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Original Research Article

More young adults accidentally pregnant; neither timed nor wanted: evidence from Southwest Ethiopia

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ABSTRACT

Background: In the resource-poor setting, unintended pregnancy is exacerbated by several factors that result in high maternal and newborn deaths. Given the considerable gap between actual and wanted fertility rates in Ethiopia, preventing unintended pregnancy can play a role in reducing complications, morbidity, and mortality. The purpose of this study was to determine unintended pregnancy and its correlates among ever pregnant women in Bitta woreda, Southwest Ethiopia.

Methods: Quantitative data from a community-based cross-sectional study among 770 ever-pregnant women (15-49 years) were employed. A random selection using multistage sampling technique was exercised to select study participants. Logistic regression models were used to assess factors associated with unintended pregnancy.

Results: In the study area nearly, thirty-seven percent of women have experienced an unintended pregnancy: mistimed (26%) and unwanted (11%). Three percent of the respondents had a faced an induced abortion. A relatively higher proportion of women aged 26-29 years reported experiencing unwanted and mistimed pregnancies. Women who traveled a longer distance (more than an hour) to family planning service area were more likely to face unintended pregnancy (AOR=2.23(1.37-3.63)). A woman who had more than five parity were more likely to experience unintended pregnancy 5.52(2.50-12.20).

Conclusions: The unintended pregnancy remains higher in the study area which is more than the national average. Existing unintended pregnancy among young women urges family planning providers to deliver youth-inclusive family planning programs.

Keywords: Ever pregnant, Mistimed pregnancy, Unwanted pregnancy Unintended pregnancy

INTRODUCTION

The concept of unintended pregnancy has been essential to demographers in seeking to understand fertility, unwanted pregnancy and how to promote woman's ability to determine whether and when to have children.¹ Research findings highlight unintended pregnancy as a leading cause of unsafe abortion and maternal mortality and morbidity.^{2,3} Despite a decrease in maternal mortality

in the world by 43% from approximately 532,000 deaths in 1990 to an estimated 303 000 deaths in 2015, in developing countries, it is a major public health issue.⁴ In Africa, over 40% of the total maternal deaths are occurred due to unsafe abortion, making it the leading cause of maternal mortality.⁵ Developing countries take a large share of women with unintended pregnancy, account for approximately 99% (302 000) of the global maternal deaths, sub-Saharan Africa alone accounting for roughly 66% (201 000) in 2015.⁴ An unintended

pregnancy could be either mistimed (they occurred earlier than desired) or unwanted (they occurred when no children or no more children were desired) at the time of conception.¹ Studies show women who experience an unintended pregnancy are more likely to seek an abortion, and nearly half of all unintended pregnancies end in induced abortion, which in many cases will be illegal and unsafe in sub-Saharan Africa.⁶

In Ethiopia, the prevalence of unintended pregnancy is 29% with a maternal mortality ratio of 673 deaths per 100,000 live births in 2014.⁷ A large proportion of these deaths result from the unsafe abortion performed owing to unwanted pregnancies. A nationally representative survey conducted in 2008 appraised, 382,000 induced abortions were executed and 52,600 women were treated for complications of abortion.⁸ The level of unwanted fertility is a sign of the existence of unintended pregnancy, the country has the total fertility rate (TFR) which is 1.8 children greater than the total wanted fertility rate (TWFR). It displays the total fertility rate is nearly 39% higher than it would be if unwanted births were avoided.^{9,10} A large number of studies on determinants of unintended pregnancy have investigated also the potential effects women experience. Findings reported that women's autonomy, partner communication about family planning, desire for children, ideal number of children, family planning health worker visit, travel time to the nearest family planning service area, and exposure to mass media were among the factors that significantly associated with unintended pregnancy.¹¹⁻¹⁵ On the other side, a study reveals the age of respondents, household economic status, and educational level, were among the factors that significantly associated with unintended pregnancy.¹¹ Regards the effects of encountering unintended pregnancy, a study illustrates women with unwanted pregnancy had almost twice as likely undergoing depressive symptoms compared with women with a wanted pregnancy.¹²

