WOLKITE UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCE

DEPARTMENT OF MIDWIFERY

PREGNANT WOMEN WELLBEING AND WORRY DURING COVID-19 IN DURAME GOVERNMENTAL HEALTH INSTITUTIONS, SOUTHERN ETHIOPIA, 2021

BY:-

1. AELAFAT AWEKE
2. NARDOS BIRHANU
3. ANISA ABDELA

ADVISORS:-

1. MAJOR ADVISOR: MS. GENET ASFAW (BSc, MsC)
2. CO-ADVISOR: MR. SEBOKAABEBE (BSc, MSc)

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A thesis Submitted to the Department of Midwifery College of Medicine and Health Sciences Wolkite University in Partial Fulfillment of The Requirement for the Degree of Bachelor of Science in Midwifery

AUGUST 2021

WOLKITE, ETHIOPIA

DECLARATION

We here declare that, this is our original work and has not been presented for degree in any other university and all source of material used for this thesis have been fully acknowledged.

Name ----------

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DEPARTMENT OF MIDWIFERY

ADVISOR'S APPROVAL SHEET

This is to certify that the thesis entitled PREGNANT WOMEN WORRY AND WELL-BEING DURING COVID-19" submitted in partial fulfillment of requirements for degree of bachelor in MIDWIFERY, undergraduate program and has been carried out by AELAFAT AWEKE, NARDOS BIRHANU, ANISA ABDELA under our supervision. Therefore, we recommend that the students have fulfilled the requirements and hence, here by submit the thesis to the department.

Name of major advisor ----------

Signature ----------

Date ----------

Name of co-advisor ----------

Signature ----------

Date ----------

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ACRONYM AND ABBREVATION

ANC	Antenatal care
AOR	Adjusted odds ratio
COR	Crude odd ratio
CoV	Corona virus
HCoV	Human corona virus
MERS-CoV	Middle east respiratory syndrome corona virus
SARS-CoV	Severe acute respiratory syndrome
SPSS	Statistical package for social science

ABSTRACT

Background: Merriam Webster dictionary define well-being as the state of being happy, healthy, or successful. It defines worry as to feel or show fear and concern because you think that something bad has happened or could happen.

Worry among pregnant women is common due to the pregnancy by itself but this pandemic has brought its own influence on pregnant women and other peoples.

During the pandemic pregnant women are concerned about their own health, their unborn baby's health, their relatives' health. This fear may have influence on the health of the women which may decrease the well-being of them.

Objective: The aim of this study was to assess pregnant women's well-being and worry during COVID-19 in Durame governmental health institutions, Southern Ethiopia, 2021

Methods: Institution based cross-sectional study was employed from June to July 2021. The study was conducted on 218 pregnant women using the Cambridge worry scale questionnaire and the WHO-5 well-being index. The participants were selected using systematic random sampling after proportional allocation of the sampling size for each health institutions. Pregnant women attending governmental health institution in Durame town were included in the study after obtaining informed consent. Finally, the data was analyzed using SPSS version25 software.

RESULTS: Out of 218 respondents, 14 (6.4%) had contact history with confirmed or suspected covid-19. A total of 151 (69.3%) had high well-being and a total of 44 (20.2%) had high worry.

CONCLUSIONs and RECOMMENDATION: Worry of pregnant women exist in Durame governmental health institutions so health institutions, Ethiopian minister of health and the community should work together to improve the health of the women.

KEY WORDS: Covid-19, Well-being, Worry

CHAPTER ONE: INTRODUCTION

1.1 Background

Corona virus (CoV) is an enveloped, positive stranded ribonucleic acid(RNA) virus of the family of corona-viridae and belonging to the Nidovirales order (1). CoV is responsible for epidemics in the world. Severe acute respiratory syndrome (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) have led to epidemics which leads to a high morbidity and mortality in the world (2,3). Seven years after MERS-CoV the third human corona virus (HCoV) emerged on December 2019 in Wuhan, China (4,5). The virus emerged in Wuhan is called SARS-CoV-2 or Covid-19(Corona virus disease 2019) which has a characteristics of rapid transmission from human to human and it is quickly transmitted from person to person when compared with SARS-CoV(6).

SARS-CoV-2 is contagious disease; it has a mean incubation period of 5.2 days (2-14) days with 95% of cases within 12.5 days. The virus is commonly transmitted through respiratory droplets or through contact with contaminated objects. It can persist in aerosols up to three hours, on plastic and stainless steel up to five days(7,8).

This outbreak affect vulnerable people, like pregnant women and the fetus and are associated with symptoms of mental illness and distress(9) which in turn leads to increased risk of preterm birth, delayed maternal fetal bound, and delayed cognitive development in the newborn (10,11)

SARS-CoV-2 has similar symptoms on pregnant women with non-pregnant women. Pregnant women with this virus also experience symptoms like fever, cough, shortness of breath, malaise, muscle pain diarrhea, sore throat, headache, chills (12–14).

Infectious diseases are known to cause worry in pregnant women. There is historical evidence of pregnant women being a high risk group during pandemics. It was associated with high mortality rates during the swine flu pandemic and the severe acute respiratory syndrome (SARS) pandemic(15,16).

Pregnant women may have fear for their own health and their unborn baby. Because of worry of the infection many pregnant women fear about to go to hospital, and also there are women who refused to visit hospital for Antenatal follow-up due to the fear of the virus (17).

Public health officials can reduce pregnant women uncertainty by ensuring that information provided to the public timely, accurate and consistent with information from other sources (18).

1.2 Statement of the problem

Pregnancy is a period in a woman's life which may be influenced by several psychological stressors. Each trimester of pregnancy has its own stress on the mother that may provoke several worries for pregnant women (19). Worries about the possibility of losing the baby, baby's health and child birth are common causes of concerns among pregnant women. In addition to these pregnant women have worry about money, job, housing their health and marital relationship (20).

pregnancy-related anxiety has its own effect on the pregnant mother which may influence the day to day life of the mother the symptoms are muscle pain, palpitation, fatigue, headaches, stomach pain, sleep disruption, nightmares, and insomnia (21). Maternal anxiety is responsible for poor perinatal outcomes such as preterm birth, postpartum depression, poor child developmental outcomes, negative physical and psychological health consequence. Pregnancy stress may lead to mother infant relationship disorder, antenatal and postpartum depression, increased physical problem (22).

