay of biological, psychological, social, cultural, economic, and political factors.

The application of ecological models for health promotion focuses on explaining the person-environment interaction, improving people-environment transactions, nurturing human growth and development in particular environments, and improving environments so they support the expression of an individual's system's dispositions(McLeroy *et al.*, 1988).

1.4Modified Social-Ecological Model Framework

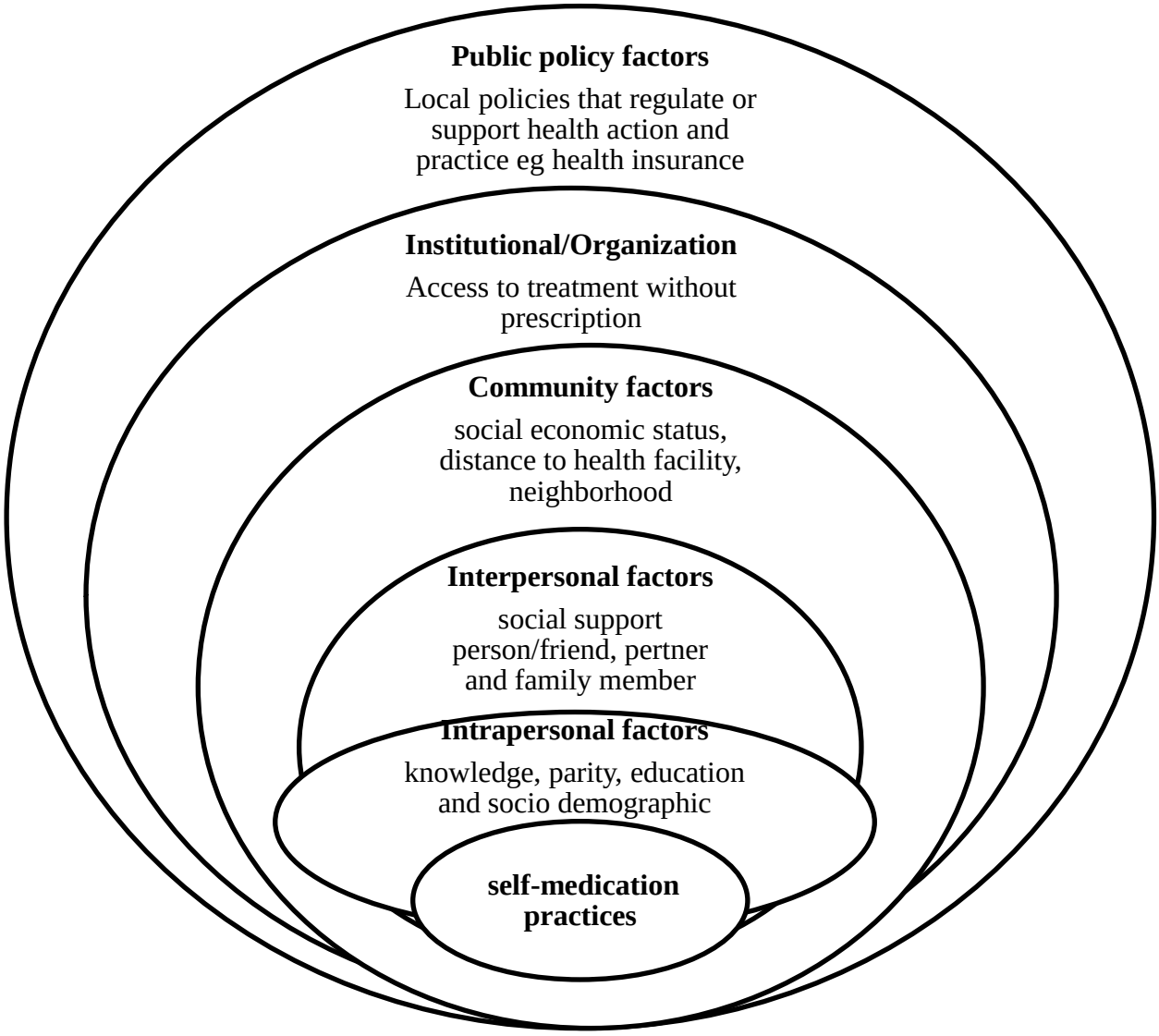

Figure 2: Modified Social-Ecological Model Framework on factors associated self-medication among pregnancy

The modified social-ecological model acknowledges the existence of personal responsibility in maintaining behavior changes that are important for the improvement of self-medication. Therefore using the social-ecological model as an analytical lens, this study will explorepregnant women's interaction with factors associated with self-medication in MbagalaRangitatu hospital(Onono *et al.*, 2015).

The Social-Ecological Modelframework shows theassociation of various factors on the usage of self-medicationamong pregnant women. This framework was useful in answering the research questions, making up the questions in the questionnaire, and also the construction of study objectives.

1.5Rationale

This study intended to assess the magnitude of self-medication practices and associated factors among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospitalin Dar esSalaam. The findings of this study broadened the knowledge on the magnitude, types, and factors associated with self-medication practices during the first and second trimester of pregnancy. Also, the information provided from this study would be useful for policymakers and relevant stakeholders to develop plans and appropriate interventions to prevent health risks resulting from self-medication practices during pregnancy.

1.6Research questions

1. What isthe prevalenceof self-medication practices during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam?

2. What are the factors associated with self-medication practices during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam?

3. What types of medication are self-medicated during the first and second trimester by pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam?

1.7 Research hypothesis

HI: Thereareno self-medication practices during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

HO:There areself-medication practices during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

1.8Objectives

1.8.1 Broad objective

To assess the magnitude and factors associated with self-medication practices during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospitalin Dar esSalaam.

1.8.2 Specific objectives

1. To determine the prevalenceof self-medication practices during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

2. To analyzefactors associated with self-medication practices during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.
3. To identifythe types of drugs that are self-medicated during the first and second trimester by pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Prevalenceof self-medication practice during pregnancy

Self-medication practice is regarded as the action of consuming medications by patients to cure a health condition or health symptoms diagnosed with their initiative (WHO 2017; Azami-Aghdash *et al.,* 2015). It is recognized as an individual's or patient's act of attempting to solve their health-related problems without taking into account professional skills and advice (Azami-Aghdash *et al.*, 2015). Unless proper caution is taken, this practice may result inmaternal and fetal adverse outcomes(Aljoher *et al.*, 2018).Purchasing and using the medicine without prescription has been reported to be the most common form of self-care which is rapidly increasing in pregnancy worldwide(Gebreegziabher *et al.*, 2012; Afshary *et al.*, 2015). This increase is found to be higher in low-income countries and reported to range from 12.7% to 95% (Wijesinghe, Jayakody, and de A Seneviratne, 2019).

Several studies conducted in African countries have reported a higher prevalence of self-medication practices among pregnant women(Yusuff and Omarusehe, 2011; Abasiubong *et al.*, 2012; Emmanuel *et al.*, 2014; Mbarambara *et al.*, 2016; Adanikin and Awoleke, 2017). In Nigeria, studies were conducted at various places including Uyo, Ado-Ekiti, Ibadan, and Jos where the prevalenceof self-medication practice were 72.4%, 31.5%, 63.8%, and 85% respectively(Yusuff and Omarusehe, 2011; Abasiubong *et al.*, 2012; Emmanuel *et al.*, 2014; Adanikin and Awoleke, 2017). In the Democratic Republic of Congo, a study was conducted and found the prevalenceof self-medication practice to be 59.9% (Mbarambara *et al.*, 2016) whereas 85.1% was reported in Ethiopia(Bedewi et al., 2018).

