PREVALENCE AND DETERMINANT FACTORS OF UNINTENDED PREGNANCY AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINICS OF SHASHAMANE HOSPITALS

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ABSTRACT

BACKGROUND: Unintended pregnancy is defined as a pregnancy that is a sum of mistimed pregnancy (pregnancy wanted at a later time) and unwanted pregnancy (pregnancy which is not wanted at all). Unintended pregnancy remains a major public health problem in sub-Saharan countries, including Ethiopia. Therefore, the main aim of this study was to assess the magnitude and determinants of unintended pregnancy among pregnant women attending antenatal clinics of Shashemene hospitals.

METHODS: An institutional-based cross-sectional study was conducted among 380 pregnant women from March 25 to April 30/2019. A systematic random sampling technique was used to select the study participants. Data was collected through a pre-tested interviewer-administered questionnaire and it was entered into EPIdata 3.1 and exported to SPSS 24 for further analysis. Binary and multivariate logistic regression analysis was used to identify significant factors. Variables with P-value < 0.05 were used to declare statistical significance.

RESULT: The magnitude of unintended pregnancy was 31.1%. Age 35-45 years (AOR=0.2 95% CI; 1.057-0.8), parity ≥3 (AOR= 9.7 95% CI; 2.0-47.7), poor knowledge of family planning (AOR= 2.85 95% CI; 1.54-5.3), having rural residence (AOR = 1.27 95% CI; 2.15-4.5), and husbands' educational level (AOR= 4.34 95%CI; 2.16-9.73) were factors associated with unintended pregnancy.

CONCLUSION: The magnitude of unintended pregnancy is high in the study area. Low educational status of the husband, maternal age, parity, residence, and knowledge of mothers about family planning were the most important determinant factors of unintended pregnancy.

KEY WORDS: Unintended pregnancy, factors, Ethiopia

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INTRODUCTION

According to the World Health Organization, unintended pregnancy is defined as a pregnancy that is not wanted and/or not planned at the time of conception[1]. Unplanned pregnancy happens mainly due to the results of not using contraception or inconsistent or incorrect use of effective contraceptive methods[1]. Unintended pregnancy is one of the measures of quality of reproductive health service success or failure[2-3]. It can occur due to different reasons such as:; not using family planning, failure/lack of contraceptive methods, rape, and lack of knowledge regarding family planning[4-6]. Unintended pregnancy is a worldwide problem that affects women, their families, and societies at large. It is an important public health concern in both the developing and developed world because of its association with adverse social and health outcomes, for both mothers and children[7].

Among 208.2 million pregnancies in the world, 41% are unintended. Also, 213 million pregnancies occur each year, 89% of this occurs in developing countries, and 40% of these are unintended pregnancies; the majority of unplanned pregnancies end in abortion. Unintended pregnancies and births are most common among young unmarried women, especially teenagers and the most disadvantaged groups[1,3].

Unintended pregnancy has a direct relation with poor utilization of maternal health care services. Researches relate unintended pregnancy with poor antenatal care utilization, which is a risk factor for unfavorable pregnancy outcome and maternal morbidity and mortality [6-7]. In addition, unintended pregnancy results in unsafe abortion, which is the other main cause of maternal mortality and morbidity [6-7].

In less developed regions, in 1000 pregnancies, an average of 57 of them were unintended and the pregnancies resulted in unplanned birth, abortion, and miscarriage[8,9]. In Ethiopia, every year on average 620,296 induced abortions were performed; 103, 648 women were treated for complications of such abortions. Around 53% of abortions were legal and performed in the health facilities; whereas 47% of all abortions occurred outside of health facilities[10]. According to EDHS 2016, 22% of married women had an unmet need for family planning. On the other hand, 9% of births were not wanted and 16% of births were mistimed[11].

Unintended pregnancy is one of the most evident issues for the violation of women's sexual and reproductive rights in developing countries. Despite the availability of highly effective methods of contraception, different studies in Ethiopia revealed that there is a high level of unintended pregnancy[11].

This study was aimed at assessing the magnitude and associated factors of unintended pregnancy among pregnant women attending antenatal care in Shashemene public hospitals, Ethiopia.

METHOD

Study area and period

This study was conducted in Shashamane town public hospitals from Mar 25- April 30/2019. The town is located about 240 km from Addis Ababa. According to the 2007 national census report, the town has a total population of 100,454; out of which 49,800 were women. The town has two hospitals that serve at district and referral levels

Study design

An institutional-based cross-sectional study

Populations

Source population

All pregnant women attending antenatal care (ANC)

Sample size determination and sampling procedure

The required sample size was determined using a single population proportion formula by considering the proportion of unintended pregnancy from a previous study 34% [14], 95% confidence interval (CI), and 5% of margin of error. After adding 10% for the non-response rate, the final sample was 380 women.

