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Assessment of the Prevalence of Unplanned Pregnancy and Associated Factors among Pregnant Women Attending Antenatal Care Unit at Hambiso Health Center Hambiso, North Shewa, Ethiopia

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Abstract

Introduction: Unplanned pregnancy has been a distressing reality among females in the reproductive age group particularly in developing countries. The repercussions of such events range from illegal abortions to various health related problems associated with pregnancy in mothers. This study aimed to determine the prevalence of unplanned pregnancy and associated factors among pregnant women following ANC at Hambiso Health Center, Hambiso town, North Showa, Oromia region, Ethiopia.

Methodology: Cross sectional study design was conducted at Hambiso Health Center from June 10, 2017 to July 24, 2017. The sample size was calculated as 165 and convenience sampling technique was used. The study populations were pregnant women following ANC at Hambiso Health Center, Hambisoo town. Data was collected by pretested structured questionnaire, by face to face interview. Chi square test was used to test the association between the dependent and independent variables.

Result: Prevalence of unplanned pregnancy was high 35.2% among the study sample, majority of the unplanned pregnancies were miss timed followed by husband influence.

Keywords: Unplanned pregnancy; Contraceptive; Obstetrics; Gynecology; Chi square test

Introduction

Unplanned pregnancy is an important public health issue in developed and developing countries because of its negative association with the social and health outcomes for both mothers and children. Globally, about 210 million women throughout the world discover that they are pregnant when they miss a menstrual period or have a positive pregnancy test every year. However, out of this 15% of pregnant women spontaneously miscarry or experience a stillbirth. Another 22% end their pregnancy by abortion. Thus, only about two-thirds of known pregnancies each year 133 million result in the birth of a baby [1].

Unplanned pregnancies are important cause maternal deaths. Pregnancies that occur too early, too late or too frequently can lead to illness during pregnancy and complications at the time of birth [2].

Globally, there were an estimated 287,000 maternal deaths in 2010, of this developing countries account for 99% (284,000). At the country level, 10 countries comprised 60% of the global maternal deaths, out of this Ethiopia ranked 7th by 9,000 maternal deaths in 2010. The global maternal mortality ratio (MMR) in 2010 was 210 maternal deaths per 100,000 live births [3]. However, Ethiopian MMR in 2012 EDHS report were 676 per 100,000 live births which was higher as compared to the global average [4]. 95% of unsafe abortions occur in developing countries.

In many poor countries, treatment of these complications consumes up to half of hospital budgets for obstetrics and gynecology [5]. Every year in sub-Saharan Africa, approximately 14 million unintended pregnancies occur and a sizeable proportion is due to poor use of short-term hormonal methods [6].

In southeast Ethiopia, a study in Harar town showed that from a total of 983 females aged 15–49 years who were interviewed, 225 (33.3%) reported that their most recent pregnancies were unintended [7]. Use of contraception could reduce the share of maternal mortality caused by unsafe abortion by up to 15% [8].

Unplanned pregnancy occurs even among contraceptive users mainly through incorrect or inconsistent use and contraceptive discontinuation. Also unavailability of method choice or restricted access, contraceptive failure, use a variety of contraceptive methods during their lifetime stop using an effective method and delay taking up a new one and switching methods as their circumstances change leads UP [9]. In Ethiopia the vast majority of UP 95% occur among the women who do not practice contraception at all and the remaining 2% are attributable to failures of traditional methods.

More than seven in 10 women who want to avoid pregnancy either do not practice contraception or use a relatively ineffective traditional method. Totally the percentage of unplanned birth decreased from 35% 2005 to 29% in 2011 [10].

According to studies conducted in different parts of Ethiopia the prevalence of UP were showed 27.9% in Kersa District East Hararge in

2010, 36% in Ganji Woreda, West Wollega Oromia Region in 2013 and 42.4% in Damote Gale woreda respectively [11].

According to the National Health Survey in 2014, 31% of the reproductive age women use any type of contraceptive. Those who use modern contraceptives are still low 29%. Those who ages 40 or above only 22% use modern contraceptives, while those below forty years 40% of them use modern contraceptives [12].

Materials and methods

Study area and period

The study was conducted at Hambiso Health Centre, Hambiso town, North Shoa, Oromia Region, Ethiopia from June 10, 2017 to July 24, 2017. Hambiso town is located 126 km from Addis Ababa in North direction.