In Tanzania, such studies are rare, one study was conducted in Mwanza to assess self-medication practices among pregnant women and found the prevalenceto be 46.2% (Marwa *et al.*, 2018). Given the insufficiency of these studies in Tanzania, and the revealed maternal and fetal potential health effects of various drugs during pregnancy, this study aims to assess the prevalence of self-medication practices among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

2.2The types of drugs self-medicated during pregnancy

Various kinds of drugs are self-medicated in different parts of the world during pregnancy. Research indicates both modern and herbal medicines are frequently self-medicated especially in low-income countries with the reasons such as; prevention of abortion, treatment of insomnia, nausea and vomiting, infection prevention of anemia, high cost of consultation of private Doctors, non-seriousness of illness, prior experience about illness and easy accessibility to such medicines (Kulkarni, Khan, and Chandrasekhar, 2012; Befekadu et al., 2014; Emmanuel *et al.*, 2014; Mbarambara *et al.*, 2016). Common drugs that have been seen to be self-medicated in pregnancy include; analgesics, vitamins antibiotics, and herbs (Abeje et al., 2015).

A study that was conducted in Nigeria by Emmanuel and his colleagues found that pregnant women were using various drugs to self-medicate themselves including; analgesics (24.1%), anti-malarial (23.4%), vitamins (17.2%), antacid (14.5%), antibiotics (16.5%) and herbal remedies which were4.1%(Emmanuel *et al.*, 2014). These drugs were taken to relieve health conditions such as headache/fever, malaria, gastrointestinal disorders, infections, common cold, and cough. Another study that was done in Nigeria by Yusuff and his colleague revealed that more than half of pregnant women (58.4%) used orthodox medicines to self-medicate themselves, 31.2% of them did so by local herbs while 10.4% used both (Yusuff and Omarusehe, 2011). In their study, the reported reasons for using local medicines were effectiveness, easy parturition, faster-acting, and make babies stronger. The local herbs reported to be self-medicated include ginger (zingiber Officinale), Tena Adam (Ruta Chalepensis), and garlic (Allium Sativa) (Tamuno et al., 2011; Bayisa, Tatiparthi and Mulisa, 2015; Laelago, Yohannes and Lemango, 2016).Herbal medicine use has been shown to pose both maternal and fetal significant health impacts becausethe safety of such remedies is not well known (Abeje et al., 2015).However, some studies indicate ginger to be the most effective local herbs for nausea and vomiting. A systematic review of several published clinical trials provided evidence of ginger being effective at reducing nausea and vomiting at doses of 1.0 to 1.5 g (Borrelli *et al.*, 2005).

There are limited studies done in Tanzania assessing the types of drugs self-medicated during pregnancy. Therefore, this study aims to assess types of drugs that are self-medicated during the first and second trimester among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

2.3 Factorsassociated with self- medication practices during pregnancy

Although most of the reviewed studies did not address factors associated with self-medication practices, some checked such association with socio-demographic characteristics including age, place of residence, sex, educational status, occupation, income, and ethnicity (Frawley et al., 2015; Courrier et al., 2015; Kıssal et al., 2017). Other factors include knowledge, access to medicines, time (Befekadu et al., 2014; Afshary *et al.*, 2015) perception towards risk of self-medication, previous medication use, gestational age, gravidity, and parity (Yusuff and Omarusehe, 2011).

The association of previous medication use and self-medication practices has been reported by different studies (Befekadu et al., 2014; Jambo *et al.*, 2018). This association was justified by the experience, effectiveness, and safety belief of the pregnant women towards the previously used drug. For a factor of occupation, a type of occupation such as farming has been reported to be associated with self-medication in pregnancy compared to other occupations. A study that was done in Ethiopia reported an increased odds of self-medication practices for pregnant women who were farmers (Jambo *et al.*, 2018). The same study reported increased risk of self-medication practices among pregnant women with low monthly income. Education level may also influence self-medication practices;a high level of education reduces the risk of self-medication practices than low-level education. This is because a high level of education increases awareness of health risks following the use of drugs without a prescription (Befekadu et al., 2014; Afshary *et al.*, 2015). Some studies provide contradicting results(Frawley et al., 2015; Courrier et al., 2015; Kıssal et al., 2017). In their findings, higher education seems to increase risks for self-medication practices among pregnant women. However, a study done in 2014 reports lower odds of self-medication practices with local herbs with higher education(Mothupi, 2014).

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Design

The study design was cross-sectional using a quantitative approach.This design was selected as it intends to describe the status of a phenomenon and how it relates to other variables and that all of them are captured during one period of data collection. Therefore, self-medication practices(health phenomena) and other variables (factors) were captured during one period of data collection (Polit and Beck., 2004).

3.2 Study Site

This study was conductedat the antenatal clinic at MbagalaRangitatu Hospital Temekedistrict in Dar es Salaam. The purpose of selecting this study siteis because of the large number of pregnant women attending that public health facility. Itwas easy for the researcher to get access to the facility. Also, the sitegetsan average of 50-100 pregnant women that attend ANC per day.A total of 1174 pregnant womenattended this facility on Sep/19 from different wards and villages.Thislarge populationserves as a key point for site selection as it will enable the researcher to obtain an estimated sample that will lead to informed conclusions.

3.3 Study Population

The study population waspregnant women attending the antenatal clinic atMbagala Rangitatu hospital Temeke in Dar es Salaam.

3.4 Sample size

The following formula was used for sample size calculation as stipulated by (Ajay and Micah, 2014).

$$n = \mathbf{Z^2Pq/ e^2}$$

Where;

n = sample size

Z = Z value for confidence level, 95% (1.96)

q=1-p

P = Proportion of drug use during pregnancy, 0.4624(Account and Guidelines, no date)

e = Confidence interval or margin of error, 5% (0.05)

Using the confidence level of 95% proportion of 46.24% and the precision of 5% then substituting the values in the formula, we get the following:

n = 1.96x1.96x0.4624 (1-0.4624)/0.05x0.05

= 381.9, adding 10% of this value to take care of possible non-responses,

If no was calculated sample size and R was (100%-10%) non-responses = 90% responses rate (0.9)

$$\text{Adjusted sample} = \text{no} \times \frac{1}{R}$$

$$381.9 \times \frac{1}{0.9} = 424$$

Therefore, the calculated sample size was 424 pregnant women attending at Mbagala Rangitatu hospital.

3.5 Sampling procedures

A Systematic Random Sampling method was used to select study participants by dividing the estimated total number of pregnant women attending RCH for Antenatal care services (1174) with an estimated sample size (424) to obtain a random sampling interval 3 (the 'kth' value). After obtaining the sampling interval, the first participantswere selected by using simple random sampling, in this method; all pregnant women had equal chances to participate in the study. Thereafter, the rest were selected systematically until the sample size was reached.