Study Population To select study participants, systematic random sampling technique was used. From the registered 1 month ANC data of hospitals, the expected number of study population during the study period was 820 (440 at Shashemene referral and 380 at Melkaoda hospital). The Kth interval number approximates 2 and the first number was taken randomly between 1 and 2 that was 2, then the rest samples were taken every 2nd digit interval. Based on population size to proportional allocation, samples of 204 from Shashemene referral hospital and 176 from Melkaoda hospital were selected.

Data collection method and quality assurance

A structured interviewer-administered face-to-face interview was used to collect data. The questionnaire consisted of sociodemographic and economic characteristics, sexual behaviors, and behavioral characteristics of participants which were initially prepared in English and translated into local languages (Amharic) and back-translated to the English language by three language experts to check the consistency. A total of two diploma midwife data collectors were involved in the study. Data collectors received one day of training before data collection. A pretest was done on 19 (5%) of the sample at Shashemene health centers. The principal investigator and one BSc midwife had supervised the performance of the data collectors daily. The collected data were checked for completeness and consistency.

Data Processing and Analysis

The collected data were checked for completeness, coded, and entered into EPI data version 3.1, and analyzed using SPSS version 24. Summary statistics such as percentage and frequency were computed. Bivariate analysis, COR with 95% CI was used to see the association between each independent variable and the outcome variable. AOR with 95% CI was estimated to identify the factors associated with unintended pregnancy using multivariate logistic regression analysis. The level of statistical significance was declared at a p-value ≤ of 0.05.

Operational Definition

Unintended pregnancy: Is the combination of unwanted and mistimed at the time of conception. Knowledge of contraceptive methods: seven knowledge questions about modern contraceptive methods were used and those who answered five or more questions were categorized as good knowledge & those who answered less than five were grouped as poor knowledgeable

Ethical approval and consent to participant

Ethical clearance of the study was obtained from Arba Minch University and then Shashemene administrative town wrote a formal letter to each hospital and permission was taken from each hospital. After the purpose and objective of the study were given, informed verbal consent was obtained from each study participant. All the study participants were informed about the purpose of the study. Their information was kept confidential by excluding their names in the questionnaire

RESULT

Socio-demographic characteristics of respondents

A total of 380 respondents were involved in the study with a response rate of 100%. The mean age of the respondent was 25.02 with (SD± 5.213) with minimum and maximum age of 15 and 45 years respectively. The majority, 366(96.3%) of the respondents were married, and nearly half, 182(47.9%) of respondents had completed primary school. More than half, 210(55.3%) of the respondents had a family monthly income > 2000 Ethiopian Birr (Table 1).

Table 1: Socio-demographic and economic characteristics of pregnant women attending antenatal care in Shashamane hospitals, Ethiopia, 2019 (n = 380).

Characteristics	Classifications	Number	Percentage
Age group (in years)	15-19	58	15.3
	20-24	116	30.5
	25-29	126	33.2
	30-34	58	15.3
	35-39	20	5.2
	≥40	2	0.5
Marital status	Married	366	96.3
	Divorced	7	1.8
	Widowed	5	1.3
	Single	2	0.5
Religion	Orthodox Christian	63	16.6
	Muslim	245	64.5
	Protestant	68	17.9
	Others*	4	1.1
Ethnicity	Oromo	311	81.8
	Amhara	21	5.5
	Sidama	5	1.3
	Wolaita	18	4.7
	Others**	25	6.6
Residency	Urban	219	57.6
	Rural	161	42.4
The educational level of the mother	No formal education	57	15.0
	Primary (1-8)	182	47.9
	Secondary (9-12)	109	28.7
	College and above	32	8.4
Occupational status	Government Employees	30	7.9
	Non-governmental occupations	350	92.1
Families' monthly income level. The median income was 2000	Less or equal to 2000	170	44.7
	Greater than 2000	210	55.3

Obstetrics characteristics of respondents

Around, 177(46.6%) of respondents had more than or equal to three gravidities, and.78 (20.5%), of respondents, had a history of unwanted pregnancy. From unplanned current pregnancy, 58 (74.4%) of respondents were due to nonuse of family planning and 15(19.2%) were due to failure of family planning. More than half, 235(61.8%) of respondents had a history of institutional delivery and 345(90.8%) of respondents had a history of ANC follow-up (Table 2).