The total population of the town is 26,000 with females 14518 (55.8%) and males 11482 (44.2%). The town has one health center and four private clinics.

Study design

A facility based cross sectional study was conducted on pregnant women who visited ANC follow up at Hambiso Health center.

Study population

All pregnant women who attended ANC follow up at Hambiso Health Center during the study period.

Inclusion criteria and exclusion criteria

Pregnant women who visited ANC unit during the data collection period and who fulfilled the inclusion criteria were included. Pregnant women who had hearing, speech problem and critically ill were excluded from the study.

Sample size and sampling technique

The sample size was determined based on the single population proportion formula using $Z^2 \times p \times q/d^2$ with a 95% confidence interval, 5% margin of error and an assumption that 29% of pregnant women are have unplanned pregnancy in the area.

However, due to the fact that, the total pregnant women attending in the health care system were less than 10,000 and we used correction formula to come up with the final sample size.

Convenient sampling technique were used because the pregnant women attending the ANC unite in the area were quite limited and it was almost less than 200.

$$n_i = \frac{(Z\alpha/2)^2 P(1-P)}{d^2}$$

$$n_i = \frac{(1.96)^2 0.29(1-0.65)}{(0.05)^2} = 316$$

Where,

ni: The initial sample size required

P- National prevalence of unplanned pregnancies among woman in reproductive age=29% (17)

d- The margin of sampling error tolerated, mostly 5%.

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

$$n_f = \frac{316}{1 + \frac{316}{350}} = 165 \text{Where,}$$

n_f=final sample size

n=total study population which is 316

N=source population which is 350

Data collection method and instrument

The data was collected by face to face interview using structured questionnaire. The questionnaire was translated in to local languages. The data collectors were health officer and midwifery, both of them were working at ANC unit.

In order to check the validity and reliability of the questionnaire, pilot study was conducted on 5% of the actual sample size at Hambiso town, Degem woreda and North Shoa zone Oromia region. The questionnaire was modified based on information obtained from pre-test results as necessary.

Results

From the total 165 study participants, only 159 fulfilled the inclusion criteria and gave their consent to participate in the study.

Thus, the response rate was 96.4%. As the below table indicates oromoethnicity (63.2%) and orthodox religion (84.8%) were the largest group among the study participants (Table 1).

Characteristics		Frequency	Percentage
Age group (in year)	15-19	4	2.5
	20-24	41	25.9
	25-29	76	47.7
	30-34	28	17.6
	35-45	10	6.3
	Total	159	100
Marital status	Married	123	77.3
	Single	8	5
	Widowed	17	10.7
	Divorced	11	7
Ethnicity	Oromo	100	63.2
	Amhara	44	28.4
	Tigre	4	2.1
	Others	11	6.3
	Total	159	100

Religion	Orthodox	135	84.8
	Muslim	13	8.3
	Protestant	8	5
	Others	3	1.9
	Total	159	100
Educational level	Illiterate	18	11.4
	Can read and write	37	23
	1-6 grade	41	26.1
	12-Jul	53	33.3
	College/University complete	10	6.2
	Total	159	100
Occupational status	House wife	93	58.5
	Government Employees	33	20.7
	Merchant	28	17.6
	Others	5	3.2159
	Total	159	100
Monthly income in ETB	<790	111	69.8
	790-2805	39	24.5
	>2805	9	5.7
1 ETB=27 USD			

Table 1: Socio demographic characteristics at Hambiso Health Center, Hambiso town (July, 2017).

The below table is demonstrating how much of the pregnant women are aware of contraceptives use (Table 2). Thus, majority (97.5%) of the respondents have heard about modern contraceptives use and the advantages and the disadvantages of modern contraceptives from health care providers.

Almost 96 (60.4%) have used modern contraceptives at least once and injectable one Inject able (Depo-Provera) were used by majority of them (59.4%).

Characteristics		Frequency	Percentage
Have ever heard of MC	Yes	155	97.5
	No	4	2.5
	Total	159	100
Source information on MC	Health workers	92	57.9
	Mass media	63	39.6
	Others	4	2.5
	Total	159	100
Information on advantages of MC	Know none	4	2.5

	Know at least one	97	61
	Know greater than one	58	36.5
	Total	96	60.4
Modern contraceptive practices	Yes	63	39.6
	No	159	100
	Total	96	60.4
Type of MC practices	Pills	29	30.2
	Injectable (Depo-Provera)	57	59.4
	Others	10	10.4
	Total	96	100

Table 2: Awareness and practice of respondents toward modern contraceptives at Hambiso Health Center, Hambiso town (July, 2017).