3.6Inclusion criteria

a) Pregnant women attended antenatal clinic aged between 18 to 45 years. This age group was selected because the majority of pregnant women in Tanzania fall under 18-45 years.

b) Pregnant women who were in the first and second trimester.The first and second trimester were used as most teratogen effects occur in this period of pregnancy.

3.7Exclusion criteria

a) Pregnant women with a hearing problem.
b) Pregnant women with chronic or serious condition with young children who could interfere with data collection.

3.8Study variables

3.8.1 Independent variables:

Intrapersonal factors: Knowledge, Parity,education and socio-demographic, interpersonal factors: Social support person/friend, partner, and family, Community factors: social-economic status, distance to health facility and neighborhood, institutional/ organization factors: access to treatment without prescription and public policy factors: local policies that regulate or support health action and practice eg health insurance.

3.8.2 Dependent variable

The dependent variable of this study was self-medication practices. In this study,any pregnant woman who tookany drugswithout a prescription was considered asself-medication.

3.9Data collection procedure

Swahili structured questionnaires wereused to collect data and through face to face interview. Theresearcher and researcher assistant read the question and fill it according to the participant's responses. Data was collected from study participants after being well informed of the purpose and benefits of the study for them to make an informed decision.

3.10 Selection and training of research assistants

Three nurses who had experience in the research were selected as research assistants. They were trained and familiarized with the study objectives and how to collect data using the tools provided.

3.11 Pre-test

The tool was validated by conducting a pre-test study at Round table Health Centre which involved 10% of all participants which was42. Participantswere selected by simplerandom using lottery and the questionnaire was administered. A statisticianwas consulted to validate the tool before going to actual data collection. Results wereused to categorizeand correct doubt of questionnaires for the reliability of data collection.The Cronbach's alpha score of 0.8 was obtained, and therefore it showed that the scale has high internal consistency and therefore reliable for the study.

Results of the pilot study

A total of 42 pregnant women were recruited in the pilot study. The mean age, parity, and gravidity of the study population were 27.52± 5.75, 1.50± 1.19, and 2.93± 1.45 respectively. The majority of study participants were married (83.3%) and nearly three quarters had a primary level of education (73.8%). Also, the majorityof study participants (69.0%) were in the second trimester of pregnancy.

Out of 42 pregnant women, 18(42.9%) women reported to self-medicate themselves. Therefore, the prevalence of self-medication practices among pregnant women in the pilot study was found to be 42.9%. Self-medication practice was mostly done in the first trimester of pregnancy (Table 0) as compared to the second trimester of pregnancy (p-value<0.05). Headache was the commonest reason (26.2%) reported for self-medication practices followed by general body malaise (21.4%). The most prevalent self-medicated drugs were analgesics (35.7%) followed by antibiotics (16.7%).

Table 0: Self-medication practices during the first and second trimester in the pilot study

Trimester	Self-medication practices		p-value
	Frequency(n)	Percentage (%)	0.0001
First trimester	16	38.1	
Second trimester	2	4.8	
Total	**18**	**42.9**	

3.12Study tools

A structured questionnaire that contained 37 questions was used to collect data onself-medication practices and associated factors. Data collected included socio-demographic information, interpersonal factors, community, intuitional/organization factors, types of drugs being self-medicated, and self-medication practices.

3.13Validity and Reliability

Validity is establishing whether the instrument content is measuring what it is intended to measure accurately(Polit and Beck, 2004). The data collection instrument was validated to obtain relatively reliable responses. The validation of the data collection instrument (the questionnaires) intends to make them clear and unambiguous.The reliability of a research instrument concerns the extent to which the instrument yields the same results on repeated trials(Kothari, 2004; Polit and Beck, 2004). Questions in the research instrument werepre-coded, pre-tested,and modified by identified shortcomings(Polit and Beck, 2004).Thestructuredquestionnairewasprepared inEnglishLanguageandtranslatedtheSwahili language to make easy understand for study participants however, both versions werekept for potential use. The questionnaire was tested before to actual data collection, the same questionnaire wasadministered to all participants and a detailed explanation was provided for participants to understand the instructions on the tool. Only trained researcher and research assistants wereinvolved in data collection using the tool and ample time to practice weregiven before the actual use of the tool.

3.14Data analysis

The questionnaires were coded and entered into a computer for analysis using Statistical Package for Social Sciences version 23 software.Data analysis was doneby using both descriptive statistics,inferential analysis. In descriptive statistics, standard deviation, bar chart, and tables wereused tosummarize, organize, and present the descriptive statistical measures.

The association between the independent variables (Knowledge, Parity, education, socio-demographic factors, Social support person/friend, partner and family, social-economic status, distance to the health facility, access to treatment without prescription and policy factors such as health insurance) and dependent variables (self-medication practices) was examined with the use of chi-square test. Thereafter, logistic regression analysis was performed to determine factors that strongly affected the outcome variable (self-medication practices). A p-value < 0.05 was considered statistically significant at the 95% confidence level.

3.15Ethical consideration

Ethical clearance was obtained from theMUHAS Research and Publications Committee**(**refer to App E). Permission to conduct the research study was obtained from District Administrative Secretary (DAS) through a District Medical Officer (DMO) and Medical officer in charge of theMbagalaRangitatu hospital(refer toApp G).Participants were informed of confidentiality and were maintained throughout the research process. Participants were informed about the purpose of the study and had the right to join or withdraw from the study.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This chapter presents the results of the study produced by quantitative analysis. It starts by describing the general characteristics of the study participants. This is followed by the substantive findings of the study presented according to the research objectives. These findings have been used to provide the foundation for the conclusions and implications outlined in chapter six.

4.2 Characteristics of the Study Population

Table 1 shows the general characteristics of the study participants. A total of 424 pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam were recruited in the study. Out of them, 383 were interviewed resulting in a response rate of 90.3%.

In this study, the mean age, parity, and gravidity of the study population were 28.70± 6.23, 1.43± 1.28, and 2.55± 1.35 respectively.The majority of study participants were married (80.4%) and more than half had aprimary level of education (66.1%). Besides, about three-quarters of study participants (75.5%) werein the second trimester of pregnancy.

Table 1: General characteristics of study participants (N = 383)

Characteristics	Frequency	Percentage
Age (Years)		
15-19	20	5.2
20-24	100	26.1
25-29	89	23.2
30-34	98	25.6
35-39	53	13.8
40-44	23	6.1
Education level		
No formaleducation	16	4.2
Primary education	253	66.1
secondary education	99	25.8
Higher education	15	3.9
Marital status		
Single	60	15.7
Married	308	80.4
Cohabited	15	3.9
Occupation status		
Non employed	228	59.5
Self-employed	141	36.8
Employed	14	3.7
Alcohol consumption		
Yes	8	2.1
No	375	97.9
Trimester		
First trimester	94	24.5
Second trimester	289	75.5

4.3 Prevalence of self-medication practices in the first and second trimester

In this study, out of 383 pregnant women, 197(51.4%) women reported to self-medicated themselves. Therefore, the prevalence of self-medication practices among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam was found to be 51.4%. As shown in table 2, there was a significant difference in proportion in pregnant women who self-medicated themselves during the first and second trimester of pregnancy (p-value <0.05).