Table 2: Obstetric characteristics of pregnant women attending antenatal care in Shashamane hospitals, Ethiopia, 2019 (n = 380).

Characteristics	Classification	Number	Percent (%)
Gravidity	One	104	27.4
	Two	99	26
	Three and above	177	46.6
Parity	One	110	39.9
	Two	63	22.8
	Three and above	103	37.3
Is current pregnancy unplanned	Yes	118	31
	No	262	68.9
Cause of unplanned pregnancy	Failure of FP	15	19.2
	Nonuse of FP	58	74.4
	Rape	3	3.8
	Other	2	2.6
History of abortion	Yes	65	17.1
	No	315	82.9
History of stillbirth	Yes	44	11.6
	No	336	88.4
History of institutional delivery	Yes	235	61.8
	No	145	38.2
History of ANC follow up during first pregnancy	Yes	345	90.8
	No	35	9.2
Number of ANC follow up in current pregnancy	One	95	25
	Two	114	30
	Three	118	31.1
	Four and above	53	13.9

Prevalence of unintended pregnancy

The overall prevalence of unintended pregnancy was 31% (95% CI 25.5, 36.50).

Utilization of family planning

About half, 201(52.9%) of respondents had a history of contraceptive use and 8320(4.2%) had future intentions to use family planning. Of those who have a history of using contraceptives majority, 100(49.7) % of respondents used Injectables. Of nonusers, 98(54.7%) did not use it due to fear of abnormal bleeding (Table 3).

Table 3: History of family planning Utilization among pregnant women attending antenatal care in Shashemene hospitals, Ethiopia, 2019 (n = 380).

Characteristics	Classification		Number	Percent (%)
Have a history of using family planning	Yes		201	52.9
	No		179	47.1
Do they have future intention to use FP	Yes		320	84.2
	No		60	15.8
Types of FP used	Pills		48	23.9
	Emergency pills		9	4.5
	Condom		4	2
	IUCD		6	3
	Implants		30	14.9
	Injectables		100	49.7
	Others traditional methods		4	1.9
Reason for not using family planning	Fear of side effect	Yes	48	26.8
		No	131	73.2
	Believing that it could cause abnormal bleeding	Yes	98	54.7
		No	81	45.3
	Because her husband does not allow	Yes	22	12.3
		No	157	87.7
	Because of religion	Yes	44	24.6
		No	135	75.4
	Other reason	Yes	32	17.9
		No	147	82.1

Knowledge on contraceptives use as prevention of unintended pregnancy

The majority, 261(68.7%) of respondents reported that contraceptives can be used to prevent unplanned pregnancy and 163(42.9%) of respondents reported that contraceptives can be used to **prevent possible maternal death** (Table 4)

Table 4: Knowledge of use of contraceptives among pregnant women attending antenatal care in Shashemene hospitals, Ethiopia, 2019 (n = 380).

Characteristics	Classification	Values	Frequency	Percent (%)
Do you believe that contraceptives		Yes	347	91.3
help couples to become responsible parents		No	33	8.7
What are general uses of contraceptives	Prevent unwanted pregnancy	Yes	261	68.7
		No	119	31.3
	Prevent possible maternal death	Yes	163	42.9
		No	217	57.1
	Limiting the number of children	Yes	242	63.7
		No	138	36.3
	*Child spacing	Yes	261	68.7
		No	119	31.3

Factors associated with unintended pregnancy

In bivariable analysis, age of respondent, marital status, educational status of mothers, history of institutional delivery, number of parities, stillbirth, abortion, knowledge of FP, and ANC follow up were associated with unintended pregnancy at P < 0.2, but other variables were not significant.

Variables which had a significant level of P < 0.2 were inserted into the model in the multivariable logistic regression analysis process. The variables like mothers' knowledge towards family planning use, residency, age of the mother, parity, and husband's educational level were factors associated with an unintended pregnancy.

35-45 years old had 0.2 times less risk of unplanned pregnancy than those age groups from 15-24 years (AOR=0.2 95% CI 0.057-0.8). The high odds of unintended pregnancy were observed among women who lived in rural areas (AOR= 1.27, 95% CI 2.15-4.5), husband's educational level of primary (AOR=4.34 95% CI 2.16-9.7), parity of three and above (AOR= 9.7, 95% CI 2.0-47.7), and poor knowledge towards family planning use (AOR= 2.85, 95% CI 1.54-5.3 (Table 5)

Table 5: Bivariate and multivariable logistic regression analyses of unintended pregnancy among pregnant women attending antenatal care in Shashamane hospitals, Ethiopia, 2019 (n = 380).