From all the respondents, 39.6% of them have never used modern contraceptives and the main reason were fear of side effects (26.1%) and husband influence (22.3%). The figure below is indicating the main barriers for not to use modern contraceptives in the study area (Figure 1).
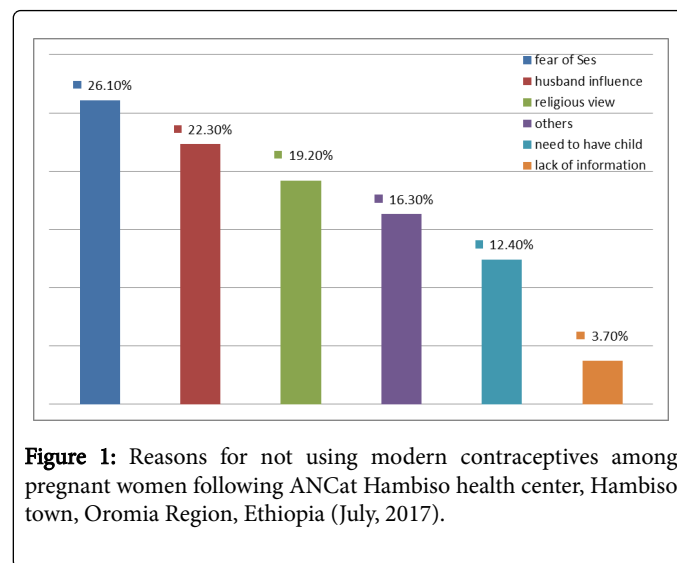

Figure 1: Reasons for not using modern contraceptives among pregnant women following ANCat Hambiso health center, Hambiso town, Oromia Region, Ethiopia (July, 2017).

Distribution of respondents by status of their current pregnancy

Out of the total participants, 56 (35.2%) respondents claimed their current pregnancy was unplanned (Figure 2).

Twenty four (42.9%) claimed that the reason for their unplanned pregnancy was because it was miss timed that is they require the pregnancy in the future, which was followed by husband influence (21.4%).
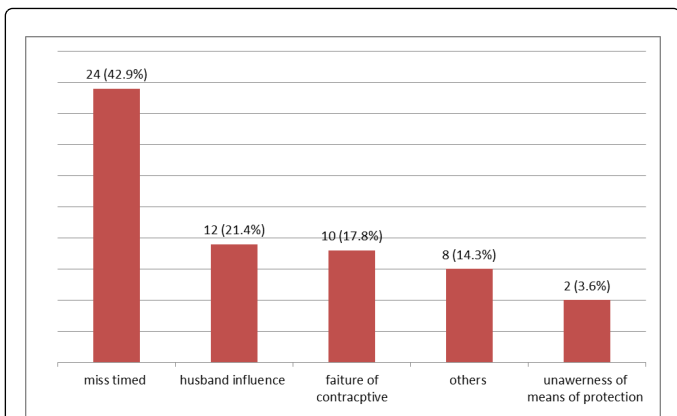
Figure 2: Reasons for the occurrence of unplanned pregnancy among women following ANC at Hambiso health center, Hambiso town (July, 2017).

claimed their current pregnancy was unplanned none of them wanted to have five and above children while those with planned current pregnancy 16.3% of them wish to have. Most of the respondents 120 (75.5%) believe that modern contraceptives enable them to get the number of children they desire (Tables 3 and 4).

Preferred no of children	Planned Pregnancy	Unplanned pregnancy	Total
One	0 (0%)	2 (3.4%)	2 (1.3%)
Two	19 (18.1%)	17 (31.2%)	36 (22.6%)
Three	22 (21.9%)	32 (57.1%)	54 (34%)
Four	45 (43.7%)	5 (8.3%)	50 (31.4%)
Five	17 (16.3%)	0 (0%)	17 (10.7%)
Total	103 (100%)	56 (100%)	159 (100%)

Table 3: Preferred numbers of children planned to have among ANC attendants at Hambiso health center, Hambiso town (July, 2017).