Table 2: Self-medication practices during the first and second trimester

Trimester	**Self-medication practices**		**p-value**
	Frequency(n)	Percentage (%)	0.0001
First trimester	126	32.9	
Second trimester	71	18.5	
Total	**197**	**51.4**	

4.4 Health symptoms for self-medication practices among study participants

Figure 3 shows various health symptoms that were reported by study participants to be the reasons for self-medication practices among them. In all the reasons reported, the headache was the commonest one (29.8%) followed by general body malaise (19.6%).

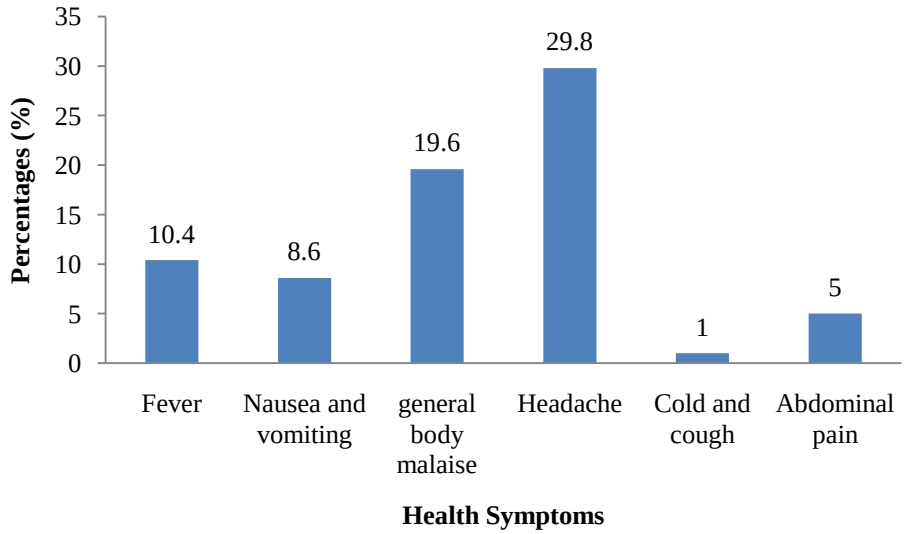

Figure 3: Health symptoms related to self-medication practices

4.5 Types of drugs self-medicated among study participants

Figure 4 shows various drugs that were self-medicated by pregnant women attending the antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam. The most prevalent self-medicated drug was analgesics (39.2%) followed by antibiotics (13.8%).

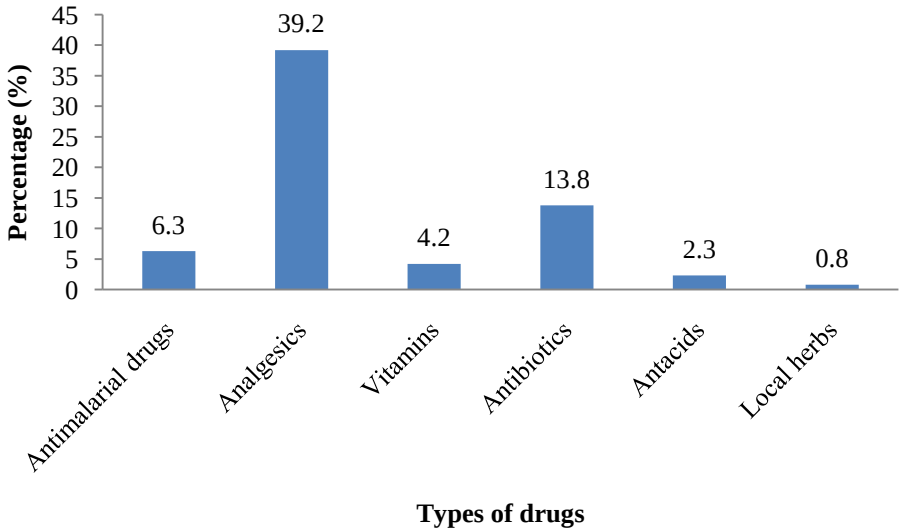

Figure 4: Types of drugs self-medicated by study participants

4.6 Factors associated with Self-medication Practices

Table 3 shows various factors associated with self-medication practices among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

Table 3:Bivariate analysis between various factors and self-medication practices

Intrapersonal factors	**Self-medication practices**			
	Yes	No	Crude odds	P-value
Education level				
No formal education	8(50%)	8(50%)	1.5(0.4-6.2)	0.577
Primary education	135(53.4%)	118(46.6%)	1.7(0.6-5.0)	0.319
secondary education	48(48.5%)	51(51.5%)	1.4(0.5-4.3)	0.541
Higher education	6(40.0%)	9(60%)	reference	
Marital status				
Single	32(53.3%)	28(46.7%)	0.9(0.5-1.6)	0.749
Married	165(51.1%)	158(48.9%)	reference	
Occupation status				

Non employed	122(53.5%)	106(46.5%)	0.9(0.3-2.6)	0.791
Self-employed	67(47.5%)	74(52.5)	0.7(0.2-2.1)	0.494
Employed	8(57.1%)	6(42.9%)	reference	
Knowledge ofthe consequences of poorly treated health condition				
Knowledgeable	95(46.6%)	109(53.4%)	0.7(0.4-0.9)	0.042
Not knowledgeable	102(57%)	77(43%)	reference	
Reading drug leaflets				
Read	55(49.5%)	56(50.5%)	0.9(0.6-1.4)	0.637
Don't read	142(52.2%)	130(47.8%)	reference	
Social support				
Yes	175(51.9%)	162(48.1%)	1.2(0.6-2.2)	0.602
No	22(47.8%)	24(52.2%)	reference	
Monthly income				
<150000	180(50.7%)	175(49.3%)	0.7 (0.3-1.5)	0.308
150000 and above	17(60.7%)	11(39.3%)	reference	
private pharmacies around home				
Yes	182(51.6%)	171(48.4%)	1.1(0.5-2.2)	0.870
No	15(50%)	15(50%)	reference	
health facilities distance				
> 1 Km	186(53.9%)	159(40.1%)	2.9(1.4-5.9)	0.004
Within 1 km	11(28.9%)	27(71.1%)	reference	
Easy to access a health facility				
No	38(69.1%)	17(30.9%)	2.4(1.3-4.4)	0.005
Yes	159(48.5%)	169(51.5%)	reference	
Easy to get a doctor of choice				
Yes	136(49.1%)	141(50.9%)	0.7(0.5-1.1)	0.139
No	61(57.5%)	45(42.5%)	reference	
medical expenses payment method				
Cash	186(53.9%)	159(46.1%)	2.2(1.3-5.8)	0.003
Insurance	11(28.9%)	27(71.1%)	reference	
Easy accessibility to retail pharmacy				
Yes	155(77.1%)	46(22.9%)	11.2(6.9-18.1)	0.000
No	42(23.1%)	140(76.9%)	reference	
Gravidity	Mean±SD=2.68±1.44	Mean±SD=2.4±1.24	2.011*	0.014
Parity	Mean±SD=1.54±1.39	Mean±SD=1.32±1.13	1.736*	0.020
Age	Mean±SD=28.58±6.42	Mean±SD=28.82±6.04	0.382*	0.173

*= t-test

Results from this study revealed no significant association between variables such as age, marital status, occupation status, education level, reading drug leaflets, social support, monthly income, presence of private retail shop near home, accessibility of doctor of choice with self-medication practices ($p>0.05$). However, there is an existing evidence association between knowledge on the consequence of poorly treated health conditions, distance from home to the health facilities, mode of payment to medical expenses, and easiness in accessing health facilities with self-medication practices ($p<0.05$). The crude odds of self-medication practices increased by 3 for pregnant women who are living > 1 km to health facilities, also, the odds increased by 2 for the pregnant women who were using cash as a mode of payment method for medical expenses. Additionally, the odds of self-medication practices increased by 2 to pregnant women who felt difficult in accessing health services. However, the crude odds for self-medication practices decreased by 0.7 with knowledge of the consequences of poorly treated health conditions. Moreover, the crude odds of self-medication practices increased by 11 for pregnant women who could easily access private retail pharmacy.