The prevalence of anxiety and depression in pregnant women was between 7.8% and 22.3% before the pandemic (21). But after the emergence of COVID-19 the prevalence of anxiety in pregnant women is 64.5% and the prevalence of depression in pregnant women is 56.5% (22).

Peoples among families of confirmed cases, people living around the area of the high prevalence are vulnerable to psychological problem. Suicide, anxiety, hopelessness, anxiety, fear, stigma are the commonly observed symptoms (23).Feeling of shame, self- blame dissociative symptoms, social isolation and depression are the common problems of pregnant women and delivering mother during the pandemic (24).

In Ethiopia the magnitude of perinatal depression before the pandemic was 25.8% (25). At the community level psychological distress during the pandemic was 66.4% (26).

Due to worry of the pandemic women are not willing to visit hospital, clinic or health center for antenatal care service, delivery service, postnatal care service. Thus the Ethiopian ministry of health in collaboration with other different organizations worked to encourage mothers to follow their antenatal care, delivery, and postnatal care (27)

During pregnancy period mental as well as the general health of the mother has its own impact on the pregnancy and the fetus. Mental health of the mother is important for the prevention of preterm birth and complication during pregnancy. Low educational level, rural

residence, low income, previous complication and multiparty are factors associated with perinatal stress and depression (28).

Studies shows that mental health problem was increasing thus strengthening the mental health service on those group of population is a solution taken to prevent the psychological impact of the pandemic for both the mother and the baby (29).

The prevalence of general anxiety disorder among perinatal service attending motherinDilla, SNNPR, Ethiopia is 32.2% (30).

1.3 Significance of the Study

Pregnant women are essential part of the community, understanding their problem and providing a good care is important for the health of both the women and the unborn baby which indirectly is important for the society's well-being.

Studies conducted on well-being and worry of pregnant women are scarce especially in Ethiopia therefore conducting this study was important to clearly understand the well-being and worry of pregnant women.

This study was also important for health planners to design strategies on the improvement of pregnant women's well-being and to prevent their worry during the COVID-19 pandemic.

CHAPTER TWO: LITRATURE REVIEW

2.1 Pregnant Women Worry

Mental illness is more commonly seen among pregnant women than the non-pregnant women during the pandemic. This mental illness is closely related with the fear of transmission of the virus to the infant, limited accessibility of antenatal care resources, and lack of social support (31). In addition to this some directions implemented by different countries has also a significant effect on the psychological health of pregnant women. Directions implemented by different countries which affect the mental health of pregnant women are social distancing, quarantine or isolation. These procedures increase the risk of psychological problems among pregnant women (31,32).

A study conducted by Koenen and colleagues, globally 40% of pregnant women and postpartum women screened positive for posttraumatic stress disorder. Significant anxiety and depression is also reported by 70% of women (33).

A study done in a nationwide survey of 2740 pregnant women by Moyer CA and colleagues indicated that the rate of planning to give birth in hospital is decreased to 87.7% during the pandemic which was 96.4% before the pandemic (34).

A study done on a Chinese pregnant women revealed that a high prevalence of anxiety and depression among women who are in low level education (35).

In a study multicenter cross sectional study performed in china by Y. Wu et al, when compared with self-assessed pre pandemic level and comparing with non-pregnant individuals self-reported rate of anxiety and depression were commonly seen among women who are pregnant (36).

A study conducted in Canada shows that 37.0% of participants had clinically elevated symptoms of depression. 46.3% of participants had moderately elevated anxiety symptoms, and 10.3% severely elevated anxiety symptoms. 56.6% total had clinically elevated anxiety symptoms(37).

A study conducted on Ireland revealed that before the pandemic most women (83.1%) did not often worry about their health over half of women (50.7%) worried about their health often or all the time(38).

During the pandemic many women had discomfort in visiting health centers for their follow-up due to the fear that they may be infected by the virus. Liu X and colleagues reported that due to the fear of the pandemic 41.9% of pregnant women refused to visit hospital and 12.8%

of pregnant women decided to have cesarean section(CS) instead of waiting for labor at hospital (39).

Based on the study of Effati-Daryani and colleagues,on Iranian pregnant those women with low level of income has a lower level of stress when compared with women who has middle to high(sufficient) income (40). But a study done on 484 pregnant women who were registered in health centers afflicted to Sabzevar University of Medical Science indicated that women with low level of income has a higher level of worry than women with high level of income from which concluded that insufficient family income is a predictor of women's worry (41).

A study conducted in Iran shows that women with age <30 years (57%), nulliparous (58.1%), employed, those with a low family income, those who were in the second third trimestr of pregnancy and those who had at least one covid-19 infected person in their relatives had a higher level of worry in comparison with their counterparts(42).

Having a history of abortion is also one of the indicators of worry during the Covid-19 outbreak. A study on 484 pregnant women who were registered in health centers afflicted to Sabzevar University of Medical Science indicated women who has history of abortion are at increased of worry(57.3%)(43).

Avoidance of pregnancy follow up is very dangerous both for the health of pregnant women and the unborn baby it also has a negative impact on the outcome of pregnancy. Lack of pregnancy follow-up may lead to inability of detection of pregnancy complications or delayed in detecting them. Complications like ectopic pregnancy, fetal congenital anomaly, uncontrolled hypertension, preeclampsia, post term pregnancy, dystocia can be detected early and treated accordingly if a woman has follow-up(44).

Nanjundaswamy MH and colleagues reported that women have fear of visiting health centers for prenatal check-up and ultrasound scan due to the fear of getting infected by the virus (45).

2.2 Pregnant Women Well-being

A study conducted in Iran indicates that the percentage of women experiencing low wellbeing state during the pandemic is 24.4% which was 25.2% before the pandemic. The percentage women experiencing low well-being state before the pandemic was 9.18% in Mumbai and 19.6% in Osasco, Sao Paulo (42).

According to the study conducted in china before the covid-19 pandemic the prevalence of depressive symptoms was 26% and the prevalence of depressive symptoms after the emergence of the covid-19 pandemic was to 29.6% (46).

A report from the study conducted in Dilla university referral hospital shows that general anxiety disorder among perinatal service attending mother is 32.2% which is higher than the study conducted in china (17.2%) (47).

