Unintended pregnancy among married women in Damot Gale District, Southern Ethiopia: Examining the prevalence and risk factors

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Abstract

The main objective of this study is to examine the prevalence and risk factors for unintended pregnancies among selected married women in Damot Gale Woreda (a district in Southern Ethiopia). A multistage sampling technique was used to select women respondents in the reproductive age group of 15-49 years. Quantitative and qualitative data were obtained using structured questionnaires, focus group discussion and key informants interview. The dependent variable is unintended pregnancy. Demographic, socio-cultural and service related characteristics were used as explanatory variables. Of 713 women surveyed, 302(42.4 %) reported that their most recent pregnancies were unintended. Most of the women (89%) knew at least one modern Family Planning (FP) methods. Further, we found that 84% of the women have never discussed FP with husbands, and 80% of women have never been visited by health workers. Major reasons mentioned for failure to avoid unintended pregnancy were lack of knowledge, disapproval by husband, difficulty to get method and method failure. The predicted probability, using logistic regression, has shown that women with delayed age at marriage, with lower parity, women exposed to radio, women who discus about FP issues with husband; those who have autonomy on their health care and those visited by FP workers are less exposed to unintended pregnancy. Finally, based on the key findings, some workable recommendations are given which includes: sustainable behavioral changes among community members, reforms in disseminating family planning and related information, enhancing women's status at all levels through formal and non-formal education, strengthening the follow up system on FP workers and beneficiaries, improving inter- spousal communication through peer or informal education and community level orientation.

Keywords: Unwanted pregnancy, contraception, determinants, Southern Ethiopia, Damot Gale

1. Background

Over 100 million acts of sexual intercourse take place each day in the world, resulting in around 1 million conceptions, about 50 percent of which are unplanned and about 25 percent definitely unwanted (Akalework,2008; WHO, 2007). The World Health Report (WHR, 2005) noted that unwanted, mistimed and unintended pregnancies are the most common cause of mater-

nal mortality in developing countries. In Africa, the very high rate of unintended pregnancy in 1995 which was 92 per 1000 women – declined only slightly to 86 per 1000 by 2008 (Singns *et al*., 2009). The unintended pregnancy rate is much higher in Eastern Africa (118 per 1000 women of child bearing age) and middle Africa (94 per 1000) than in the other three sub-regions: Northern, Southern and Western Africa – where the rate ranges between 56 and 83 per 1000 (Singns *et al.*, 2009).

About one third of all unintended pregnancies in Africa end in abortion (Singns *et al.*, 2009; WHO, 2007). Although the unfavorable consequences of unintended pregnancy are well delineated, unintended pregnancy itself is less well defined. Previous research has suggested that pregnancy intentions are multidimensional, ambivalent, and the decision to carry a pregnancy to term or to abort is affected by life circumstances and social influences (Johns, 2006).

The level of unintended pregnancy can also serve as an indicator of the state of women's reproductive health, and of the degree of autonomy women have in determining whether and when to bear children (Mazharuarul and Rashid, 2004). Therefore, unintended pregnancy is an issue not to be ignored. Many pregnant women will need to end a pregnancy to avoid risks to their lives, psychological trauma, and socio-economic turmoil (IPAS, 2004).

In Ethiopia, the few surveys conducted on issues related to unintended pregnancy have suggested that unintended pregnancy is among the main causes of maternal mortality (Solomon and Mesganaw, 2006). Even if fertility declined steadily from 6.8 live births per women in 1981 to 5.4 in 2005 and there is increased contraceptive prevalence, many women in Ethiopia are experiencing unintended pregnancy. For example, the Ethiopian Demographic and Health Survey of 2005 reported that 35 percent of pregnancies among women of reproductive age were unintended (CSA and ORC Macro, 2006). As a result, a significant proportion of married women turned to induced abortion to avoid unintended pregnancy. According to the Ministry of Health report (2006), approximately half a million pregnancies annually end in induced abortion among 3.7 million pregnancies, which is a reflection of the high rate of unintended pregnancy.