Additionally, results from this study show that there is a significant difference in mean of parity and gravidity among individuals who practiced self-medication compared to those who did not ($p<0.05$), therefore the study suggests an existing relationship between these variables and self-medication practices.

4.5 Determinants of Self-medication Practices

Table 4 show determinants for self-medication practices among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam.

Table 4: Multivariate analysis of predictors for self-medication practices

Variable	Crude Odds	P-value	Adjusted Odds	P-value
Knowledge of poorly treated health condition				
No	1.520 (1.015-2.277)	0.042	1.203 (0.184-7.875)	0.847
Yes	Reference		reference	
health facilitie distance				
> 1 Km	2.871 (1.381-5.972)	0.003	2.989 (1.407-6.350)	**0.004**
Within 1 km	Reference		reference	
Easy to access a health facility				
No	2.367 (1.289-4.379)	0.005	2.127 (1.141-3.965)	**0.018**
Yes	Reference		reference	
medical expenses payment method				
Cash	2.171 (1.281-5.772)	0.003	2.611 (1.217-5.599)	**0.014**
Insurance	Reference		reference	
Easy accessibility to retail pharmacy				
Yes	11.23 (6.97-18.09)	0.000	13.17 (7.74-22.39)	**0.000**
No	Reference		reference	
Gravidity	1.167 (1.003-1.357)	0.04	1.890 (1.014-3.195)	**0.045**
Parity	1.751 (1.67-2.767)	0.02	0.785 (0.459-1.341)	0.375

After adjusting for all the variables, results revealed that the odds of self-medication practices increased by 3 for pregnant women who are living >1 km to health facilities, also, the odds increased by 2 for the pregnant women who were using cash as a mode of payment method for medical expenses. Additionally, the odds of self-medication practices increased by 2 with pregnant women who felt difficult in accessing health services. Also, the odds of self-medication practices increased by 13 for pregnant women who could easly access a private retail pharmacy. More over, the odds of self-medication practices increased with the unity increase in gravidity.

CHAPTER FIVE

5.0 DISCUSSION

5.1 Prevalence of self-medication practices

In this study, the prevalence of self-medication practices among pregnant women attending antenatal clinics at Mbagala Rangitatu Hospital in Dar es Salaam was 51.4% with the most prevalence practice being done during the first trimester of pregnancy (32.9%).Self-medication practices were associated with using cash for medical expenses, staying more than one kilometer to the health facility, and difficultness in accessing health services.

The prevalence of self-medication practices in this study was lower compared to the one reported by Kazeem and his colleagues where the prevalence was reported to be 61.5% (Kazeem and Omarusehe, 2011) Mulongo et al where the prevalence was reported to be 61.3% (Mulongo, et al 2016), and Abasiubong and his colleagues where the prevalence of self-medication practices was reported to be 72.4% (Abasiubong, et al 2012).The noted differences can be explained by the sample size. In the study of Kazeem and his colleagues, given the same methodology, their sample size wasfive times (1,594) higher compared to this study (383). Studies suggest higher chances of getting the outcome of interest with an increasing sample size. In the study of Mulongo et al, their sample size was three times higher (920) compared while the sample size for the study of Abasiubong was reported to be slightly higher (518)compared to this study (383).

However, the prevalence of self-medication practices in this study was higher compared to various studies done elsewhere (Befekadu1 et al., 2013; Banzal, et al. 2017; Adanikin and Awoleke, 216; Marwa et al, 2018). These differences (except for the study done by Marwa and his colleagues) can be explained by differences in the health service system of the other countries, the health system of most middle-income countries, as well as India,is good compared to the one in Tanzania (developing country). It is believed that easy health services accessibility is associated with a good health system.

A similar study done in Tanzania by Marwa and his colleagues showed the prevalence of self-medication practices to be 46.24% (Marwa et al., 2018). The reasons for this difference may be due to various reasons. The first reason may be differences in age group, in their study, there were only 13 participants who were above 37 years while in this study, 55 participants were age above 37 years, the older the age the higher the possibility of being aware of health effects accompanied by using drugs without prescription. The second reason may be marital status, in a study by Marwa and his colleagues; it shows that 46.24% of study participants were married compared to 51.1% in this study. Results from the direct questionnaire showed that most of the participants who self-medicated themselves were advised by their husbands (11.7%) while 18.6% were advised by friends and relatives. The third reason may be due to difference in education level, more than half of study participants (51.6%) in the study of Marwa and his colleagues had secondary and higher education compare to the one (29.8%) in this study. It is believed that education helps to broaden the understanding of health risks to various behaviors including self-medication practices.

5.2 Types of drugs self-medicated

In this study, the most prevalent self-medicated drug was analgesics. The prevalence of self-medication of this drug is not surprising due to the reason that the majority of study participants in this study complained of headaches and general body malaise. The mentioned prevalent symptoms are believed to be managed by analgesics. These findings are similar to the findings reported by Marwa et al, 2018. The prevalent use of analgesics without prescription in this study is also not surprising because they are the kind of drugs that can easily be accessed at the small retail pharmacy and even in other normal shops. Although there was no significant association between self-medication practices and the presence of private retail shops near participant's homes, results from the direct questionnaire showed that more than half of study participants could easily access private retail pharmacy as they were near their homes. Also, the source of drugs for self-medication was reported by some participantsto be a private retail pharmacies. Additionally, the study has revealed a statistically significant association between easy accessibility of the private retail pharmacy and increased adjusted odds of self-medication practices.

5.3 Factors associated with self-medication practices

In this study, self-medication practices were found to be predicted by using cash for medical expenses, staying more than one kilometer to the health facility, and difficultness in accessing health services. The association of using cash for medical expenses and increased odds of self-medication in this study can be explainable. Almost all study participants in this study had no employment and could earn very little or nothing at all per month. Also, responses from the direct questionnaire showed that the majority (88%) of study participants were dependent thus they were getting social support, participants were getting support such as food, shelter, and clothes (50.7%) and payment to hospital bills (82.5%). Similar findings were reported by Kazeem and his college in Nigeria.

The association of long distance from home to the health facility and self-medication practices has also been reported elsewhere (Befekadu1 et al., 2013; Banzal, et al., 2017; Adanikin and Awoleke, 216; Marwa et al, 2018). The identification of the distant location of health facilities and difficultness in accessing health services by the majority of the study participants (90.1%) as a crucial factor encouraging self-medication during pregnancy may be particularly important in rural parts of Tanzania, where a significant majority of Tanzanians reside and where functional access roads and transportation are shortage (Marwa et al., 2018). A large proportion of pregnant women may therefore find themselves self-medicated to meet their professed health needs rather than seek proper medical care at distant health facilities.