CHAPTER THREE: OBJECTIVE

3.1General Objectives

To assess the well-being and worry of pregnant mothers and its associated factor during COVID-19 among pregnant women of Durame governmental health institutions Southern Ethiopia, 2021

3.2 Specific Objective

- To assess the worry of pregnant women during COVID-19 among pregnant women of Durame governmental health institutions, Southern Ethiopia, 2021
- To assess the well-being of pregnant mother during COVID-19 among women of Durame governmental health institutions, Southern Ethiopia, 2021
- To identify associated factors of worry of pregnant mother
- To identify associated factors of well-being of pregnant mother

CHAPTER FOUR: METHODS AND MATRIALS

4.1 Study Area

The study was conducted in Durame governmental health institutions, in Durame town. It is the administrative center of KembataTembaro Zone of the SNNPR which is about 335Km South-West of Addis Ababa and 125Km far fromHawassa. Durame town has a total population of 39,459 of whom 51% are female and 49% are male.

The town has one general hospital and 3 health center. Majority of the population follow the protestant religion but there are peoples who follows religion other than protestant.

In the study area the average ANC follow up of mothers women 408 pregnant women in one month

4.2 Study Design and Period

An institution based cross sectional study was used from June 14-July 11, 2021

4.3 Source Population

The source population was all pregnant women who had ANC contact in Durame governmental health institutions.

4.4 Study Population

The study was conducted in all pregnant women who had ANC contact in Durame governmental health institutions at the time of the study.

4.5 Eligibility Criteria

4.5.1 Inclusion Criteria

Women who were pregnant at the time of the study and who had ANC follow up in Durame governmental health institutions were included in our study.

4.5.2 Exclusion Criteria

Women who were not able to communicate due to different illness like confirmed mental illness which exists before the pandemic were not included in the study.

4.6 Sample Size Determination

Single population proportion formula was used to calculate sample size by considering 95% CI, 5% marigin of eror and 50% proportion.

$N=Z^2p(1-p)/W^2$

n= sample size from infinite population

Z= standard score= 1.96

d= marginal error= 0.05

P= 50%

$n= (1.96)^2(0.5)\ (1-0.5\ )/(0.05)^2$

n=384

The total population(Average ANC follow-up among governmental health institutions in Durame) is 408 which is <10,000 and need an adjustment on the above formula.

$$n = n/1+\frac{n}{N}$$

$$n = 384/1+\frac{384}{408}$$

n=198

By considering non response rate of 10% our sample size was198+19.8= 218

4.7 Sampling Technique

All the three governmental health institutions in the Durame town were included in the study. Sample size was proportionally allocated to each health institutions according to patient flow. Then,systematic random sampling method was used to select the participants. The sampling interval was calculated using K= N/n 408/218=1.8≈2, Then by using lottery method the first person was selected from 1-2 (we selected 2) then 218 women were selected at every 2 interval in order of 2. 4, 6, 8…

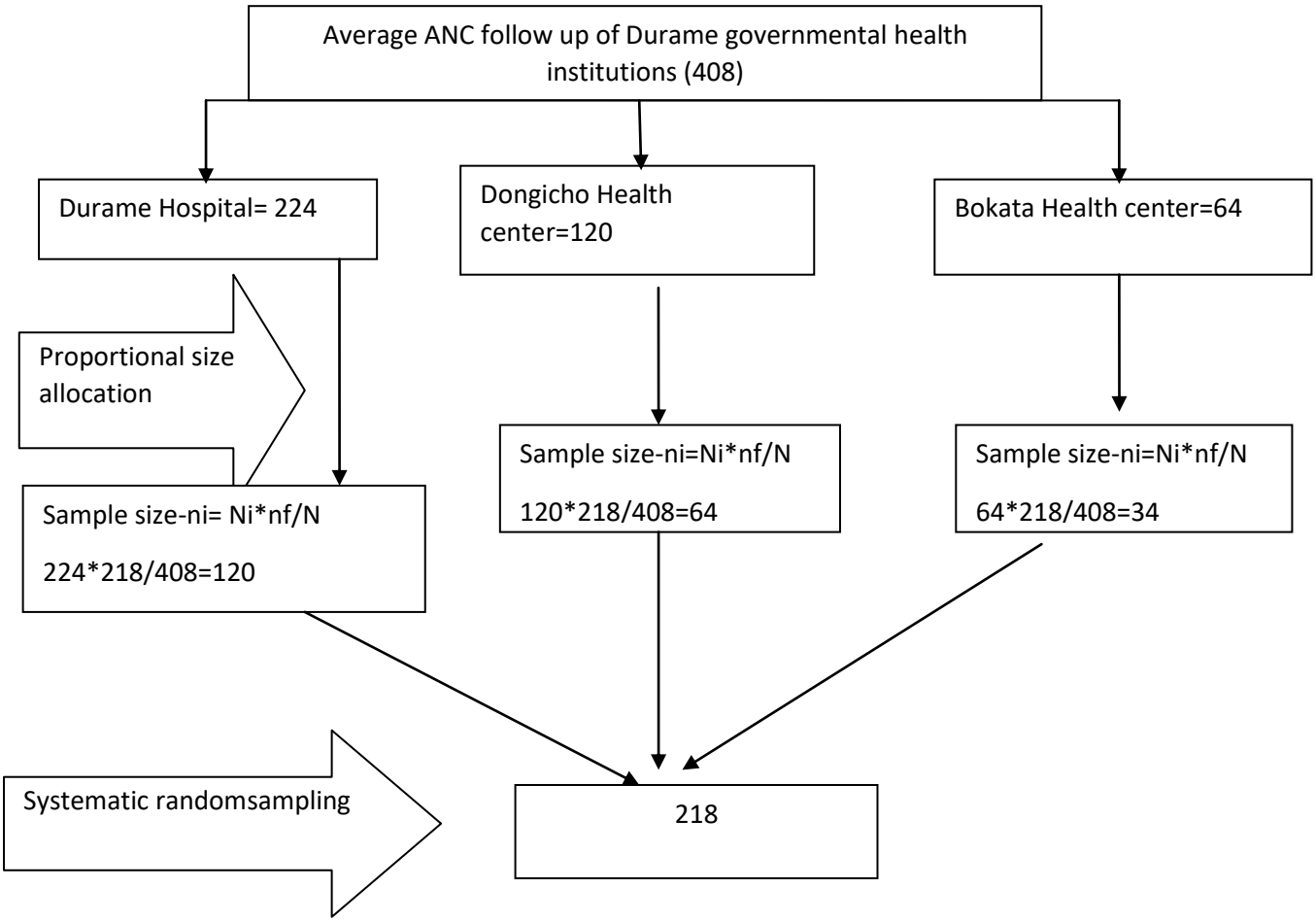

Figure 1: Sampling procedure of the study from the governmental health institution of Durame town

4.8Study Variables

4.8.1 Dependent Variable

- well-being and worry of pregnant women

4.8.2 Independent Variable

- Demographic character- Age, religion, residence, marital status
- Socio-economic- Educational status, income level
- Obstetric and Gynecologic character- Gravidity, Parity, Abortion

4.9Operational Definition

Worry: - Those whose Cambridge worry score was >37(42).