Issues related to unintended pregnancy have been studied by few researchers in Ethiopia and little has been discussed about its cause, especially in the rural parts of the country (Akalework, 2008). Moreover, efforts to reduce the incidence of unintended pregnancy have been very weak. Hence, there is a continued need for research, information sharing and documentation of efforts aimed at reducing unintended pregnancy. Therefore, this study was carried out to determine the prevalence and risk factors for unintended pregnancy among selected married women in one of the rural districts of Southern Ethiopia, Damot Gale. It is hoped that the results of this study can be used as inputs for family planning program implementation, thereby increasing the chance of health outcomes for both mothers and their infants.

The study has tested the following

six hypotheses: a) unintended pregnancy is positively associated with the number of living children in a household b) health extension workers visits to women decrease the likelihood of unintended pregnancy c) unintended pregnancy is negatively associated with women's level of education d) spousal communication is inversely related to unintended pregnancy e) late age at first marriage decreases the risk of unintended pregnancy f) exposure to mass media decreases the chance of unintended pregnancy.

2. Methodology of the study

1.1 Profile of the study area

Damot Gale woreda (district) is located in Southern Nations Nationalities and Peoples Region (SNNPR) to south direction of Addis Ababa. According to the 2007 Ethiopian Population and Housing Census, the woreda is the 3rd most populated in Wolayta zone with a total population of 154, 610, and of which 51% were women (CSA, 2007).

The woreda has estimated population density of 726.1 people per square kilometer which is greater than the zonal average of 156.5 people per square kilometer, and is one of the highest density districts in Ethiopia. The woreda is also subdivided into 31 kebele administrations (i.e. the smallest administrative segment in Ethiopia) where there is one health post per kebele. The woreda has 3 health centers which provide services. Mixed agriculture is the main economic activity of the woreda. Recurrent drought is a major problem markedly reducing food production, income and assets. Limited availability of land among a growing number of households is resulting in decline in the size of land holdings (Elias, 2006).

2.2 Data sources

The main data for this study were generated from primary sources through interviews and focus group discussion. Women whose most recent pregnancy occurred five years back from the survey date were the main participants of the study, and all pregnancies regardless of the outcomes were considered in the study.

2.3 Sample size

The sample size was determined based on the estimates of proportion of unintended pregnancy by the Ethiopian Demographic and Health Survey 2005 which is 35% (CSA and ORC Macro, 2006). The underlying assumption here is that the population proportion of currently married women who had encountered unintended pregnancy in the study area is the same as the country's result.

By fixing the level of confidence at 95% and the error to be tolerated at 5%, the sample size was determined by the formula given by Woodward, 1992: $(n) = P(1-P)\, Z^2 / e^2 + 5\%$

where $P = 0.35$, $e = 0.05$ and $Z = 1.96$. This formula assumes that households are selected with simple random sampling procedure. However, since eligible households are not directly selected in this case, the calculated sample size should be adjusted for design effect (D).The design effect is generally assumed to be 2**.** The required sample size, therefore, can be obtained by $n \times D$. Therefore, adjusting for the design effect by 2 and considering non response rate of 5%, the total sample size taken was: 350(2)

=700……..700(5%) =35…….. =700 + 35=735

A multi-stage sampling technique was used to select the study subjects. The Damot Gale woreda has 31 kebeles, of which eight kebeles were selected by using simple random sampling technique. Each kebele has 3-4 sub villages called '*gotes'*. One *gote* was selected from each selected kebele using the same sampling technique.

The number of households to be included in each *gote* was determined in proportion to the total number of households found in each *gote*. Finally, based on the sampling frame of each gote, currently married women within reproductive age were selected from the selected eight *gotes* by using systematic random sampling method. A systematic selection was conducted across every th household with a random start, where was calculated by dividing number of households of the selected *gote* by the sample size allocated to the *gote*. Whenever more than one eligible respondent was found in the same selected household, only woman with recent pregnancy was preferred. In case where no eligible candidate was identified in a selected household, the interviewer was told to move to households in the clockwise direction until she gets an eligible woman. The final interviewed women were 713.