5.4 Study limitation

The study had some limitations. The first limitation was the cross-sectional nature of the data that could murky the causal effect relationship of different factors and it lacks qualitative data that could get into the depth of the problem.The second limitation is that the study was conducted at the town (Mbagala Rangitatu) and therefore it will be difficult to generalize the results for the rural population.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The prevalence of self-medication practices among pregnant women attending antenatal clinic at Mbagala Rangitatu Hospital in Dar es Salaam was high. The most prevalent practice was done during the first trimester of pregnancy. The commonest drug self-medicated was analgesics. The most reported symptoms for self-medication practices were headache and general body malaise. The determinants for Self-medication practices in this study are using cash for medical expenses, staying more than one kilometer to the health facility, and difficulty in accessing health services.

6.2 Recommendations

Following the higher prevalence of self-medication practices during the first and second trimester in this study,policy-makers should intervene to minimize the practice among pregnant women.Health care personnel should promotehealth focusing on advising pregnant women to seek medical help in case of any ill health symptoms and therefore prevent self-medication practices.

Besides, the government should prioritize the addition of new and well-equiped health centres to help pregnant women easily access health care services.

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APPENDIXES

Appendix A: Informed consent

INFORMED CONSENT FORM

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES DIRECTORATE OF RESEARCH AND PUBLICATION, MUHAS ID-NO _____

Consent to participate in the study about the magnitude and factors associated with self-medication among pregnant women at Mbagala Rangitatu Hospital in Dar es Salaam

My name is Joyce Iman Ngao. I am a midwife student conducting a study about themagnitude and factors associated with self-medication among pregnant women.

The purpose of the study is to assess themagnitude and factors associated with self-medication among pregnant women to help to reduce the utilization of self-medication.

Participants will require to answer some basic questions about self-medication practice during pregnancy and some basic demographic information. Your participation in this study will be at your discretion and you are free to decide without any adverse reactions.

Confidentiality

All information that will be collected from you will be entered into the computer and protected. The study will not include details that directly identify you, such as your name, only the participant identification number will be used. Only a small number of researchers will have direct access to the interview. The study will be published or presented at a scientific meeting, names,and other information that might identify you will not be used.

Risks and discomfort

There are no known risks associated with your participation in this study. However, if any physical injury results from participation in this study, we will provide you/your relative with

medical treatment according to the current standard of care in Tanzania. There will be no additional compensation to you or your relative.

Rights of Participation

Your participation in this study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way you decide not to participate or to withdraw from this study. Also, you are free to skip any question if you feel uncomfortable.

Potential Benefits

There are no known direct benefits to you that will result from your participation in this study. However, your participation will bring contributions that help to decrease the magnitude and effect related to theutilization of self-medication during pregnancy.

Contact information

If you have any questions about this study or any problems arise, please contact Joyce Iman Ngao, (mobile number 0652595150). If you have any questions or concerns about your rights as a research participant, please contact Director of Research and Publication (DRP), Muhimbili University of Health and Allied Sciences, P.O. Box 65001, Dar es Salaam, Tel no +255-22-2152489 Email drp@muhas.ac.tz

Consent

I have read this consent form and have been allowed to ask questions. I give my consent to participate in this study.

Participants signature…… Date: ……

Signature of principal investigator…… Date……..

Appendix B: Swahili consent form

CHUO CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI KIBALI CHA KUSHIRIKI KWENYE UTAFITI

Namba ya mshiriki_____

Idhini ya kushiri kwenye utafiti waukubwa na hali zinazo changia utumiaji wa dawa binafsi kwa wanawake wajawazitowa Mbagala Rangitatu Hospital ya Dar es Salaam.

Jina langu ni Joyce Iman Ngao. Ni mwanafunzi wa ukunga nafanya utafiti juu ya ukubwa na hali zinazopelekea utumiaji wa dawa binafsikwa wanawake wajamzito Mbagala Rangitatu hospitaliya Dar es Salaam.

Lengo la utafiti huu ni kuchunguza ukubwa na hali zinazopelekea utumiaji wa dawa binafsi kwa wanawake wakati wa ujauzito.

Kushiriki kwako katika utafiti huu ni hiari na hutashurutishwa na mtu yeyote kama utashiriki utaombwa kujibu maswali hapo chini

Madhara Utafiti huu hautamdhuru mtu yeyote atakaeshiriki. Hatutarajii kama kushiriki kwako kutaleta Madhara kwako lakini ikiwa umedhurika tutakusaidia kulingana na sera ya matibabu ya Wizara ya afya.

Usiri

Taarifa zote zitakazo kusanywa kutoka kwako zitaingizwa kwenye kompyuta na zitalindwa. Utafiti huu hautaweka wazi taarifa kama vile jina, ila kutakua na namba ambayo itakutambulisha. Kama utafiti huu utachapishwa kwenye mitandao au kuwasilishwa kwenye mikutano, jina lako au maelezo mengine yanayokutambulisha hayatatumika.

Madhara

Utafiti huu hautamdhuru mtu yeyote atakaeshiriki. Hatutarajii kama kushiriki kwako kutaleta Madhara kwako lakini ikiwa umedhurika tutakusaidia kulingana na sera ya matibabu ya Wizara ya afya.

Haki ya kushiriki

Una uhuru wa kuchagua kushiriki au kutoshiriki katika utafiti huu na pia unahaki ya kujibu au Kutokujibu swali ambalo halikupi amani, hakuna gharama yoyote endapo utaamua kujitoa Kwenye utafiti huu kama hutapendezwa nao.

Faida

Hakuna faida ya mojakwamoja kwako kwa sasa lakini mchango wako utasaidia katika Kuboresha huduma za afya na kuelimisha jamii kuhusu ufahamu juu ya ukubwa na hali zinazopelekea matumizi binafsi ya madawa kwa wamama wajawazito hii itachangia kuwaelimisha wajawazito madhara ya matumizi binafsi ya madawa na kupunguza madhara yatokanayo na matumizi ya madawa wakati wa ujauzito.

Mawasiliano.

Kama una maswali zaidi kuhusu utafiti huu, tafadhali wasiliana na mtafiti Mkuu Joyce Iman Ngao (0652595150). Chuo Kikuu cha Sayansi naTiba Shirikishi Muhimbili, S.LP. 65004, Da esSalaam. Na kama una wasiwasi kuhusu haki zako kwenye utafiti huu tafadhali wasiliana na Mkurugenzi wa utafiti na uchapishaji .Chuo cha Sayansi naTiba Shirikishi Muhimbili S.L.P 65001 Dar-es-Salaam, simu namba 022-2152489. Barua pepe drp@muhas.ac.tz

Idhini ya ushiriki Nimesoma fomu hii na nimepewa muda mzuri wakuuliza maswali na kujibiwa kwa ufasaha, Hivyo nakubali kushiriki katika utafiti huu.

Sahihi ya mshiriki…..……tarehe……..

Sahihi ya mtafiti……tarehe……..