From the three successive surveys, it is reported that unwanted pregnancies are decreasing; 17 %, 16% and 9% in 2000, 2005 and 2011 respectively in Ethiopia.^{10,14,16} However, the percentage of births that were wanted later (mistimed) remained stable over the years in the range of 19-20%.^{10,14,16} This calls for the investigation of factors for unintended pregnancies to reduce its occurrence and act for prevention. Based on evidence demonstrated above this paper entails to examining unintended pregnancy and associated factors among ever-pregnant women. It is conducted in 2015, in an urban and rural area of Bitta woreda, Southwest, Ethiopia.

METHODS

This paper used a quantitative data from a community based cross-sectional study conducted in Bitata district, Ethiopia. Bitata district is one of the ten districts in the zone located 70 Kms from the zonal capital Bonga, Southern Nations, Nationalities, and people's (SNNP).

The district has two urban and 24 rural kebeles with the total estimated population projection for the year 2007 is to be 93,585 and females accounted 50.5% (47,260) of the total population.¹⁷ The research was based on women who had ever been pregnant or currently pregnant during this survey data collected from the selected kebeles (small districts in the administrative structure of Ethiopia).

Inclusion criteria

- Age group 15-49 years
- Who had ever been pregnant for at least once within the past five years preceding the survey
- Currently pregnant and who lived in the study for at least six months prior to the day of the survey.

Exclusion criteria

Those who were seriously ill and unable to communicate at the time of data collection.

The sample size was determined using single population proportion formula by considering the following assumptions: the prevalence of unintended pregnancy from a study in South West Ethiopia to be 35%; 5% - margin of error and 95% confidence level of certainty (1.96).¹⁸ Accounting the 10% non-response rate of 35 and design effect of 2, the total sample size attained was 770.¹⁹

Regarding sampling procedure, the study area has two urban and twenty-four rural kebeles. For this study one urban kebele selected from the two by simple random sampling (lottery method) and eight rural kebeles were selected among the 24 kebeles by simple random sampling, a total of 9 kebeles were included in the study. Census was conducted based on the inclusion criteria in selected kebeles, the number of women was allocated in to kebeles by proportionally allocating to their population size based on the sample size, women from census in each kebele were registered and given codes using the list of the census, then required numbers of women included in the study were selected by SPSS V.20 for random selection.

Data were collected using a structured interview questionnaire and administered by eight data collectors, from February 10-24, 2015. Training was given to data collectors and the supervisors on the questionnaire, approach to the interviewees, details of interviewing techniques, respect and maintaining privacy and confidentiality of the respondents. The questionnaire was pre-tested in the area which has the same set up as the study site with 5% (thirty-nine mothers) and important revisions were done based on the feedback. The questionnaire was developed using a tool that was applied in different studies related to unintended pregnancy previously.¹³ The questionnaire was translated from English to the local language and back to English to

assure consistency. The collected data were checked for completeness, accuracy, clarity, and consistency.

In this study, women’s experience of unintended pregnancy in the past five years prior to the survey is the dependent variable. It is a retrospective measure of a woman’s feeling about her pregnancy at the time that she learned she was pregnant. Unintended pregnancy was assessed as either mistimed or unwanted pregnancy for those who were pregnant during this survey data collection. The question was “At the time you became pregnant did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?”.

Women who had had a birth in the five years prior to the survey but were not pregnant at the time of the survey, were asked: “At the time you became pregnant your most recent baby”, did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?. The independent variables include women’s education, age, marital status, economic status, place of residence, partner communication about family planning, women’s autonomy, religion, parity, ideal number of children, exposure to media, travel time to family planning service, knowledge of any modern family planning, family planning practice identified a priori from reviewed literatures.^{10,18,19}

Statistical analysis

Data were entered using Epidata 3.1 and analyzed by STATA software version 13. Running descriptive results; computing cross-tabulations and bivariate analysis, and lastly multivariate analysis were performed and P-value less than 0.05 taken as statistically significant.