Well-being: - Those whose WHO well-being score was>50 (42)

4.10 Data Collection Tools and Procedure

Data was collected using a structured interview questionnaire adapted from Questionnaire (Cambridge worry scale, WHO well-being index). Three data collectors were used to collect data from consented pregnant women.

4.11 Data Quality Control Method

Before collecting the actual data, we gave pretest questionnaire for 5% of the sample size. The pretest was done in Halaba hospital which is 95km far from the general hospital. During the actual data collection, the completeness of the questionnaire was checked daily by the investigators. If necessary, the data collectors were giving the necessary explanations for the respondents. Appropriate training was also given for the data collectors.

4.12 Data Processing and Analysis

The data was entered to Epi data version 3.1 and was exported to SPSS version 25 for analysis. The result was systematically tabulated and analyzed using percentage, tables, and verbal explanation.

4.13 Ethical Consideration

Ethical clearance and formal letter was obtained from Wolkite University College of Medicine and Health Science. Permission was obtained from Durame town health department. Written consent was obtained from each study participants after explaining the purpose and procedure of the study. Confidentiality was maintained at each level of the study. Participants who were identified as worried were linked to ANC clinic for consultation.

CHAPTER FIVE: RESULT

5.1 Socio demographic Characteristics

The research was conducted on 218 pregnant women with 100% response rate. The respondents have a mean age of 26.75 and minimum & maximum of 18 & 40 respectively. The standard deviation of the age is SD ±3.9 and the age of the participants is normally distributed.

Among the women 82.1% (179) were in the age group of 20-30. 119 (54.6%) of the respondents were kambata and 107 (49.1%) were protestant. Out of the 218, 96.8%(211) were married, 68.3% (149) had educational level of secondary school& above and 35.8% (78).

Table 1:- Socio demographic characteristics among pregnant women in Durame governmental health institutions.

	characteristics	Frequency	Percent
Age of respondent	<19	11	5.0
	20-30	179	82.1
	>31	28	12.8
Ethnicity of the respondent	Kambata	119	54.6
	Hadiya	44	20.2
	Wolayita	28	12.8
	Oromo	18	8.3
	Amhara	9	4.1
Marital status of the respondent	Single	4	1.8
	Married	211	96.8
	Divorced	1	0.5
	Widowed	2	0.9
Religion of the respondent	Protestant	107	49.1
	Orthodox	41	18.8
	Muslim	53	24.3

	Catholic	17	7.8
Educational level of the respondent	Can't read & write	33	15.1
	Primary	36	16.5
	Secondary & above	149	68.3
Job of the respondent	Private work	48	22.0
	Government employed	78	35.8
	House wife	71	32.6
	Unemployed	21	9.6
Family monthly income	<2000	55	25.2
	>2000	163	74.8

Figure 2:- Age distribution of respondents

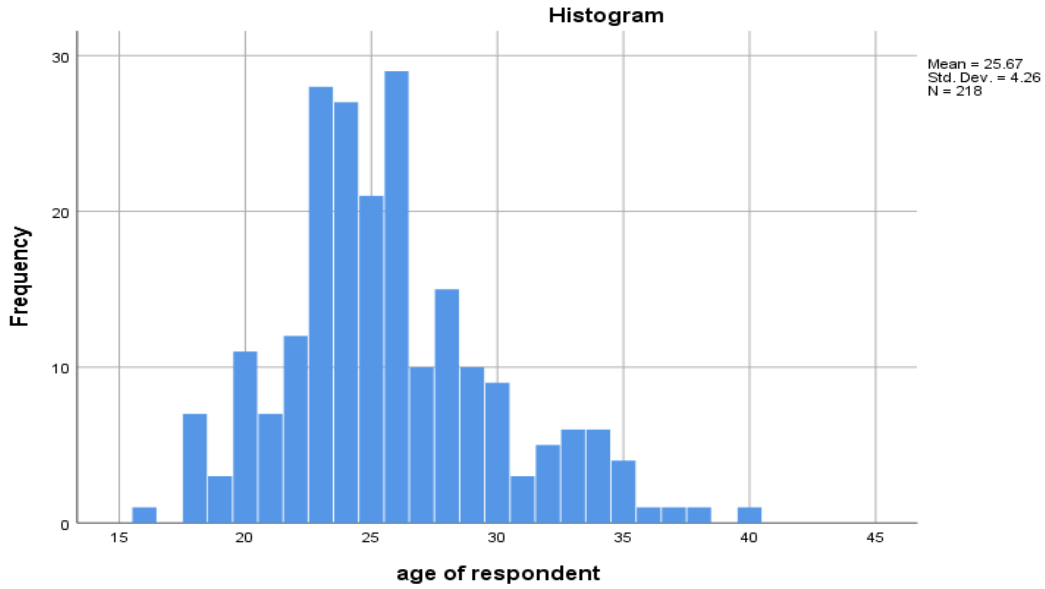

Figure 3:- Age distribution of respondents

5.2 Obstetric Characteristics

Most of the study participants are gravid 1-3 and 165 (75.7%) were primi/Multiparaand 92 (42.2%) were 2nd trimester pregnant.

Table 2:- Obstetric characteristics among pregnant women in Durame governmental health institutions

	Characteristics	Frequency	Percent
Gravidity of the mother	1-3	172	78.9
	4-6	41	18.8
	>7	5	2.3
Parity of the mother	Nulipara	53	24.3
	Primi/Multipara	165	75.7
Gestational age of the pregnancy	<14	66	30.3
	14-28	92	42.2
	>28	60	27.5
Do you have history of abortion	Yes	59	27
	No	159	73
Do you have pregnancy complication	Yes	49	22.5
	No	169	77.5

5.3 Medical and Covid-19

Among the study participants more than half of them have no known medical illness and no known family medical illness

Among the respondents 14 (6.4%) of them had contact history with confirmed or suspected covid-19, 18 (8.3%) had relatives infected with covid-19, 2 (0.9%) had relative death due covid-19.