Appendix C: Questionnaire

THE QUESTIONNAIRE ABOUT MAGNITUDE OF SELF-MEDICATION PRACTICES AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN AT MBAGALA RANGITATU HOSPITAL IN DAR ES SALAAM

Please fill in the Required Information and Only Tick the Most You Think is the Correct Answer

SECTION I. For office use only **Serial No. [ ]**

SECTION II. Socio-demographic Information

1. Age: ……
2. Education level:
   a) No formal education( )
   b) Primary Education ( )
   c) Secondary Education ( )
   d) Higher education ( )
3. Marital status
   a) Single ( )
   b) Married ( )
   c) Cohabited ( )
   d) Widow ( )
   e) Divorced ( )
4. Where do you live?.....
5. Occupation:
   a) None employed ( )
   b) Self-employed ( )

c) Employed ( )

6. What kind of work do you do?.....

SECTION II Self-medication practices

7. Do you smoke/ smoking status in this pregnancy?

a) Smoker

b) Non smoker

8. Do you consume alcohol in this pregnancy?

a) Yes ( )

b) No ( )

9. Do you use drug abuse in this pregnancy?

a) Yes ( )

b) No ( )

10. Have you used any medication without prescriptions in this pregnancy?

a) Yes( )

b) No( )

11. If yes, what kind of drugs have you used without doctor's prescriptions in this pregnancy?

a) Antimalarial( )

b) Analgesics( )

c) Vitamins ( )

d) Antibiotics ( )

e) Antacid( )

f) Local herbs….specify…….

g) Others-Mention……...

12. What were the signs and symptoms of using such drugs without prescriptions?

a) fever ( )

b) general body malaise ( )

c) Headache ( )

d) nausea and vomiting ( )

e) Others……..

13. For this pregnancy in which trimester did, you take such drugs?

a) first trimester ( )

b) second trimester ( )

14. what trimester are in?

a) First ( )

b) Second ( )

SECTION IIIFactors associated with self- medication practices during pregnancy

Intrapersonal factors

15. Gravidity……

16. Parity…….

17. Do you know the dangers associated with using drugs that are not prescribed?

a) Yes ( )

b) No ( )

18. If yes what are they?

…….

19. Do you know the consequence of poorly treated health conditions?

a) Yes ( )

b) No( )

20. Is there any difference between using the prescribed and non-prescribed drugs?

a) Yes ( )

b) No ( )

21. Do you normally check and read the accompanying leaflet content?

a) Yes ( )

b) No ( )

22. If YES; which information do you get from this leaflet?

……..

23. If No; what made you not read this leaflet?

a) I don't know to read ( )

b) I don't know English ( )

c) Drugs do not have leaflets ( )

Interpersonal factors

24. Who advises you to take such medication during pregnancy?

a) Friend ( )

b) Relative( )

c) Partner ( )

d) Private retail pharmacy ( )

e) Others specify…….

25. Do you have any social support from your family or relatives?

a) Yes ( )

b) No ( )

26. If yes, what kind of support do you get from them?

……..

……..

27. Are satisfied with the support you get from them?

a) Yes ( )

b) No ( )

Community Factors

28. What is your income per month?.....

29. Are private retail pharmacies around your home place?

a) Yes ( )

b) No ( )

30. What is the distance from home to the health facilities

a) Within 1km ( )
b) 1-2 km ( )
c) Too far ( )

Organizationand policy factors

31. Is it easy for you to assess health care services for you to get prescribed drugs?

a) Yes ( )
b) No ( )

32. Is it always easy for you to get the doctor of your choice for a consultation?

a) Yes ( )
b) No ( )

33. If yes, are you always prescribed drugs of your choice?

a) Yes ( )
b) No( )

34. If no, mention the drug(s) that you were prescribed and were not your choice.

……

35. When you seek medical help, where do you get money for medical expenses?

a) Insurance ( )
b) Cash ( )
c) Exemption ( )

36. If it is paying out of pocket, who is the main provider?

a) Myself ( )
b) Partner ( )
c) Relative ( )

37. Circle things associatedwith self-medication Practices

a) It is the same drug I used in the past.
b) It is easyto access to get the drugs from the retail pharmacy
c) We spend too much time to get service at the health center
d) No satisfaction to health care in health facilities eg access of drug

Appendix D: Dodoso

DODOSO KUHUSU MATUMIZI BINAFSI YA DAWA NA MAMBO YANAYOPELEKEA MATUMIZI HAYO MIONGONI MWA WANAWAKE WAJAWAZITO WANAOHUDHURIA KLINIKI YA UJAUZITO MBAGALA RANGITATU HOSPITAL DAR ES SALAAM

Tafadhali Jaza panapohitajika

SEHEMU YA I: KWA MATUMIZI YA OFISI TU No. [ ]

SEHEMU YA II. Taarifa binafisi

1. Umri: ……
2. Kiwango cha Elimu:
   a) Sijasoma ( )
   b) Shule ya msingi ( )
   c) Shule ya sekondari ( )
   d) Chuo kikuu ( )
3. Hali ya ndoa:
   a) Sijaolewa ( )
   b) Nimeolewa ( )
   c) Nipo kwenye mahusiano ( )
   d) Mjane ( )
   e) Mtalaka ( )
4. Unaishi wapi?.....
5. Kazi:
   a) Sina ajira ( )
   b) Nimejiajiri ( )
   c) Mwajiriwa ( )
6. Je, unafanya kazi gani? (taja).....

SEHEMU II: MATUMIZI BINAFSI YA DAWA

7. Je unavuta /hali ya uvutaji wa sigara kwenye mimba hii ya sasa
    a) Navuta sigara ( )
    b) Sivuti sigara ( )
8. Je unatumia pombe au uliwahikutumia pombe kwenye mimba hii?
    a) Ndiyo ( )
    b) Hapana ( )
9. Je unatumia madawa ya kulevya kwenye ujauzito huu?
    a) Ndiyo ( )
    b) Hapana ( )
10. Je, umetumia dawa yoyote katika ujauzito huu bila kuandikiwa na daktari?
    a) Ndiyo **( )**
    b) hapana **( )**
11. Kama ndiyo, umetumia dawa gani?
    a) Dawa za kutibu malaria**( )**
    b) Dawa za kutuliza maumivu**( )**
    c) Dawa za kuongeza vitamin **( )**
    d) Antibaotiki**( )**
    e) Dawa za kuzuia asidi**( )**
    f) Tiba za asili (taja)…….
    g) Nyinginezo (taja)……...
12. Je, ni dalili gani zilizokufanya utumie mojawapo ya dawa bila kuandikiwa na Daktari?
    a) Homa**( )**
    b) Maumivu ya mwili mzima**( )**
    c) Maumivu ya kichwa**( )**
    d) Kichefuchefu na kutapika **( )**
    e) Nyinginezo (taja)…….
13. Je, katika ujauzito huu,ni miezi ipi ulitumia dawa hizi?

a) Mwezi 1-3( )

b) Miezi 4-6( )

14. Je, ujauzito wako una miezi mingapi?

a) Miezi mitatu ya mwanzo**( )**

b) Miezi 4-6**( )**

15. Je huu ni ujauzito wa ngapi?.....

16. Je umezaa mara ngapi?.....

<u>SEHEMU YA III:Mambo yanayopelekea matumizi binafsi ya dawa wakatiwa ujauzito</u>