2.4 Data collection

Questionnaires were administered to currently married women in the reproductive age group. The DHS questions were used as a main source to set the questions. Eight female data collectors who completed grade ten and one supervisor who had similar experience were recruited and trained for quantitative data collection.

2.5 Data processing and analysis

The data were processed and analyzed using SPSS version 15. Univariate, bivariate and multivariate statistical tools were applied.

In order to examine the effect of each predictor on the dependent variable, multivariate analysis technique was employed. Logistic regression is the most widely used statistical model when the main interest is to examine the net effects of an independent variable on a certain dependent or response variable, where the dependent variable is dichotomous (taking the values 0 or 1) .Using the binary logistic regression model, it is possible to estimate the probability (likelihood) of an event occurring. When a number of predictors are taken into consideration to estimate the likelihood of the occurrence of an outcome variable (for this study, unintended pregnancy of married women), the relation is built using the equation as follows:

$$p/(1-p)=exp(a+Bx+c)$$

Where: *P* is the probability that the event *y* occurs, at $p(y=1)$;
$p/(1-p)$ is the "*odds ratio*";
Logistic regression is based on the concept of odd ratio: $p/(1-p)$, where p is the probability that the event *y* occurs p(y=1) and (1-p) is the probability that the event y does not occur $p(y=0)$. Based on this, the probability of the outcome variable not occurring can be estimated as: $prob(no\ event)=1-prob(event)$. In this case p would be the probability of unintended pregnancy, whereas $1-p$ would be probabil-

ity of planned pregnancy, a is the constant term, B is logistic coefficient. *exp(B)* is the factor by which the odds change when the independent variable increased by one unit (Gujirati,1988). To check for goodness of fit of the model, the Hosmer and Lemshow test was used which shows 0.609, indicating that the model fits well the data (i.e value greater than 0.05 is taken as cut point).

2.6. Conceptual framework of the study

The conceptual framework was derived from certain theories and previous studies that have documented the relationship among selected explanatory variables and unintended pregnancy. the arrow in the conceptual framework is designed to show the influence of independent and intervening variables on unintended pregnancy. it is assumed that the independent variables should pass though the intermediate variable in order to influence the dependent variable.

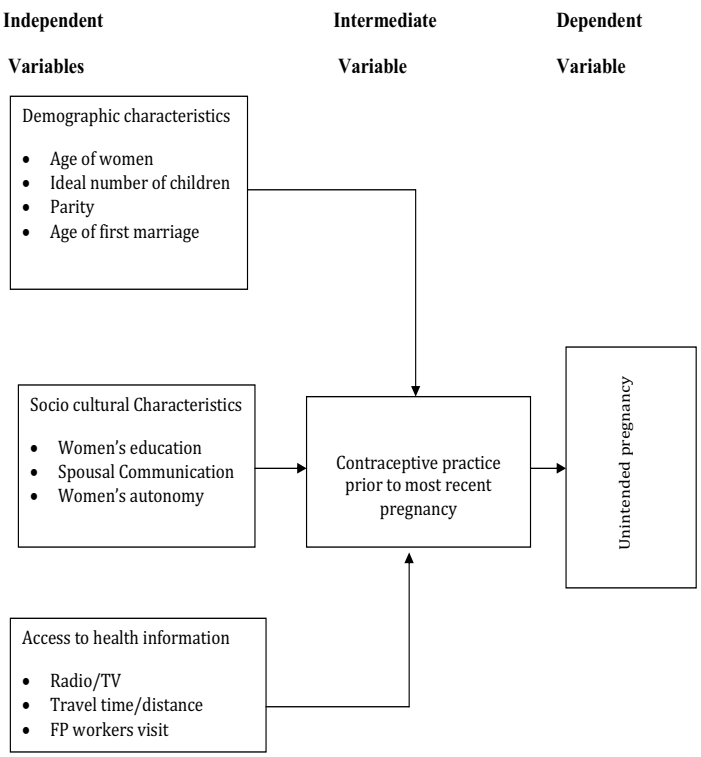

Figure1 Conceptual Framework for examining the risk factors for unintended pregnancies among married women in Damot Gale District, Southern Ethiopia.
Source: Developed by the Authors based on literature, 2010.