RESULTS

A total of 755 women were interviewed and making the response 98%. The prevalence of unintended pregnancy in this study was 36.5%. The percentage of pregnancies that were mistimed and unwanted were 26% and 10.5% respectively.

Having a mean±SD age of the respondents was 25.8±5.3 years, the majority of the respondents aged 30-34 years (Table 1). Regarding residence, about 87% of the participants were living in a rural setting. Nearly eighty percent of the women 606(80.3%) were currently married with mean±SD ages at marriage of 28.0±5.9 years (Table 1).

Fifty-six percent of women had no any formal education, 444(58.8%) were housewives, 66(8.7%) were a government employee, and 566(75 %) had a monthly income of fewer than 30 US dollars (Table 1).

In relation to obstetric history, mostly the respondents get married for the first time between 15 and 18 years

(60.3%), 56.6% reported their age at first pregnancy is 15-19 years (Table 2). Child marriage less than fifteen years were experienced by about 14% of the respondents. One hundred fifty-seven (20.8%) of the women in the study sample was pregnant at the time of the survey and in terms of gravidity, 287(38%) of the respondents were gravida three-four. A little more than one half (55%) of the women reported their desired number of children to be three-four, yet 33% women wished to have five or more than children (Table 2).

Table 1: Socio-demographic and economic characteristics of the respondents, 2015. (n=755).

Variables	Frequency (%)	
Age (years)	18-19	115 (15.2)
	20-25	164 (21.7)
	26-29	167 (22.1)
	30-34	173 (22.9)
	35-40	120 (15.9)
	>40	16 (2.1)
Religion	Orthodox	504 (66.8)
	Protestant	222 (29.4)
	Others ¹	29 (3.8)
Residence	Rural	653 (86.5)
	Urban	102 (13.5)
Educational status	No formal education	426 (56.4)
	Primary education	198 (26.2)
	Secondary education or higher	131 (17.4)
Occupation	Housewife	444 (58.8)
	Farmer	166 (22.0)
	Government employee	66 (8.7)
	Student	55 (7.3)
	Others	24(3.2)
Monthly income in Birr	<=260	176 (23.3)
	261-460	149 (19.7)
	461-900	241 (31.9)
	>900	189 (25.0)

¹Catholic and Muslim

Given that unintended pregnancy has resulted from the lack of access or availability of family planning, this study assessed participants’ knowledge and attitude towards family planning.

Concerning family planning, more than one family planning methods were being known by 585 (77.9) of the study participants, 69% were current users of any type of contraception and by type of contraception methods; injectable accounts 439 (84%) followed by implants 44 (9%) and pills 25 (5%) (Table 3).

The need for more children has expressed more often as a reason for not using family planning. Nearly two percent

of the respondents reported that they ever had experienced induced abortion, which has an implication in the existence of unintended pregnancy resulted in whether unsafe abortion or other unnecessary costs.

Table 2: Reproductive related characteristics of respondents in Bita Woreda, 2015 (n=755).

Variables		Frequency (%)
Ideal number of children	1-2	85 (11.7)
	3-4	399 (55.0)
	5 and above	241 (33.2)
Number of live births (parity)	1-2	261(34.6)
	3-4	275 (36.4)
	5-6	147 (19.5)
	>6	72 (9.5)
Age at first pregnancy (years)	<18	151 (20.0)
	18-20	427(56.6)
	>21	177(23.4)
Age at first marriage (years)	<15	107 (14.2)
	15-18	296 (39.2)
	19-20	235 (31.1)
	>20	117 (15.5)
History of unintended pregnancy in the last three years*	One	244 (86.8)
	Two	31 (13.2)
Consequences of the unintended pregnancy	Attempted to stop it and fail	30 (10.6)
	Attempted to stop it and success	12 (4.0)
	Had ended in stillbirth	4 (1.4)
	Has ended in live birth	229 (83.3)
Ideal number of children	1-2	85 (11.3)
	3-4	399 (52.9)
	5-6	227 (30.1)
	>6	44 (5.8)
Number of pregnancies (Gravida)	1-2	249 (33.0)
	3-4	287 (38.01)
	5-6	162 (21.5)
	>6	57 (7.6)
Ever had induced abortion	Yes	13 (2.0%)
	No	742 (98.0%)