Mambo yanayomuhusu mtumiaji wa dawa mwenyewe

17. Je, unafahamu madhara yatokanayo na matumizi ya dawa bila kuandikiwa na daktari?

a) Ndiyo ( )

b) Hapana( )

18. Kama ndiyo, ni yapi? (taja)……

19. Je, unafahamu madhara ya tiba isiyozingatia utabibu wa kitaalam?

a) Ndiyo ( )

b) Hapana ( )

20. Je, kuna tofauti ya tiba inayozingatia ushauri wa daktari na isiyozingatia?

a) Ndiyo ( )

b) Hapana ( )

21. Je, huwa unasoma maelekezo yaliyopo katika kipeperushi kipatikanacho ndani ya kifungashia dawa?

a) Ndiyo ( )

b) Hapana ( )

22. Kama ndiyo, ni taarifa au maelekezo yapi huwa unayapata ndani ya kepeperushi husika?.....
....

23. Kama hapana, sababu ipi hukufanya usisome kipeperushi husika?

a) Sijui kusoma ( )

b) Sijui kiingereza ( )

c) Vifungashio hukosa vipeperushi ( )

Mambo yanayomuhusu mtumiaji wa dawa na mtu mwingine

24. Nani hukushauri kutumia dawa kipindi cha ujauzito?

a) Rafiki ( )

b) Ndugu kwenye familia ( )

c) Mweza ( )

d) Duka la dawa

e) Nyingine taja……

25. Je, una masaada wowotewa kijamii unaoupata kutoka kwa familia au ndugu?

a) Ndiyo ( )

b) Hapana ( )

26. Kama ndiyo, ni msaada upi unaoupata kutoka kwao?.....

27. Je, unaridhika na msaada unaoupata kutoka kwao?

a) Ndiyo ( )

b) Hapana( )

Mambo ya kijamii

28. Je, una kipato gani kwa mwezi?.....

29. Je, mahali unapoishi kuna maduka ya dawa muhimu karibu?

a) Ndiyo ( )

b) Hapana ( )

30. Je ni umbali kiasi gani kutoka nyumbani hadi kituo cha afya

a) Ndani ya kilometa moja ( )

b) Kilometa moja mpaka mbili ( )

c) Mbali sana ( )

Mambo ya kitaasisi na kisera

31. Je, ni rahisi kwako kufikia huduma za afya na kupatadawa zilizoandikwa na daktari?

a) Ndiyo ( )

b) Hapana ( )

32. Je, ni rahisi kwako wakati wowote kupata daktari unaemtaka mara unapohitaji?

    a) Ndiyo ( )

    b) Hapana ( )

33. Kama ndiyo, huwa unapata dawa unayoitaka wewe?

    a) Ndiyo ( )

    b) Hapana ( )

34. Kama hapana, taja dawa ambazo umewahi kuandikiwa na halikuwa chaguo lako……

35. Je, unapohitaji msaada wa kitabibu, unamudu vipi gharama za matibabu?

    a) Bima ya afya**( )**

    b) Pesa tasilimu**( )**

    c) Msamaha**( )**

36. Kama unalipa kwa pesa tasilimu, nani anakulipia?

    a) Mimi mwenyewe**( )**

    b) Mwenza**( )**

    c) Ndugu**( )**

37. Zungushia vitu vinavyopelekea matumizi yako binafsi ya dawa bila kuandikiwa na daktari

    a) Ni sawa na ambazo nilizokuwa natumia kwenye ujauzito uliopita

    b) Ni rahisi kupatikana kwenye maduka ya dawa muhimu

    c) Nikienda kituo cha afya ninakaa sana bila kuhudumiwa ndiyo maana natumia mwenyewe

    d) Kutokuwepo kwa dawa za kutosha kwenye vituo vya afya

Appendix E:Approval letter

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. HD/MUH/T.385/2018/02 **15th July 2020**
IRB#: MUHAS-REC-06-2020-284

Joyce Iman Ngao,
MSc. Midwifery and Women Health,
School of Nursing,
MUHAS

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED "THE MAGNITUDE OF SELF-MEDICATION AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN AT MBAGALA RANGITATU TEMEKE DISTRICT IN DAR ES SALAAM, TANZANIA".

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 **15th July, 2020 to 15th July, 2021.** In case you do not complete data analysis and dissertation report writing by **15th July, 2021,** you will have to apply for renewal of ethical clearance prior to the expiry date.

Dr. Emmanuel Balandya
ACTING: DIRECTOR OF POSTGRADUATE STUDIES

cc: Director of Research and Publications
cc: Dean, School of Nursing , **MUHAS**

Appendix F: Introduction Letter

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

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Telefax: +255-22-2150465
E-mail: dpgs@muhas.ac.tz

Ref. No. HD/MUH/T.385/2018

16th July, 2020

District Medical Officer,
Temeke Municipality,
P.O. Box 46343,
Dar es salaam.

Re: INTRODUCTION LETTER

The bearer of this letter is Joyce Iman Ngao (HD/MUH/T.385/2018), a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing MSc. Midwifery and Women's Health.

As part of her studies she intends to do a study titled: **"THE MAGNITUDE OF SELF-MEDICATION AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN AT MBAGALA RANGITATU HOSPITAL TEMEKE DISTRICT IN DAR ES SALAAM".**

The research has been approved by the Chairman of University Senate.

Kindly provide her with the necessary assistance to facilitate the conduct of her research.

We thank you for your cooperation.

Ms. Victoria Mwanilwa
For: DIRECTOR, POSTGRADUATE STUDIES

cc: Dean, School of Nursing, **MUHAS**
cc: Joyce Iman Ngao

Appendix G: Permission Letter

TEMEKE MUNICIPAL COUNCIL

ALL COMMUNICATIONS TO BE ADDRESSED TO MUNICIPAL DIRECTOR

P.O.Box. 45232
Tel: 2850142

TEMEKE MUNICIPAL MEDICAL
OFFICE OF HEALTH
DAR ES SALAAM
TANZANIA.

Date: 20/07/2020

M/C
MBAGALA HOSPITAL
ROUND TABLE HC

REF; PERMISSION TO CONDUCT HEALTH RESEARCH ACTIVITIES IN TEMEKE MUNICIPALITY.

Please refer to the above heading.
Extension of Permission has been granted to Mr./Mrs./Ms./Prof./Dr. JOYCE IMAN NGAO from (Institution) MUHAS Address DSM to Tel. No to collect data for research work in your area.

The research title is The magnitude of self medication and associated factors among pregnant women at Mbagala Rangitatu Hosp.

She/he has submitted the proposal for the mentioned study to the MMOH Office as a pre-condition prior to authorisation.

The researchers have been instructed and agreed to submit the research progress reports and final results to the MMOH prior to any publications.

Data collection will restart on 21/07/020 to 11/08/020
Sample size 424

This research work is part of Academic fulfilment for Diploma/Advanced Diploma/Degree/master /PhD it is part of ongoing research in your institution

I am kindly requesting you to give him/her the necessary assistance so as to accomplish this task timely.

Yours Sincerely

AGNES KYAMBA
For; Temeke Municipal Medical Officer of Health