Dependant variable The dependent variable of this study is

unintended pregnancy. It is a measure of women's reproductive intentions and was measured by asking the respondents to recall their feeling when their last pregnancy occurred. In this study, the data were collected by asking questions like: *"Right before you become pregnant with your last pregnancy, did you want to become pregnant then, did you want to wait, or did you not want to have any more children at all?"* The answer might be wanted then-planned, wanted to wait (mistimed) or did not want at all.

From this response, those who said mistimed and did not want at all are classified under unintended pregnancy.

Independent variables

On the basis of literature review, the following demographic, socio cultural and service related characters are used:

Age of respondents (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49),

Age at the time of marriage (10-14, 15-19, 20-24),

Parity or Number of children given by respondent **(**0, 1-2, 3-4, 5 and above**)**

Ideal number of children, (1-3, 4-6, 7 and above)

Highest grade completed, (illiterate, 1-4, 5-8, 9-12 grades)

Women autonomy, (no autonomy, some autonomy)

Spousal communication, (ever discussed, never discussed)

Family planning workers visit during the last twelve months, (visited, not visited)

Travel time to family planning services (less than 30 minutes, 30-60 minutes, above an hour (distance in kilometer)

Exposure to mass media, (have no exposure, have exposure)

3. Results

Table 1 shows the distribution of respondents by selected demographic characteristic. Although the age of respondents who were pregnant in the past five years ranges from 15-49, a large majority (52.2 percent) were in the age group 20-29 with mean age of 27 years and standard deviation of 7.8. Less than one out of ten respondents (9.5%) were in the age group 40 and above. Concerning age at first marriage, about 58 % of respondents got married at age 18 with a median age at first marriage of 17.8 years.

Among the surveyed married women, less than one in ten respondents (7.3%) were currently pregnant at the time of survey and more than 3/4 of the women had three and above birth. Looking at the ideal number of children, more than half of the respondents (58.3%) reported that their ideal number of children is between four and six. Among the respondents, the majority (88.7%) was protestant Christians whereas Orthodox and Catholic respondents together share almost 10 percent. Approximately, one –fourth of the women (28.5%) were illiterate, where as nearly seven out of ten women (69.7%) attended some primary education. Also, only less than one out of ten respondents attained secondary schools.

Table 1 Percentage distribution of respondent by selected socio-demographic characteristic, Damot Gale district (n = 713)

Name	Character	Frequency	Percent	
Age of respondent	15-19	67	9.4	
	20-24	149	20.9	Mean of respondents 27 years with SD7.8
	25-29	223	31.3	
	30-34	94	13.2	
	35-39	112	15.7	
	40-44	60	8.4	
	45-49	8	1.1	
	Total	713	100.0	
Age at first marriage	< 10	6	0.9	
	11-14	153	23.4	Median age at first marriage 17.8 years
	15-18	224	34.3	
	19-22	259	39.7	
	23 and above	11	1.7	
	Total	653*	100	
Children ever born	0	52	7.3	
	1-2	102	14.3	
	3-4	318	44.6	
	5 and more	241	33.8	
	Total	713	100.0	
Ideal number of children	1-3	144	29.5	
	4-6	284	58.3	
	7 and more	59	12.1	
	Total	487	100.0	
Religion	Orthodox	56	7.9	
	Muslim	8	1.2	
	Catholic	14	1.9	
	Protestant	633	88.8	
	Others	2	0.2	

Highest grade completed	illiterate	203	28.5
	1-4	279	39.1
	5-8	218	30.6
	9-12	13	1.8
	Total	713	100.0

*some women could not report age

Fig 2 Distribution of respondents by contraceptive use.