*Taken from women who had unintended pregnancy experience

Four hundred sixteen (55%) of the participants had listened to the radio or watched television regarding access to health services and 173 (30%) had to walk greater than 1hour to get family planning service. It is stated that 231 (31%) had no discussion about family planning issues. Four hundred eighty-two (64%) of the study sample had discussed the number of children they want to have with their spouse (Table 3).

Travel time to access the health facility is crucial for a woman to use the service provided, 173 (23%) women

had to travel more than one hour on foot to get family planning service (Table 3).

Table 3: Family planning knowledge and practice in Bita woreda, 2015, (n=755).

Variables		Frequency (%)
Knowledge of family planning methods	More than one method	585 (77.9)
	One method only	166 (22.1)
Contraceptive practice	current users	521 (69.0)
	Ever used	162 (21.5)
	Never Used	72 (9.5)
Currently use contraceptives	Pills	25 (4.8)
	Injectables	439 (84.3)
	Implants	44 (8.5)
	Others ¹	13 (2.4)
Discussion with spouse on family planning issues	Yes	524 (69.4)
	No	231 (30.6)
Discussion with spouse on number of children ¹	Yes	482 (63.8)
	No	224 (29.7)
Exposure to mass media such (TV/Radio)	Yes	416 (55.1)
	No	339 (44.9)
Travel time to family planning service provider	Less than 30 minutes	297 (39.3)
	30-60 minute	285 (37.7)
	Greater than 1 hour	173 (22.9)

¹For those who had husband or partner

Table 4 presents the result of the cross-tabulation percentages of socio-demographic characteristics with unwanted and unplanned pregnancies. A very important profile can be observed when comparing the women who wanted to be pregnant at that time and those reporting a mistimed or unwanted pregnancy. Most women who had no experienced unplanned or unintended pregnancies are in the aged 30-34 (Table 4).

Relatively the higher income category has less number of women who experienced both unwanted and unintended pregnancy. Women in the age group of 18-20 and had no formal education had a higher percentage of having unintended pregnancies.

Whereas unplanned and unwanted pregnancies were higher among women who had 3-4 births and statistically shows an association (Table 4). Relatively high percentage of those reporting unwanted pregnancy was reported by housewives (54%) (Table 4).

The multivariate analysis adjusted for each block of variables that maintained a significant association with at least one category under analysis for mistimed or

unwanted pregnancy were entered into the bivariate model.

value of 0.25 and less were fitted into multiple logistic regression models.

Factors that are associated with unintended pregnancy on bivariate analysis using enter method at the level of P-

Table 4: Current pregnancy of the unplanned pregnancy and unwanted pregnancy, Bitu woreda, 2015. (n=275).