Table 3:- Medical and Covid-19 condition of pregnant women in Durame governmental health institutions.

	Characteristics	Frequency	Percent
Do you have known chronic medical illness	No	179	82.1
	DM	24	11.0
	Hypertension	15	6.9
Do you have family history of known chronic medical illness	No	187	85.8
	DM	24	11
	Hypertension	7	3.2
Do you have contact history with confirmed or suspected covid-19	Yes	14	6.4
	No	204	93.6

Do you have relatives infected with covid-19	Yes	18	8.3
	No	200	91.7
Do you have relative death due to covid-19	Yes	2	0.9
	No	216	99.1

5.4 Worry of pregnant women

From a total of 218 women 174 (79.8%) had low worry and 44 (20.2%) had high worry.

In our study women who had history of abortion had high worry than those who had no history of abortion.

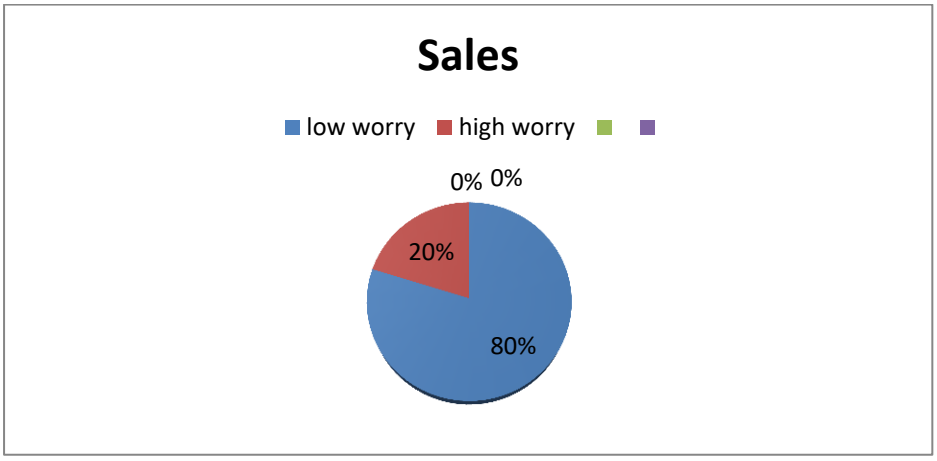

Figure 3:- Level of worry of pregnant women attending Durame governmental health institution, Durame, Southern Ethiopia, 2021

Table 4:- Worry of pregnant women in Durame governmental health institutions

	Characteristics	Frequency	Percent
Worry of pregnant mother	Low worry	174	79.8
	High worry	44	20.2
	Total	218	100.0

Table 5: Level of worry of Women's worry by their socio-demographic , obstetric, covid-19 history characteristics

Variable	Category	Levels of worry		P-value	COR(95%CI)	AOR(95CI)
		Worry <37(%)	Worry >37			
History of abortion	Yes	25 (42.4)	34 (57.6)	0.000	1	1
	No	149 (93.7)	10 (6.3)	0.000	20.264(8.902-46.126)	**19.80(6.43-60.98)***
Parity	Nulipara	26(49.1)	27(50.9)	0.000	1	1
	Primi/multipara	148(89.7)	17 (10.3)	0.000	9.041(4.330-18.876)	**6.247(1.81-21.52)***
Educational level	Can't read and write	20 (60.6)	13 (39.4)	0.002	1	1
	Primary	27 (75.0)	9(25.0)	0.203	1.92(0.798-4.638)	1.689(0.459-6.213)
	Secondary and above	127 (85.2)	22 (14.8)	0.227	3.752(1.633-8.623)	**10.383(2.811-38.353)***
Monthly income	<2000	31(56.4)	24 (43.6)	0.000	1	1
	>2000	143(87.7)	20(12.3)	0.347	5.535(2.72-11.25)	**9.11(2.99-27.69)***
relatives infected with covid-19	Yes	3 (16.7)	15 (83.3)	0.000	1	1
	No	171 (85.5)	29 (14.5)	0.000	29.483(8.030-108.244)	2.153(0.335-13.827)

* P-value <0.05, 1.00, reference

COR- crude odd ratio, AOR-adjust odd ratio, CI-confidence interval

5.5 Well-being of pregnant women

Among the participants of the study 67 (30.7%) had low well-being and 151 (69.3%) had high well-being.

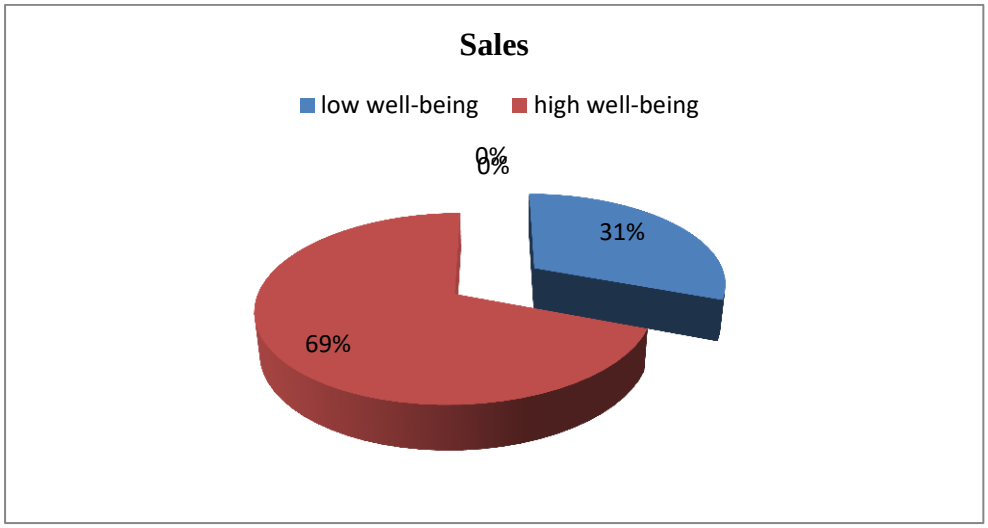

Figure 4Figure 4:- Wellbeing of pregnant women in Durame governmental health institutions, southern Ethiopia, 2021

Table 6:- Women's well-being by their socio-demographic , obstetric, covid-19 history characteristics