Perception on average number of children

Most of the respondents 54 (34%) perceived that 3 children in a life is enough while only 2 (1.3%) wish to have a single child. Those who

Variables	Unplanned pregnancy			P-value
	Yes: Number (%)	No: Number (%)	Total Number	
Contraceptive use				
Yes	27 (33.81)	69 (62.19)	96	0.0207
No	29 (22.19)	34 (40.81)	63	
Formal education				
Yes	48 (30.18)	56 (35.22)	65.4	0.0001
No	8 (5.03)	47 (29.55)	34.6	
Religion				
Orthodox	87 (54.7)	48 (30.18)	84.88	0.9324
Muslim	8 (5.03)	5 (3.14)	8.17	
Protestant	6 (3.77)	2 (1.25)	5.02	
Others	2 (1.25)	1 (0.62)	1.87	
Monthly income in ETB				
Less than 790	72 (45.28)	39 (24.52)	69.8	0.0934
790-2805	28 (17.61)	11 (6.91)	24.52	
Greater than 2805	3 (1.88)	6 (3.77)	5.65	

Table 4: Association between unplanned pregnancy with modern contraceptive, formal education, religion and income among the respondents.

Discussion

This study has shown that the proportion of unplanned pregnancy among pregnant women is high (35.2%) of women claimed their current pregnancy was unplanned. This is higher than the national figure 29% [13] and almost comparable with that of Ganji Woreda, West Wollega Oromia Region, Ethiopia conducted in February, 2013, which was found to be 36% [14] it is because the sociodemographic characteristics of both populations are nearly comparable. It was found to be higher in proportion to the study conducted in Kersa eastern

Ethiopia in 2010 which was 27.9% [15]. This might be due to diverse tradition in this study and 85% of Kersa participants were illiterate and Muslim dominant area so every child is taken as gift of God. Globally the prevalence of unplanned pregnancy is 38% [16] which is larger than the finding in this study. In sub-Saharan Africa (SSA) 39% of pregnancies are unintended, ranges from 30% in Western Africa to 59% in Southern Africa in 2014.

Those who desires to have smaller number of children in a life time are more likely to have unplanned pregnancy which is similar to studies performed in Ganji Woreda, West Wollega Oromia Region, Ethiopia conducted in February 2013 [16], in rural and urban community of Khartoum state Sudan 2014 [4] and in Nigeria 2006 [5]. Those who claimed their current pregnancy was unplanned none of them wanted to have five and above children while those with planned current pregnancy 16.3% of them wish to have. Those who claimed their current pregnancy was planned none of them wanted to have a single child while those with unplanned current pregnancy 3.4% of them wish to have.

This study showed that unplanned pregnancy increases as the level of education increases and the relation was extremely significant (0.0001), these findings were in line with study in Khartoum state Sudan 2014 [4] and a study in Kersa, eastern Ethiopia, 2010 [16]. Modern contraceptive had highly significant association with the unintended pregnancy (P=0.0207), this is in line with the studies conducted in Ganji Woreda, West Wollega Oromia Region, Ethiopia February 2013 [16], in New York Guttmacher Institute, 2010 [15] and World Health organization, word health statistics, 2009 [9].

The most frequent reasons mentioned by the participants in this study to refer the pregnancy as unplanned was miss timed, which means they want to become pregnant in the near or late future time. In this study 24 (42.9%) was miss timed which was analogous with the study finding in Khartoum state Sudan 2014 [4] which is 82.5%.

This study also revealed that there was no significant level of association between religion and low level income of the respondents and occurrence of unplanned pregnancy, which is comparable with the findings study in Khartoum state Sudan 2014 [4]. Most of the participants were followers of orthodox religion 84.8% which was followed by Muslim 8.3%.

According to the results of this study most of the respondents were in the age group of 25-29 years which was 47.7% followed by those between 20-24 years which was 25.9%. About 4 (2.5%) of the respondents were under 19 years old which indicates teenage pregnancy was much lower than the national figure which is 12% Ethiopia Demographic and Health Survey, 2011. This could be that the study area is semi urban type and so expected to have lower teenage marriage.

Conclusion

The findings of this study revealed the prevalence of unplanned pregnancy was higher than the national figure and comparable with study in Ganji. Unplanned pregnancy was associated with contraceptive use and educational level. However, there was no association found with religion, income level and ethnicity of the respondents.

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