Variables	Unplanned pregnancy		Unwanted pregnancy	
	Frequency (%)	p-value	Frequency (%)	p-value
Age (years)				
18-20	13 (14.8)	p=0.138	19 (21.6)	p=0.063
20-25	16 (10.9)		25 (17.1)	
26-29	30 (19.1)		40 (25.5)	
30-34	34 (20.1)		51 (31.1)	
35 and above	18 (14.0)		29 (22.7)	
Monthly income				
<=260	25 (15.9)	p=0.220	38 (24.2)	p =0.060
261-460	31 (23.3)		43 (32.3)	
461-900	37 (17.1)		49 (22.6)	
>900	18 (10.2)		34 (19.3)	
Educational status				
Had no formal education	72 (18.2)	p=0.090	108 (27.3)	p= 0.052
Primary school completed	27 (16.3)		34 (20.5)	
Secondary and above	12 (9.8)		22 (18.0)	
Occupational status				
Farmer	35 (22.3)	p=0.006	48 (30.6)	p=0.140
Government employee	2 (3.0)		10 (15.2)	
Student	3 (15.0)		5 (25.0)	
Housewife	70 (16.7)		97 (23.0)	
Others**	1 (5.0)		4 (20.0)	
Number of live births				
1-2	30 (12.3)	p=0.003	46 (18.9)	p =0.003
3-4	42 (15.9)		62 (23.5)	
5-6	25 (18.5)		39 (28.9)	
>6	14 (35.0)		17 (42.5)	
Age at first pregnancy (yrs)				
<18	32 (23.4)	p=0.014	45 (32.9)	p=0.007
18-20	62 (15.9)		92 (23.7)	
>21	17 (10.8)		27 (17.1)	
Age at first marriage (yrs)				
<15	19 (17.9)	p=0.041	25 (23.6)	p=0.263
15-18	44(15.6)		72 (25.4)	
19-20	43(20.0)		55 (25.6)	
>20	5 (6.3)		12 (15.2)	

** Jobless and self-employed

The final model, factors associated with unintended pregnancy is presented in Table 5.

The following variables attain an association: travel time to the family planning service provider more than 60 minutes (AOR=2.23 (1.37-3.63); being ever contraceptive user, but not currently (AOR=1.77 (1.18-2.67); being never use modern contraceptive (AOR=2.43 (1.22-4.86); and women with parity of five and above (AOR=5.52 (2.50-12.20) (Table 5).

DISCUSSION

The results of this study suggest that the study area has a high prevalence of unintended pregnancy, 36.5%, compared to the national average.¹⁰ Splitting into mistimed and unwanted pregnancies, it accounts, 26% and 10.5% respectively. It is lower than the verdict from a study conducted in Southern Ethiopia, which is 42.4% (10.5% mistimed and 31.8% unwanted).⁹ This observed difference could be due to that this study considers pregnancies which resulted only in live birth, though both

generated data, primarily through interviews from most recent pregnancy occurred five years back from the survey; however, it is in line with the other research findings, 32% (21% mistimed and 11% unwanted).¹¹ Compare to other countries in East Africa, the current

study finding is also lower than a study from Tanzania, 45.9% (32.5% mistimed and 13.4% unwanted).¹⁵ The difference could be because of differences in socio-cultural factors.

Table 5: Factors associated with unintended pregnancy among ever-pregnant women in, Bita woreda, 2015. (n=275).

Variables	Categories	Unintended pregnancy			
		Yes	No	COR (95% CI)	AOR (95% CI)
Place of residence	Urban	27	75	1	1
	Rural	248	405	1.70 (1.07, 2.71)	1.31 (0.70-2.44)
Exposure to media	No	148	191	1	1
	Yes	127	289	0.57 (0.42-0.77)	0.90 (0.59-1.35)
Travel time to get family planning service (minute)	<30	78	219	1	1
	30-60	100	185	1.518 (1.06-2.16)	1.04 (0.68-1.60)
	>60	97	76	3.58 (2.41-5.33)	2.23 (1.37-3.63)*
Modern contraceptive practice	Current use	157	364	1	1
	Ever use	64	98	1.51 (1.05-2.18)	1.77 (1.18-2.67)*
	Never used	54	18	6.96 (3.95-12.24)	2.43 (1.22-4.86)*
Age (years)	<20	52	63	1	1
	20-34	167	337	0.60 (0.40-0.91)	0.92 (0.48-1.74)
	≥35	56	80	0.85 (0.51-1.40)	1.03 (0.49-2.17)
Marital status	In marital union	190	416	1	1
	Not in a marital union	85	64	2.91 (2.02-4.20)	1.39 (0.89-2.16)
Educational status	No formal education	166	260	1	1
	Primary	73	125	0.92 (0.65-1.30)	0.89 (0.56-1.40)
	Secondary and above	36	95	0.59 (0.39-0.91)	0.91 (0.48-1.70)
Parity (number of live births)	One	37	94	1	1
	Two -four	152	287	1.35 (0.88-2.07)	2.27 (1.21-4.23)*
	Five and above	86	99	2.21 (1.37-3.56)	5.52 (2.50-12.20)*