Variable	Category	Well-being score		P-value	COR(95%CI)	AOR(95%CI)
		Well-being <50	Well-being >50			
History of abortion	Yes	44 (74.6)	15 (25.2)	0.000	17.34(8.31-36.13)	**13.281(5.707-30.90)***
	No	23(14.5)	136 (85.5)	0.000	1	1
Parity	Nulipara	32(60.4)	21 (39.6)	0.000	5.66(2.911-11.01)	1.946(0.771-4.913)
	Primi/Multi para	35 (21.2)	130 (78.8)	0.000	1	1
Relatives infected with covid-19	Yes	17(94.4)	1(5.6)	0.000	51.0(6.62-393.02)	8.062(0.66-97.95)
	No	50(25.0)	150(75.0)	0.001	1	1
Educational status	Can't read and write	14(42.4)	19 (57.6)	0.178	1.70(0.78-3.69)	
	Primary	8(22.2)	28(77.8)	0.344	0.66(0.17-2.17)	
	Secondary & above	45 (30.2)	104 (69.8)	0.000	1	
Family monthly income	<2000	30(54.5)	25(45.5)	0.000	4.086(2.144-7.78)	**4.727(2.014-11.096)***
	>2000	37(22.7)	126(77.3)	0.000	1	1

* P-value <0.05, 1.00, reference

COR- crude odd ratio, AOR-adjust odd ratio, CI-confidence interval

Factors associated with pregnant women worry and wellbeing during covid-19

First a bivariate logistic regression was performed to identify factors that are associated to worry and well-being. Then those independent variables p-value ≤0.25 were fitted in to multivariable logistic regression. On bivariate analysis history of abortion, family monthly incomes, parity, were associated with worry and history of abortion, educational level,

monthly incomes were associated with well-being. Multivariable analysis was performed to determine the factors which were independently associated with worry and well-being during pregnancy. After multivariable analysis women who had history of abortion had high worry which is 19 times those who had no history of abortion [AOR=19.80, 95% CI 6.43-60.98], nulipara had 6 times worry than primi/multipara[AOR= 6.247, 95% CI 1.81-21.52]and women who had monthly income of >2000 had 4 times well-being than those who had monthly income of <2000.

CHAPTER SIX: DISCUSSION

A study conducted in Italy shows that directions implemented related with the covid-19 has a significant effect on the psychological health of pregnant women, our study also shows that 72(33%) of women have some-what worry about problems with the law(31,32)

A study conducted around the world indicates that a significant anxiety and depression was seen in about 70% of women which is higher than our study about 44(20%) of women has high worry. (33)A study conducted on 1987individuals in Canada shows that 56.6% of the total participants had clinically elevated anxiety symptoms which is higher than from the result we obtained from our study 44 (20.2%) of participants had high worry(37). This difference is may be due to our study participants had low knowledge about covid-19.

Our result shows that 29%(13.3%) of the respondents have too much worry (whose score is 4) about their own health which has a big difference from the study conducted on Ireland; over half of women (50.7%) worried about their health often or all the time(38)

About 13 (6.0%) of women have very worry about going to hospital in our study and a study conducted in Wuhan and Chongqing revealed that due to the fear of the pandemic 41.9% of women refused to visit hospital(39) and a study conducted in a nationwide the rate of planning to give birth in hospital is decreased to 87.7% (34)during the pandemic which was 96.4% before the pandemic, the study on India also shows that women have fear of visiting health centers for prenatal check-up and ultrasound due to the fear of getting infected by the virus. (36,38) This difference is may be due to a the women have shortage of information about how covid-19 is affecting the world.

In this study monthly income, educational level (secondary and above), parity, history of abortion are were significantly associated with worry among the pregnant women at value $\leq$ 0.05 table-

In our study women with low level of income has a higher level of worry than women with high level of income. This may be due to they think that they can't afford money for vaccine, medication in case they are ill. Our study is similar with the a study conducted in Iran(41) whereas in another study conducted by Effati-Daryani and colleagues women with low level of income has a lower level of stress(40)

A high prevalence of anxiety and depression among women who are in low level education was seen in a study done on Chinese pregnant women(35), our study also revealed that

women who are in low level of education had high worry, this is maybe due to those who had low educational level cannot get information through reading or searching from different sources especially those women who cannot understand international language and those women who can't read and write .

A study conducted in Iran indicates that nulliparity is the predictor of women's worry . In our study women who are nulipara had more worry than those primi or multi para women. This result is may be due to because this is there first time of pregnancy for nulliparas they may have increased fear than those who have previous one or more children.

In this study monthly income, history of abortion are were significantly associated with well-being among the pregnant women at value ≤ 0.05 table-

According to the study conducted in china before the covid-19 pandemic the prevalence of depressive symptoms was 26% and the prevalence of depressive symptoms after the emergence of the covid-19 pandemic was to 29.6%(46). Our result is a little bit greater than the study conducted before the pandemic but it does not have significant difference with the study conducted after the pandemic 67 (30.7%) of women had low well-being.

Our study revealed that from 218 study participants 67 (30.7%) of women had low well-being state which is higher than a study conducted in Iran which is 24.4% (42) This result is may be due to their low socio economic status.

The prevalence of general anxiety disorder among perinatal service attending motherin Dilla, was 32.2% which indicates a low well-being of the women(30). This study's result is close to our study 67 (30.7%) of the women had low well-being

CHAPTER SEVEN: Strength and Limitation of the Study

7.1 Strength

This study is the first research done related to pregnant women worry and well-being during covid-19 in the study area because of this the research will be helpful as a baseline study for further researches on this area.

The second strength of our study is that covid-19 is a current and alarming problem in the world as well as in our country which causes chaos on different sectors including the health of pregnant women.

7.2 Limitation

- Since the study was institution based we couldn't participate those pregnant women who worry to visit health institutions

CHAPTER EIGHT: CONCLUSION AND RECOMMENDATION

8.1 CONCLUSION

From the total participants about 14 (6.4%) of the respondents have contact history with confirmed or suspected covid-19 and 18 (8.3%) of the respondents have relatives infected with covid-19 among them only 2 (0.9%) of participants have relative death due to covid-19. Generally 44 (20.2%) of the participants had high worry, 174(79.8%) had low worry and 151 (69.3%) of the participants had high well-being, 67(30.7%) participants had low well-being. Generally our results indicate a close relationship between worry and well-being in pregnant women

8.2 RECOMMENDATION

Ethiopian Minister of health

- Giving current reliable information about covid-19
- Giving especial attention for pregnant women and investing on their health especially mental health

Durame Governmental health institutions

- To create an awareness on community level about the importance of supporting pregnant women at the time of the pandemic.
- To encourage pregnant women who visit health institution to counsel their pregnant neighbors and friends about visiting health institution

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ANNEX-I

Annex-I: - Consent form

My name is ---------- (Interviewer) I am candidate of Bachelor degree of Midwifery from Wolkite University, College of Medicine and Health science. This is a study to be conducted with the objective assessing pregnant women well-being and worry during COVID-19. You are kindly requested to participate in this study and provide the information required from you.