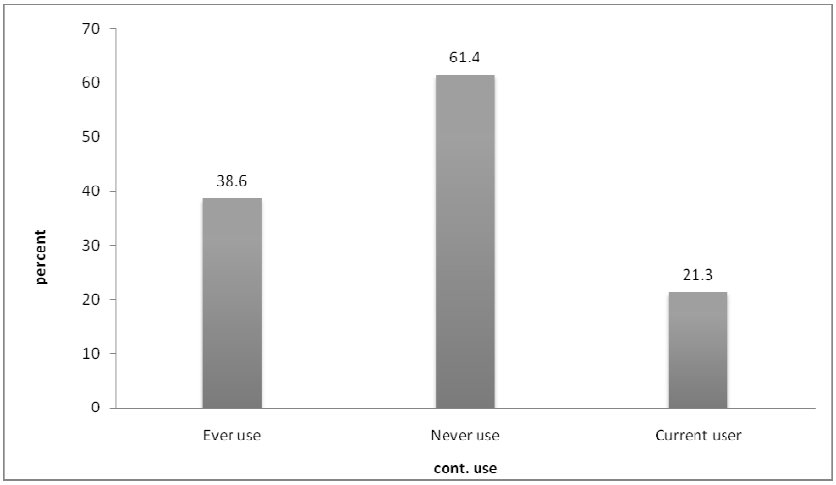

Table 2 shows the intensions of the respondents about their pregnancies. About one-tenth of the respondents mentioned that they wanted their current pregnancies later (mistimed = 10.5%) and the other three –tenth reported that they did not want their current pregnancies at all (unwanted = 31.8%).When summing up these two, more than two – fifth of respondents (42.4%) reported their current pregnancies were unintended (i.e. mistimed and unwanted pregnancy)

About 39 percent of the respondents reported ever use of contraception and 61 percent never used contraception during their life time. The current users of contraception accounted for 21.3% (fig. 2). Major reasons reported for failure to avoid unintended pregnancy were: desire to have children and disapproval by husbands (34.6%), and lack of knowledge and difficulty of getting the method shares (30.1%). The least important reason identified was health concern which is 4.8 percent as shown in Fig.3 .

Table 2 Distribution of respondents by reported pregnancy outcome, Damot Gale district (n = 713)

Pregnancy outcome	Frequency	Percents
Unintended	302	42.4
Mistimed	75	10.5
Unwanted	227	31.8
Planned	411	57.6
Total	713	100

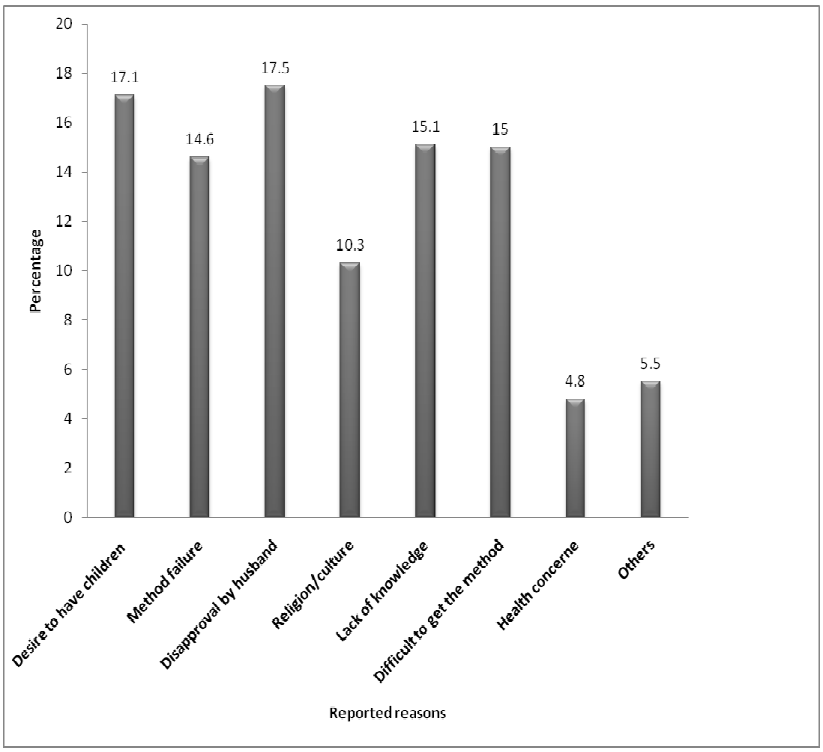

Fig. 3 Major Reasons given to avoid unintended pregnancy

Table 3 presents the association of selected characteristics and unintended pregnancies. The results indicated that women's autonomy, age of the respondent, age at the time of marriage and visit by FP worker were strongly associated with unintended pregnancy at $p < 0.001$ where as number of children born, education and spousal communications were associated with $p < 0.01$ and $p < 0.05$ values respectively.

