A Review of Unintended Child birth in Ethiopia: Magnitude and Contributing Factors

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Abstract

Background: Unintended pregnancy is a major social and public health problem in the globe and a major cause of unsafe abortion, underutilization of prenatal care and low birth weight. In Ethiopia, according to the national demographic and health survey (2016) report , about 23 % of total last pregnancy were unintended. Therefore this review aimed to document the magnitude and major factors contributing to untended pregnancy from several Ethiopian studies.

Methods: The reviewed articles were searched from electronic databases (PubMed, MEDLINE and Google Scholar) using key words or phrases such as 'unintended pregnancy', 'unwanted pregnancy', mistimed pregnancy ' Factors ' and 'Ethiopia'. The reviewed studies included all epidemiologic studies (descriptive and comparative cross-sectional, and national demographic and health survey reports) published between the years 2008 and 2018.

Result: The magnitude of untended pregnancy was ranged from 13.7% to 42.4% in Ethiopia. Socio-demographic factors (marital status, distance to the nearest health facility, Occupation, educational status, husband preference and religious prohibition, income and place of residence), maternal/ obstetric factors (maternal age, ever utilizations of any types of contraceptive methods, having child before and number of children, having history of abortion or still birth, ante natal visit, awareness of contraceptive) are the major contributing factors identified for unintended pregnancy in Ethiopia.

Conclusion and recommendation: The study found high prevalence of unintended childbirth in the country associated to various socio-demographic, maternal and obstetric contributing factors. Therefore there is a need for evidence based targeted interventions to increase access and use of modern contraceptive services and create awareness for the public is recommended.

Keywords: Unwanted Pregnancy, Unintended Pregnancy, Mistimed pregnancy, Ethiopia

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Introduction

Pregnancy intention (woman's desire at the time of conception) has an impact on the health and wellbeing of the mother, baby, and family at large. Unintended pregnancy has a major social and public health impact in both developing and developed countries. It is one contributing factor for unsafe abortion in most developing countries [1]. It affects women children and the societies as a whole. The adverse outcomes include a high likelihood of unsafe abortion, late initiation and underutilization of prenatal care, and of low birth weight.

Studies categorized unintended pregnancy in to mistimed and unwanted pregnancy. A mistimed pregnancy is when a woman becomes pregnant earlier than she desires. On the other hand, an unwanted pregnancy is when a woman becomes pregnant when she never intends to ever become pregnant or when she does not want to have any more child [2].

Globally about 40% of pregnancies were unintended in 2012. From these 50% were ended with abortion. Although several strategies were developed on the issue, many women in developing countries particularly in sub-Saharan Africa are suffering from unintended pregnancy and unsafe abortion. Unintended pregnancy has become a public concern and is capturing a great deal of attention in Africa because of its high prevalence rate in the continent. In Sub-Saharan Africa, it is estimated that 14 million unintended pregnancies occur every year, with almost half occurring among women aged 15-24 years. This goes together with a low contraceptive prevalence rate in the less developed countries when compared with developed countries. In Ethiopia, according to the EDHS-2016 report, about 23 % of total last pregnancy was unintended (17% and 8% were unwanted and mistimed pregnancy respectively).

As evidence shows several social and psychological factors contribute for unintended pregnancy while abortion, infertility, child and maternal deaths are negative consequences of unintended pregnancies. A study in Pakistan found that women with unintended pregnancy were more likely to not have antenatal care follow up as compared to women with planned pregnancies. A study in rural India found that mothers reporting unwanted births were 2.32 times more likely to receive inadequate prenatal care. In addition mistimed/ unwanted births had 83 % higher risk of neonatal mortality compared to wanted births. In Ethiopia unintended pregnancy is also a cause of low birth weight [3].

Similarly a recent study in Southeast Nigeria reported age at marriage, level of education, place of residence, and use of

contraception were predictors of unintended pregnancy with 43.8% prevalence of an unintended pregnancy. The prevalence of unplanned pregnancy was 71% in South Africa. Younger age, single marital status, high parity, history of abortion. and having five to seven children, age less than 21 years, not married were reported as associated factors for unplanned pregnancy.