We would like to ask you a few questions if you may, but you can refuse to answer any question we ask. You can also refuse to participate in the study entirely. The interview will last approximately 25minutes. Your responses will be kept confidential and privacy of respondent will be protected. We would like to inform you that the responses that you provide to the questions are very essential, not only for the successful accomplishment of the study, but also for producing relevant information which will be helpful in the planning, implementation and intervention activities for pregnant women and their concern of COVID-19.

Are you voluntary to respond to the questions? Yes; proceed with the interview

No; thank her and End.

Name of interviewer who sought the consent: _____ Date_____

Signature: _____

ANNEX-II

Questionnaire

Part I Please read each statement and circle your response from the alternative of socio-demographic characteristics

No	Questions	Alternative choice
1	Age	…….
2	Ethinicity	1. Kambata 2. Hadiya 3. Wolayta 4. Oromo 5. Amhara 6. Other(specify)……..
3	Marital status	1. Single 2. Married 3. Divorced 4. Widowed
4	Religion	1. Protestant 2. Orthodox 3. Muslim 4. Catholic 5. Other(specify)……
5	Educational level	1. Primary 2. Secondary 3. College & above 4. Can read & write
6	Job	1. Private work 2. Housewife 3. Government employed 4. Unemployed
7	Family monthly income	……

Part-II Please read each statement and circle your response from the alternative of obstetric characteristics

No	Questions	Alternative choice
8	Gravidity	----------
9	Parity	----------
10	Gestational age	1. <14 week 2. 14-28week 3. >28 week
11	Having history of abortion	1. Yes 2. No
12	Having history of abortion	1. Yes 2. No
13	Having pregnancy complication	1. Yes 2. No

Part-III Please read each statement and circle your response from the alternative of medical illness related variables

No	Questions	Alternative choice
13	Having known chronic medical illness	1. No 2. Diabetes Mellitus 3. Hypertension 4. Heart problem 5. Other (specify)……
14	Family history of known chronic medical illness	1. No 2. Diabetes Mellitus 3. Hypertension 4. Heart problem 5. Other (specify)…….

Part-IV Please read each statement and circle your response from the alternative of COVID-19 related variables

No	Questions	Alternative Choice
15	Have contact history with confirmed or suspected COVID-19	1. Yes 2. No
16	Having relatives or acquaintance infected with COVID-19	1. Yes 2. No
17	Having relatives death due to COVID-19	1. Yes 2. No

The Farsi Cambridge worry scale

0- No worry
1- Little worry
2- Somewhat worry
3- very worry
4- too worry
5- Major worry

	0	1	2	3	4	5
Having nobody in delivery ward						
Giving birth Possibility of fetal death, disease, anomaly						
Whether midwives provide good care in labor						
Internal examination						
Whether your husband will be with you at the time of admission to labor						
Crowded delivery ward Probability of not having spontaneous labor						
Possibility of miscarriage						
Probability of going into labor too early						
Going to hospital						
Money problem						
Coping with the new baby						

Your own health						
Health of relatives						
Employment problem						
Relationship with your husband						
Your housing						
Unwanted or wanted pregnancy						
Relationship with family						
Problems with the law						
Baby gender						
Giving up work						

The WHO-5 Well-Being index

	At no time(0)	Some of the time(1)	Less than half of the time(2)	More than half of the time(3)	Most of the time(4)	All of the time(5)
I have felt cheerful and in good spirit						
I have felt calm and relaxed						
I have felt active and vigorous						
I woke up feeling fresh and rested						
My daily life has been filled with things that interest me						

Amharic Questionniare

መጠይቅ

ይህ መጠይቅ በ ኮሮና ቫይረስ ወረርሽኝ ወቅት የነፍሰጡር እናቶች ደህንነት (ጤንነት)

እናፍርሃት ምን ይመስላል በምን ያህል መጠንስ ነው ያለውበ ሚለውላይ ያተኩራል ፡ ፡

እርስዎምየዚህ ጥናትተሳታፊእንዲሆኑእናትክክለኛውን መረጃበመስጠት እንዲተባበሩን በአክብሮትእንጠይቃለን ፡

ለምን ጠይቃችሁ ጥቂት ጥያቄዎች መልስ መመልስ አልያ ምደግሞ ጥያቄውን ውድቅ ማድረግ ይችላሉ ፡ ፡ እንዲሁምበዚህ ጥናታዊ ጽሁፍ ውስጥ አለመሳተፍ ምትችላላችሁ ፡ ፡ ቃለ -መጠይቁለ 25

ደቂቃየ ሚቆይሲሆን ሚስጥራዊነቱየ ተጠበቀይሆናል ፡ ፡ የ ሚሰጡት ምላሽየ እናቶች ጤንነትበ ማሻሻልላይትልቅ አስተዋጽኦ እንዳለውለ ማሳወቅእወዳለሁ ፡ ፡

በቃለ መጠይቁላይ ለመሳተፍፈቃደኛነዎት

አውፈቃደኛነኝ _____

ፈቃደኛአይደለሁም _____

መጠይቅ

ክፍል 1

ቁጥር	ጥያቄ	አማራጭ
1	እድሜ	.....
2	ብሔር	1. ከምባታ 2. ሃድያ 3. ወላይታ 4. አሮሞ 5. አማራ 6. ሌላ .....
3	የትዳርሁኔታ	1. ያላገባ

		2. ያ ገ ባ 3. የ ፈ ታ 4. ባ ሏ የ ሞ ተ ባ ት
4	ሐ ይ ማ ኖ ት	1. ፕ ሮ ተ ስ ታ ን ት 2. ኦ ር ቶ ዶ ክ ስ 3. ሙ ስ ሊ ም 4. ካ ቶ ሊ ክ 5. ሌ ላ ……
5	የ ት ም ህ ር ት ደ ረ ጃ	1. ማ ን በ ብ ና መ ጻ ፍ የ ማ ይ ች ል 2. የ መ ጀ መ ሪ ያ ደ ረ ጃ 3. የ ሁ ለ ተ ኛ ደ ረ ጃ እ ና በ ላ ይ
6	ስ ራ	1. የ ግ ል ስ ራ 3. የ መ ን ግ ስ ት ስ ራ 3. የ ቤ ት እ መ ቤ ት 4. ስ ራ ያ ላ ገ ኘ ቸ
7	የ ገ ቢ መ ጠ ን	_____