Table 3 Results of bivariate analysis for associations between unintended pregnancy and selected explanatory variables, Damot Gale district (n = 713).

Name	Class	Unintended	Total	percent	χ^2
Age of respondent	15-19	43	67	64.2	30.063***
	20-24	61	149	40.9	
	25-29	95	223	42.6	
	30-34	27	94	28.7	
	35-39	38	112	33.9	
	40-44	32	60	53.3	
	45-49	6	8	75	
Age at marriage	10-14	87	155	56.1	30.09***
	15-19	178	428	41.6	
	20-24	10	66	15.2	
	25and above	0	4	0	
Number of children born	0	16	52	30.8	12.817**
	1-2	37	102	36.3	
	3-4	126	318	39.6	
	5 and above	123	241	51	
Ideal number of children	1-3	66	137	48.2	1.37
	4-6	164	304	53.9	
	7 and above	59	84	70.2	
Highest grade completed	illiterate	109	203	53.7	19.054**
	1-4	116	279	41.6	
	5-8	74	218	33.9	
	9-12	3	13	23.1	
Women's autonomy	no autonomy	100	145	69	52.784***
	some autonomy	202	568	35.6	
Spousal communication	ever discussed	38	114	33.3	4.525*
	never discussed	264	599	44.1	

Travel time to FP source	<30	32	89	36	6.654*
	30-60	192	392	49	
	>60	72	136	52.9	
Exposure to mass media	have no exposure	256	562	45.6	11.097**
	have exposure	46	151	30.5	
Visit by FP workers	visited	34	141	24.1	23.957***
	not visited	268	572	46.9	
	Total	302	713	42.4	

NB: *=p<0.05, **=p<0.01, ***=p<0.001

The result of the logistic regression model for demographic, socio-demographic and service related characteristics are presented in table 4. In the model, eight variables were identified as significant variables predicting unintended pregnancy. Travel time to nearest FP services was found to be insignificant in the multivariate analysis.

Table 4 Results of logistic Regression for socio-demographic variables, Damot Gale district (n= 713)

Variables	B	S.E.	Sig.	Exp(B)
Age of women				
15-19	-.407	.290	.000	.965
20-24	.415	.460	.036	.520
30-34	-2.313	.454	.000	.099
35-39	-2.067	.435	.000	.127
40-44	.209	.477	.001	1.20
45-49	.393	.998	.032	1.37
25-29(RC)	-	-	--	-
Children ever born				
0	1.220	.388	.002	3.388
1-2	1.316	.622	.034	3.728
>=5	1.748	.476	.000	5.605
3-4(RC)	-	-	-	-
Age at first marriage				
10-14	.281	.251	.026	1.342
20-24	-1.817	.440	.000	.163
15-19(RC)	-	-	-	-
Educational status				
Illiterate	.139	.249	.004	1.149

5-8	-.230	.245	.034	.794
9-12	-.740	.817	.036	.483
1-4(RC)	-	-	-	-
Woman's autonomy				
No autonomy	1.451	.267	.000	4.269
Some autonomy(RC)	-	-	-	-
Spousal communication				
Ever discussed	-.850	.281	.002	.428
Never discussed(RC)	-	-	-	-
Travel time to FP service				
<30	-.530	.316	.093	.589
>60	.102	.248	.680	1.108
30-60(RC)	-	-	--	-
Exposure to mass media				
Have exposure	-.889	.269	.001	.411
Have no exposure(RC)	--	-	-	-
Visit by FP worker				
Visited	-1.199	.275	.000	.301
Not visited(RC)	-	-	-	-
Constant	-.491	.431	.255	.612

RC-Reference category, **-** R Square=0.761**; Number of cases = 713**
* Significant at .05; ** Significant at .01; *** Significant at .001
Source: Own Data

Similarly, age at first marriage, total children ever born, highest grade completed, spousal communication, exposure to mass media, women's autonomy and FP workers' visit were found to have statistically significant influence on unintended pregnancy.