Magnitude of unintended pregnancy was 30.2% in Sudan during in 2014, household size, educational level, parity and use of modern contraceptive method were the predictors of unintended pregnancy in Sudan. Nearly 43% of the pregnancies were unintended of which 25% were mistimed in Malawi. Here the finding showed that age of the respondent, fertility preference, number of children ever born, wealth status, and region of residence were contributors for unintended pregnancy.

Several socio-demographic and reproductive factors were predictors for unintended pregnancy associated with reduced use of prenatal health care services, illicit drug use, intimate partner violence with adverse maternal, mental and physical health consequences [4].

A Systematic review in Africa identified sociocultural, environmental and Economic factors (Peer influence, poverty, religion, early marriage, lack of parental counseling and guidance, non-use of contraceptives, early sexual debut); Individual factors (excessive use of alcohol, substance abuse,). Health service-related factors (cost of contraceptives, inadequate and unskilled health workers, long waiting time and lack of privacy, lack of comprehensive sexuality education, misconceptions about contraceptives, and non-friendly adolescent reproductive services) are influencing factors for adolescent pregnancies in Sub-Saharan Africa.

In Guna, unintended pregnancies were high among women aged 15–19 years (69.4%), unmarried women (45.1%) and non-working women (40.0%). Age, parity and level of education, wealth status, rural residence were associated factors with unintended pregnancies. Similarly in South Africa two-thirds of the women (64.33%) had unintended pregnancies. Here a significant relationship was found between marital status, unemployed and unintended pregnancy.

As evidence shows trend of teenage pregnancy decreased in East Africa, plateaued in West Africa and slightly increased in Southern Africa between 1992 and 2011. Teenage pregnancy was associated with family disruption, female unemployment and community poverty.

Another cross-sectional study in South Africa showed that levels of unplanned pregnancy were higher in HIV-positive but not on ART. Increased parity and younger age (<24 years) were associated with unplanned pregnancy.

As we tried to understand from the literatures multiple factors can predict unintended pregnancy. Several studies outlined the factors contributing to unintended pregnancy related to sociodemographic, socioeconomic, sociocultural, fertility, contraceptive and access related factors depending on the countries development status. This review will provide evidence to policymakers and health planner on the magnitude and contributing factors of unintended pregnancy to design policies and strategies that can help couples to have their desired number of children without facing unnecessary threats to their health. Furthermore, this review will suggest the need to conduct more strong studies in future to assess the available cost-effective interventions for reducing unintended child birth and to improve women's and children's health in the country [5].

Research Question

- What is the magnitude of unintended pregnancy in Ethiopia?
- What are the factors contributing to unintended child birth in Ethiopia?

Materials and Methods

Search strategy

A review of literature was conducted by retrieving articles from various databases on factors contributing to unintended child birth in Ethiopia during March 2019. We searched electronic databases (PubMed, MEDLINE and Google Scholar) using key words or phrases such as 'Unintended pregnancy', 'Unwanted pregnancy', Mistimed pregnancy 'Determinant factors ' and 'Ethiopia'. The Boolean logic (AND, OR) search technique was also used. The reviewed studies included cross-sectional studies and national demographic and health survey reports.

Selection of studies (selection criteria)

All epidemiologic studies (descriptive and comparative cross-sectional) published between in the years from January 1, 2008 to December 30, 2018 (in the last seven years) were included in this review. Only published and English language literatures were included. Initially, titles and abstracts of the articles were assessed for relevance. Then the full papers of relevant articles were reviewed. Articles without full paper and those published before 2008 were excluded from the review.

Synthesis of study results

The findings from published studies on unintended pregnancy were pooled together to develop tables that guided for discussion. The results and conclusions of previous studies were compared, contrasted and integrated to arrive at conclusions and recommendations in relation to the objectives of this review.

Data quality assurance

To maintain the quality of the data, only those studies which met the inclusion criteria were reviewed. The quality, relevance and application of the studies were evaluated by experts in the field.