ክ ፍ ል 2

ቁ ጥ ር	ጥ ያ ቄ	አ ማ ራ ጭ
8	ስ ን ተ ኛ እ ር ግ ዝ ና ሽ ነ ው	_____
9	ስ ን ት ል ጅ አ ለ ሽ	_____
10	እ ር ግ ዝ ና ው ስ ን ት ሳ ምን ቱ ነ ው	1. <14 ሳ ምን ት 2. 14-28 ሳ ምን ት 3. >28ሳ ምን ት
11	አ ስ ወ ር ዶ ሽ ያ ው ቃ ል	1. አ ዎ 2. አ ያ ው ቅ ም
12	እ ር ግ ዝ ና ላ ይ ች ግ ር አ ጋ ጥ ሞ ሽ ያ ው ቃ ል	1. አ ዎ 2. አ ያ ው ቅ ም

ክ ፍ ል 3

No	ጥ ያ ቄ	አ ማ ራ ጭ
13	የ ቆ የ ህ መ ም አ ለ ብ ሽ	1. የ ለ ብ ኝ ም 2. ስ ኳ ር 3. ደ ም ብ ዛ ት 4. ል ብ 5. ለ ላ ……
14	በ ቤ ተ ሰ ብ የ ቆ የ ህ መ ም አ ለ	1. የ ለ ብ ኝ ም 2. ስ ኳ ር 3. ደ ም ብ ዛ ት 4. ል ብ 5. ሌ ላ ……

ክ ፍ ል 4

ቁ ጥ ር	ጥ ያ ቄ	አ ማ ራ ጭ
15	በ ኮ ሮ ና ቫ ይ ዘ /ከ ተ ጠ ረ ጠ ረ ሰ ው ጋ ር ን ክ ኪ ነ በ ረ ሽ	1. አ ዎ 2. አ ል ነ በ ረ ኝ ም
16	ከ ቤ ተ ሰ ብ በ ኮ ሮ ና የ ተ ያ ዘ ሰ ው ነ በ ረ	1. አ ዎ 2. አ ል ነ በ ረ ም
17	ከ ቤ ተ ሰ ብ በ ኮ ሮ ና የ ሞ ተ ሰ ው ነ በ ረ	1. አ ዎ 2. አ ል ነ በ ረ ም

በ ጭ ራ ሽ (0) ከ ግ ማ ሽ ጊ ዜ በ ላ ይ (3)

አ ን ዳ ን ዴ (1)በ ጣ ም (4)

ከ ግ ማ ሽ ጊ ዜ ያ ነ ሰ (2)እ ጅ ግ በ ጣ ም (5)

The Farsi Cambridge worry scale

	0	1	2	3	4	5
ማዋለጃክፍልማን ምአጠገብሽአለመኖርያሰጋሻል						
የታመመ፣ አካለጎዶሎ፣ የሞተልጅልወልድእችላለውብለሽትሰጊያለሽ						
አዋላጆችጥሩእንክብካቤይሰጡይሆንበሚልትሰጊያለሽ						
የውስጥምርመራማድረግያሰጋሻል						
ለወሊድሆስፒታልስገባባለቤቱአብሮኝይገባይሆንበሚል ትሰጊያለሽ						
የተጨናነቀማዋለጃክፍል ና ምጥበራሱጊዜላይጀምርይችላልበሚልትሰጊያለሽ						
ውርጃያጋጥመኝይሆናልበሚልትሰጊያለሽ						
ጊዜዬሳይደርስወደማዋለጃእሄድይሆናልበሚልትሰጊያለ ሽ						
ወደሆስፒታልመሄድያሰጋሻል						
የገንዘብችግርይገጥመኝይሆናልበሚልትሰጊያለሽ						
ከአዲሱሐፃንጋርስለሚኖርሽግንጉነትትሰጊያለሽ						
የራስሽጤናያሰጋሻል						
የ ዘመዶችሽጤናያሰጋሻል						
የስራሁኔታያሰጋሻል						
ከባለቤትሽጋርያለሽግንጉነትያሰጋሻል						
ስለቤትሽትሰጊያለሽ						

የ ተ ፈ ለ ገ /ያ ል ተ ፈ ለ ገ እ ር ግ ዝ ና መ ሆ ኑ ያ ሰ ጋ ሻ ል						
ከ ቤ ተ ሰ ብ ጋ ር ስ ላ ለ ግ ኙ ነ ት ት ሰ ጊ ያ ለ ሽ						
ስ ለ ሕ ጉ ት ሰ ጊ ያ ለ ሽ						
ስ ለ ል ጅ ሽ ፆ ታ ት ሰ ጊ ያ ለ ሽ						
ስ ራ ል ተ ው እ ቸ ላ ለ ው የ ሚ ል ነ ገ ር ያ ሰ ጋ ሻ ል						

The WHO-5 Well-Being index

	በ ጭ ራ ሽ (0)	አ ን ዳ ን ዴ (1)	ከ ግ ማ ሽ ጊ ዜ ያ ነ ሰ (2)	ከ ግ ማ ሽ ጊ ዜ በ ላ ይ (3)	ብ ዙ ጊ ዜ (4)	ሁ ል ጊ ዜ (5)
ደ ስ ታ እ ና ጥ ሩ ስ ሜ ት ተ ሰ ም ቶ ሻ ል						
የ ተ ረ ጋ ጋ ና ዘ ና ያ ለ ስ ሜ ት ተ ሰ ም ቶ ሻ ል						
ን ቃ ት ና ጤ ና ማ ነ ት ተ ሰ ም ቶ ሻ ል						
ከ እ ን ቅ ል ፍ ሽ ስ ት ነ ሺ ታ ድ ሰ ሽ ና አ ር ፈ ሽ ት ነ ሻ ለ ሽ						
የ የ ቀ ን ሕ ይ ወ ት ሽ በ ሚ ያ ስ ደ ስ ት ሽ ነ ገ ር የ ተ ሞ ላ ነ ው						