*=p<0.05

Most recent research among women in the Oromia region, Ethiopia found that travel time is not associated with unintended pregnancy, though as mentioned in the result section it has shown an association especially for those who traveled more than one hour to get family planning service.¹¹

This may be due to more distance interferes with better access to family planning and hence leading to the increased occurrence of unintended pregnancy. In terms of associated factors, unintended pregnancy in this sample was predominantly more likely to women who never used a modern contraceptive, were more than two times more likely to have an unintended pregnancy. This is in line with a study from Southwest Ethiopia.¹²

This abides by the reality that unintended pregnancies can be prevented with the effective use of contraceptives, but a study from Jordan contradict to this modern contraceptive users were more likely to report unintended pregnancies than non-users (21 percent compared with 15 percent).^{20,22}

This variation may be due to those who use contraceptives might have higher expectations about

control over their fertility and timing as a result more likely to view a pregnancy unintended. The other explanation could be those women who use a contraceptive has more chance of reporting than women who ever had no exposure to family planning services and contextual factors.

Unintended pregnancy has been linked to many factors, including, parity where women with five and above were more likely experience an unintended pregnancy than with low parity. This is in alignment with findings from Tanzania and rural Gahanna.^{15,23}

These may be explained by the fact that every additional birth increases the risk of unintended pregnancy and also such women are likely to reach their desired fertility and regarded any additional birth coming to them as unintended. Moreover, the need for more children and less practicing of family planning could lead her to experience an unintended pregnancy.

In addition to all those factors, the number of children alive birth the women had is also associated with unintended pregnancy. Women with five and above children were more likely to practice an unintended

pregnancy. This is in line with the finding from Hossana town, Southern Ethiopia, and from Oromia region, Ethiopia.^{11,13}

This could be due to with increased desire for children those pregnancies are less classified as unintended in the rural community children are taken as an asset and treasure of the family, (86%) of the current participant are from a rural community.

As respondents were retrospectively asked about their pregnancy intentions, this may cause recall bias. In this study pregnancies not resulting in a live birth were not taken into account constitutes a source of bias. Those pregnancies that end up in abortion are likely to be unwanted/mistimed and thus the true prevalence of unintended pregnancy is likely to be higher than the findings shown here. The study was also cross-sectional, a design which limits causal inferences because of their snapshot nature though, efforts are made to collect relabel data as much as possible.

CONCLUSION

Compared to the national average the overall magnitude of unintended pregnancy in the study area was high. Travel time to get family planning service and ever practicing contraceptives and the number of live births a woman had were found the most important factors.

Based on the findings from this study, increasing access to family planning services and empowering women to practice contraceptives are some of the factors that would help to reduce unintended pregnancy because as the contraceptive service is more accessible, women would be protected from risks of pregnancy-related morbidity and mortality.

Further research using the mixed method, qualitative as well quantitative especially longitudinal data could benefit in exploring community factors related to unintended pregnancy and contraceptive discontinuation as women reported of ever use but failing to continue as most of them reported that they were not current users.

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Ethical approval: The study received ethical clearance from Ethical Review Committee of Jimma University; College of Public Health and Medical Sciences. Support letter was obtained from health and administrative offices at the different level in the study area. Verbal consent was obtained from study participants and those who were in need of detail information and service referred to the nearest health facility.

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