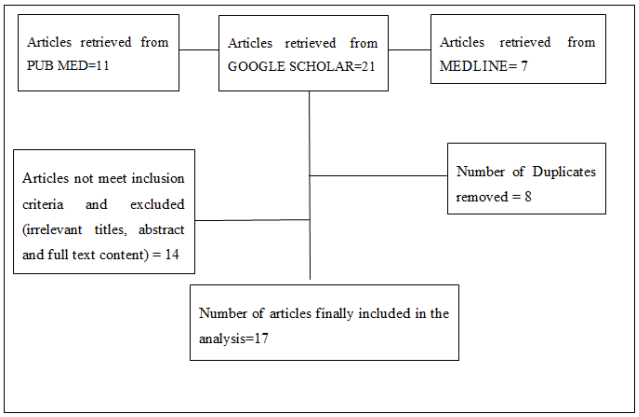

Figure1*: Diagrammatic flow of data extraction process*

Study participants

A total of 18344 participants were recruited and involved in the 17 included quantitative studies. The least number of participants in a study was 165 women and the largest consisted of 7759 participants.

Results

Magnitude of unintended pregnancy in Ethiopia

Unintended pregnancy (mistimed or unwanted) is high in sub-Saharan Africa including Ethiopia . In Ethiopia, in 2011 about 28.3% were reported to be unintended pregnancy (19.5% and 8.8 % were unwanted and mistimed respectively). The prevalence decrease to 23% (7% unwanted and 8% mistimed) in 2016.

Several studies conducted at Oromiya Region, Bale Zone, Addis ababa, Hawassa, East Ethiopia reported that the prevalence of unintended pregnancy was 27.1 %, 13.7%, 37.3%, 39.6%, 33.7% respectively. In addition cross-sectional studies carried out in Arsi Negele and wolkayit woredas revealed 41.5% and 26% of unintended pregnancy respectively. Out of 713 women surveyed 302 (42.4 %) reported unintended births in Damot Gale District, Southern Ethiopia. Prevalence of unplanned pregnancy was 35.2% of which the majority of the them were miss timed followed by husbands influence in North Shewa Ethiopia.

In Southwestern Ethiopia, more than one third (35%) of women reported that their recent pregnancy was unintended. The prevalence off unintended pregnancy was 15.8% in Bihar Dar city, Northwest Ethiopia. The magnitude of unintended pregnancy among female sex workers in Mekelle city was 28.6%.

Magnitude of mistimed and un-wanted pregnancy

Out of the 413 pregnancies, 112 (27.1 %) were unintended of which 90(21.9 %) were mistimed, and 22(5.2 %) were unwanted in at Gelemso General Hospital, Oromiya Region. Similarly from a total of 26% unintended pregnancices , 75.9% were mistimed and 24.1% were unwanted pregnancies. Out of 27.9% (578/2072 of unintended childbirths 76.12% were mistimed and 23.87% were un wanted.

Factors contributing to unintended pregnancy

Several studies identified different factors contributing to unintended pregnancy in different countries, some of the factors have similarities but some others have differences depending on the socio-cultural and economic deference's of regions.

Socio demographic factors

Most of the studies in Ethiopia revealed that single, divorced/ widowed marital status were contributing factors for unintended pregnancy. Similarly educational status, occupation, marital status was mentioned as significant factors for unintended pregnancy. Odds of unplanned pregnancy among illiterate was 4.6 times more likely than unplanned pregnancy compared diploma and above. Another evidence also showed that the burden of unintended births in Ethiopia falls more heavily on young, unmarried, higher wealth, and ethnic majority women and those with less than secondary education and with large household size. Similar study revealed that 35 and above age group, single marital status, were significant factors associated with unintended child birth in Ethiopia.

A study revealed that single, divorced/widowed marital status, having more than 2 children, were significantly associated with unintended pregnancy. Similarly the odds of unintended pregnancy among no Spousal communication and own business makers were 4 times more likely than unintended pregnancy compared to their counter parts.

Maternal and obstetric factors

A study showed that the burden of unintended births in Ethiopia falls more heavily on high parity. Similar study revealed that 35 and above age group, high parity, having history of abortion and having health professional visit were factors associated with unintended child birth. Unintended pregnancy was associated with having no ante natal visit, poor husband communication about pregnancy, lack of awareness of the concept of unintended pregnancy. Age at pregnancy, history of stillbirth and having more than 2 children were significantly associated factors for unintended pregnancies.