Respondents of age group 20-24 are 48 % less likely to experience unintended pregnancy than those who are in the age 25-29 (Reference Category, RC). The analysis indicated that as age of respondent increases, the likelihood of women experiencing unintended pregnancy decreases until age 39, and then for the last age groups i.e. 40-45 and 45-49, the likelihood of unintended pregnancy increased by 1.2 and 1.3 times respectively compared to the reference category.

Those respondents having no child and 1-2 children were nearly three and four times more likely to label their recent pregnancy unintended than those women with 3-4 children. Those women with children above five were five or more times experiencing unintended pregnancy than RC group.

Age at marriage was also found to be a significant predictor of unintended pregnancy. The risk of experiencing unintended pregnancy among women

who got married before age fifteen is 1.3 times higher than those women who got married in ages 15- 19. Over all, the probability of unintended pregnancy decreased as age at first marriage increased. The study revealed significant association between educational status and unintended pregnancy where the odds of unintended pregnancy decreased for women in 5-8 and 9-12 grades compared to those in grade 1-4. Likewise, illiterate women are 1.15 times more likely to experience unintended pregnancy compared to the reference group.

Women who had no autonomy on their health care were 4.3 times more likely to have unintended pregnancy compared to those who had some autonomy on their health care. Also, it was found that those who discuss about FP issues were 57% less likely to experience unintended pregnancy compared to the reference category.

Respondents who were exposed to radio were nearly 69% less likely to report unintended pregnancy compared to those who were not exposed. Similarly, those who were visited by FP workers during a reference period of 12 months are 70% less likely to experience unintended pregnancy compared to those who were not.

4. Discussion

This study has examined the magnitude and predictors of unintended pregnancies based on a representative sample of 713 women drawn randomly from Damot Gale district, Southern Ethiopia. It is understood from the analysis that more than two – fifth of respondents (42.4%) reported their current pregnancies were unintended (i.e. mistimed and unwanted pregnancy). This figure is higher than national average which is 35% according to Ethiopian DHS of the 2005 (CSA and ORS. Macro, 2006). It is also noted that women had some reasons for the failure to avoid the reported unintended pregnancy ranging from desire to have children and disapproval by husband –to- lack of knowledge and difficulty to get the method. Two of the striking reasons (husband disapproval and lack of knowledge) account for more than 65 percent of the rationale given by the respondents, suggesting that husbands have pivotal role in the occurrence of the events.

We found out that the eight variables predicting unintended pregnancy in the study area are related to either the women's characteristics or household socio-demographic status or service related characteristics.

The risk of experiencing unintended pregnancy is higher among the younger and older women compared to those in the middle ages. The study revealed that women above age 40 experienced higher level of unintended pregnancy which may be due to the fact that women who are above 40 usually have attained their desired number of children, and hence, less likely to use method of contraception to prevent the pregnancy. Some pre menopausal women may erroneously assume that they are no longer fertile and get surprised by unintended pregnancy. Another reason worth mentioning here is the high likelihood of menstrual irregularity during this age group which makes it difficult for them to use contraceptives. A similar result was found especially for the last age groups in a study conducted among currently mar-

ried pregnant women in Indonesia (Jaeni,2007) which shows the higher the age of the women, the higher chance of having pregnancy as unintended, and study conducted in Egypt (Shaheen *et al.*, 2007) also confirmed the same result. Moreover, during the focus group discussions, the health extension workers reported that older married women are not willing to take contraceptives due to the reasons mentioned above.

From the predicted probability, it is clear that women in delayed age at marriage are at lower risk of facing unintended pregnancy. For example, respondents whose age at first marriage occurred in the age group 10-14 years experienced unintended pregnancy nearly twice compared to those women with higher age at first marriage (20-24). Most of the focus group discussants agreed that those women who have married early are more likely to be influenced by their husband, family and culture with regards to decision on their pregnancy timing and intention. A study conducted in Harar (Southeastern part of Ethiopia) documented that women with age at first marriage less than 20 years had higher chance of experiencing unintended pregnancies (Solomon and Mesagnaw 2006). Also, a study conducted in Adama (Southeastern part of Ethiopia) documented that women who got married below age nineteen were three times more likely to label the pregnancy as unintended (Biniyam, 2009).