Variables	Status of pregnancy		95% CI	
Age of mother	Intended	Unintended	COR	AOR
15-24	134	40	1	1
25-34	112	72	2.15(1.36-3.41)	0.86(0.43-1.76)
35-45	16	6	2.26(0.46-3.42)	0.2(0.057-0.8) *
Marital status				
Married	253	113	0.6(0.13-2.7)	0.38(0.05-2.7)
Divorced	5	2	0.5(0.06-4.9)	0.9(0.06-14.1)
Others #	4	3	1	1
Residence				
Urban	172	47	1	1
Rural	90	71	3.2(1.84-4.5)	1.27(2.15-4.5)*
Mother's level of education				
No formal education	35	22	1.43(0.75-2.75)	1.1(0.37-3.15)
Primary	129	53	0.94(0.58-1.51)	0.88(0.44-1.8)
Secondary and above	98	43	1	1
Husband's level of education				
No formal education	28	14	1.0(0.5-2.0)	0.6(0.2-2.0)
Primary	76	28	0.76(0.46-1.28)	4.34(2.16-9.7)*
Secondary and above	158	76	1	1
Parity				
One	79	31	1	1
Two	40	23	1.46(0.76-2.8)	3.1(0.64-14.99)
Three and above	51	51	2.5(1.44-4.49)	9.7(2.0-47.7) *
History of unwanted pregnancy				
Yes	41	37	2.46(1.5-4.1)	1.3(0.6-2.5)
No	221	81	1	1
History of abortion				
Yes	41	24	1.38(0.78-2.4)	1.6(0.74-3.5)
No	221	94	1	1
History of stillbirth				
Yes	30	14	1.04(0.53-2.04)	0.87(0.36-2.1)
No	232	104	1	1
History of institutional delivery				
Yes	151	84	1	1
No	111	34	0.55(0.35-0.87)	0.85(0.43-1.67)
History of ANC follow up				
Yes	234	111	1	1
No	28	7	0.53(0.2-1,24)	0.2(0.05-1.05)
Knowledge on general use of FP				
Poor knowledge	101	62	1.76(1.14-2.7)	2.85(1.54-5.3)*
Good knowledge	161	56	1	1

Key: * shows p-value < 0.05 others # belongs to widowed + single

DISCUSSION

The finding of this study showed that the magnitude of unintended pregnancy among women attending ANC in Shashemene hospitals was 31.1% with 95% CI (27.1-33.5). The finding is in line with other studies done in Ethiopia such as; Hosanna (34%) [17], Welkaite (26%) [18], and Mekelle town (28.6%) [19]. But, is lower than studies done in Addis Ababa (36.4%) [25], Kenya (50%) [20], and other part of Ethiopia (37%) [21]. The possible reason for the difference might be due to the difference in the study period and study area.

In this study, women who had three and above children were more likely to have an unintended pregnancy as compared to their counterparts. The same finding was observed in studies which were done in Felegahiwot hospital, Bahir Dar Ethiopia [23], Gelemso [20], Hosanna town, Ethiopia [18], rural Ghana [22], and Zambia [24]. This might be due to women having a large family size (children) spending time taking care of their children, which may result in missing appointments and even delay in seeking maternal health services

The odds of unintended pregnancies among women in the age group 35-45 was 0.2 times higher than those in the age group of 15–24 [24]. This is different from the study done in Kenya which showed that the prevalence of unplanned pregnancy was high in the age group of 15-19 years [15].

Respondents who had poor knowledge of family planning were 2.85 times more likely the risk of having the occurrence of unplanned pregnancies than those having good knowledge. The finding is consistent with the study conducted in Gelemso [20]. This might be due to those respondents who have more knowledge about unplanned pregnancy might have more information on preventive methods (family planning), and are more likely to be aware of the benefits of those methods which in turn will motivate them to use the family planning methods and be less likely to have an unplanned pregnancy.

CONCLUSION

The prevalence of unintended pregnancy was higher in the study area than study conducted in other area which confirmed the major public health problem in the Sheshemane area. Educational status of the husband, maternal age, parity, residence, and knowledge of mothers on family planning were the most important determinant factors of unintended pregnancy.

LIST OF ABBREVIATIONS

CI: confidence interval; ANC: Ante Natal Care; AOR: adjusted odds ratio; EDHS: Ethiopian Demographic Healthy Survey; FP: family planning; SPSS: Statistical Package for Social Sciences;

COMPETING INTERESTS

"The authors declared that they have no competing interests" in this section

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