Contraceptive related factors

Several Ethiopian studies relate unintended pregnancy with inappropriate or miss use of contraceptives. The main reasons of facing unplanned pregnancy was forgetting taking contraceptive, husband preference and religious prohibition. Ever use of family planning, having autonomy to use contraceptive method, awareness of contraceptive and husband communication about pregnancy were determinants of unintended pregnancy. Discussing pregnancy related issues with husbands, making family planning decisions on their own, and making family planning decisions with their husbands

were also mentioned as contributors of unintended births in Ethiopia. Studies also found that having no awareness of contraception and having no spousal communication were found to be significantly associated factors for unintended pregnancy. Women with inadequate awareness on Intra Uterine Device were 4 times more likely to had unintended pregnancy as compared to their counter parts .

The major reasons mentioned for unintended pregnancy were lack of knowledge, disapproval by husband, difficulty to get contraceptive method and contraceptive failure.

Predictors of unintended pregnancy	**Authors and year**	**Sample size & methods**	**Measure of association used**
Single, divorced/ widowed marital status, having more than 2 children, and having no awareness of contraception	Mohammed et al. (2016) (36)	Facility based, Cross-sectional simple random sampling Sample size= 413	Odds ratio (OR)
Being formerly married and never married, distance to the nearest health facility >80 minutes, gravidity >5, 1-2 parity, and partner disagreement on desired number of children	Melese GK, et al. 2016(47)	Community based Cross-sectional study, Stratified cluster sampling Sample size =690	Odds ratio (OR)
Forgot taking contraceptive, husband preference and religious prohibition, Age respondents, educational status of the women and their husband, occupation of the women and their husband, decision making power in the household, distance to nearby health facility, ever utilizations of any types of contraceptive methods, number of children.	Darega B. et al. 2015 (44)	Facility based cross-sectional study design, simple random sampling Sample size=362	Odds ratio (OR)
Marital status and number of sexual partner	Mulatu T. et al. 2017(45)	Facility based Cross-sectional study design, systematic random sampling technique Sample size= 349	Odds ratio (OR)
Young, unmarried, higher wealth, high parity, and those with less than secondary education and with large household size	Tebekaw et al, 2014 (41)	Community based Cross-sectional, Demographic health survey data, sample size =7759	Odds ratio (OR)
Age at pregnancy, history of stillbirth, discussing pregnancy related issues with husbands, making family planning decisions on their own, and making with their husbands	Tsegaye et al. (2018)(46)	Community based Cross-sectional multistage stratified sampling technique Sample size= 592	Odds ratio (OR)
35 and above age group, single marital status, parity of 2, parity of 3 and above, having abortion history, having health professional visit and having autonomy to use contraceptive method	Fite et al., (2018) (29)	Community based Cross-sectional study, Multistage sampling technique Sample size=704	Odds ratio (OR)
Age, education, occupation, marital status and ever use family planning	Mulat et al., 2017(40)	Institution based Cross-sectional study, purposive sampling technique, Sample size= 362	Odds ratio (OR)
Anti natal visit, awareness of contraceptive, husband communication about pregnancy	Abayu et al, 2015(30)	Community based cross-sectional, cluster sampling technique Sample size= 626	Odds ratio (OR)
Own business maker, inadequate awareness on Intra Uterine Device	Kassie T. et al., 2017(42)	Facility based Cross-sectional Simple random sampling Sample size= 393	Odds ratio (OR)
Lack of knowledge, disapproval by husband, difficulty to get contraceptive method and method failure.	Geda RN. et al., 2012 (31)	Mixed method, focus group discussion and key informants interview Sample size=713	Odds ratio (OR)
Family wealth status, high parity, and a longer estimated time to walk to the nearest health care facility.	Kassa et al. 2012 (37)	Community based Survey, simple random sampling Sample size=2072	Odds ratio (OR)
History of abortion, Sex workers who had steady partners, drug users	Weldegebreal et al. (2015) (35)	Community based, Cross-sectional simple random sampling Sample size=346	Odds ratio (OR)
Having formal education, contraceptive use	Ayele M, et al, 2017(32)	Cross-sectional, convenience sampling technique Sample size= 165	Chi-square test
Use of antenatal care services and receiving adequate antenatal care, women's	Wado et al.2013 (33)	Community based Cross-sectional study, Sample size= 1370	Odds ratio (OR)