Educational status of women has become one of the predictors of unintended pregnancy in Damot Gale woreda. In a situation, like the study community, where substantial proportions of the respondents are illiterate, even little advance in education improves women's decision making power leading to avoidance of unintended pregnancy. A study conducted in Hawassa (Akalework, 2008) has showed similar results. Yonas (2005) , in his study of currently married women in Assosa town, indicated education as having the pervasive impacts on married women's pregnancy intention since it empowers women with knowledge and practice of contraceptive methods. Bongaarts (1997) also noted that education reduces the chance of discontinuity of contraception.

The finding on the relationship between women's autonomy and the occurrence of unintended pregnancy suggests that the risk of facing unintended pregnancy increased with loss of autonomy in the household's decision making. The variable was measured by the oral report on autonomy in the areas of their own health care, making large household purchase and visit to family. This is because in a patriarchal society, like ours, women are often given less opportunity to self-supporting and have to economically depend on males/husbands.

The study result also suggests that unintended pregnancy is more likely to occur when a woman believes that her husband opposes her use of contraception or other traditional protective mechanisms. Previous studies documented that women's perception that their husbands oppose FP is one of the dominant factors for discouraging contraceptive practice in a wide variety of settings For instance, a study conducted in Togo suggested that communication between the spouses is necessary in

order for them to reach consensus on desired family size and for achievement of their reproductive goals (Gage, 1995).

The predicted probabilities have also indicated decreased risk of facing unintended pregnancy with increased exposure to media and visits by FP workers. Some studies also indicated that mass medias have important effect on reproductive behavior (Odimegwa, 1999). This is related to its role in providing women with knowledge on family planning and increasing current use of contraceptive which may result in low percentage of unintended pregnancy. Phillips and collogues (1998) in Kenya found that women who have been visited by FP outreach workers are more likely to use modern contraceptive methods, which may bring down the chance of experiencing unintended pregnancy.

Finally, it is important to mention some of the major weaknesses of the study. The major limitation of this study has emanated from the very nature of the subject and method it employed. Since the research is a cross sectional retrospective measure of women's pregnancy intention, the probability of recall bias and miss reporting of events likely to happen. Besides, the variables used in the analysis were collected at specific point in time, making it difficult linking their effects with the outcome variable. On the other hand, in view of reducing recall bias and misreporting, proper training of data collectors and close supervision of data collection and management were done. Despite, the few weaknesses mentioned here, we believe that the present study contributes to our understanding of the depth of the problem in the study area with some practical relevance to other zones having similar characteristics.

5. Conclusions and recommendations

The study was conducted on a randomly drawn sample of 713 married women from Damot Gale District of Southern Ethiopia, whose recent most pregnancy occurred five years back to the survey date. The results of the study has shown that the prevalence of unintended pregnancy is very high (42.4 %) and well above the national average.

The study concludes that no single factor accounted for the high rates of unintended pregnancy, rather many variables were interwoven to affect the occurrence of the event. Among these socio-demographic and service related factors, the study has documented that age of women, women's age at first marriage, exposure to mass media, spousal communication, women's autonomy and visit by FP workers were significant predictors of unintended pregnancy in Damot Gale district, Southern Ethiopia.

On the basis of the key findings discussed above, the first and foremost call of this study is the prevention of the occurrence of unintended pregnancies by all bodies at both regional and local levels. As part of long term strategy, programs should be designed to ensure sustainable behavioral changes among community members ,reforms in disseminating family planning and related information in such a way that it actually addresses the real targets, and rentless efforts in enhancing women's status at all levels through formal and non-formal education. As part of short term strate-

gies, the concerned local authorities should make sure that FP resources are available with quantity and quality, strengthening the follow up system on FP workers and beneficiaries, improving inter- spousal communication through peer or informal education and community level orientation.

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