education, urban residence, wealth and distance from health facility.			
Single women, Women living away from their husband and women with no access/exposure to mass-media	Admasu et al, (2018) (34)	Community based Cross-sectional study, Sample size=680	Odds ratio (OR)
Having no ANC follow up.	Abame DE. Et al, 2018 (43)	Community based cross sectional study design, simple random sampling technique Sample size= 748	Odds ratio (OR)

Table1: Summary of Factors contributing to unintended pregnancy in Ethiopia

Discussion

Several studies reported unintended pregnancy as a global public health problem with significant maternal and child health problems. According to Ethiopian Demographic and Health Survey report the prevalence of unintended child birth in Ethiopia was 23%. Additionally several epidemiological studies showed 27.1 % , 13.7%, 37.3%, 39.6%, 33.7%, 41.5%, 26% , 35%, 42.4 %, 35.2%, 15.8%, 36.2% prevalence of unintended pregnancy in different regions of Ethiopia. The median proportion of unintended pregnancy in Ethiopia was 31.96%. The finding is in line with findings from Sudan (30.2%), Malawi (43%), Guna (40.0%), Nigeria 43.8% but higher prevalence of unintended pregnancy was reported in South Africa 71%. The variation might be due to inclusion of only HIV positive women.

Different studies in Africa found several socio-demographic, economic and cultural factors as predictors for unintended pregnancy. Similarly several studies in Ethiopia identified socio-demographic, maternal and obstetric as well as contraceptive related contributing factors for unintended births in the country. Single, divorced/widowed marital status, urban residence, having more than 2 children, being formerly married and never married, distance to the nearest health facility were some of the socio-demographic factors mentioned as determinants of unintended childbirth in Ethiopia. While maternal factors like age at pregnancy, history of abortion, sex workers, drug users, women with no access/exposure to mass-media, women's education, history of stillbirth, having no awareness of contraception, gravidity >5, 1-2 parity, and partner disagreement on desired number of children were found to be factors for unintended pregnancy in Ethiopia. Similar findings were reported in other African countries.

Majority of studies reported that ever use of contraceptives, disapproval by husband, difficulty to get contraceptive method and method failure, inadequate awareness on contraceptives, unable to discuss pregnancy related issues with husbands, unable to make family planning decisions on their own, having autonomy to use contraceptive method and with their husbands were factors associated with unintended pregnancy. Similar findings were found in South Africa, Sudan and Nigeria.

Women with unintended pregnancy were less likely to receive ANC as compared to their counterparts. This is in line with a systematic review finding of reduced use of prenatal health care services among women experienced unintended pregnancy. Similarly in India mothers reporting unwanted or mistimed births were received inadequate prenatal care and more likely to receive inadequate childhood vaccinations and higher risk of neonatal and infant mortality.

Own business makers, family wealth status and occupational status of women were reported as factors for unintended pregnancy. Similar findings were reported in different African countries, unemployed women, wealth status, and community poverty were more likely to have factors for unintended births. Rich women were less likely to face unintended pregnancy as compared to poor women.

A study showed that the burden of unintended births in Ethiopia was related to women's educational status and household size. Similar findings were reported in sub-Saharan Africa and Nigeria. A review in Africa associate unintended pregnancy in teenagers with family disruption, community-levels of female unemployment and community poverty in Southern, East and West Africa. Similarly females who are unemployed, engaged in prostitution and women who are living away from their husband are at higher risk of unintended pregnancy.

Conclusion

In conclusion our review found that the magnitude of unintended pregnancy in Ethiopia is relatively high with a median prevalence of 31.96% which suggests the need to put efforts to alleviate the problem through developing evidence based intervention. Therefore increasing women's empowerment, education and creating awareness about family planning services, consequences or adverse outcomes of unintended pregnancy to women in particular and community in general are important measures recommended to prevent unintended child birth in Ethiopia.

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