Research Article

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Journal of Medical Research and Health Education
ISSN 2393-8862

2022
Vol.6 No.4:13

Factors of Teenage Pregnancy among Women Attending Maternal and Child Health Clinic in Ephratana Gidem Woreda Public Health Facility, Amhara, Ethiopia, 2016/2017

Solomon Adanew Worku[1*], Yohannes Moges Mitku[1], Fiseha Girma[2] and Weyzer Tilahun[3]

[1]Department of Midwifery, Debre Berhan University, Debre Birhan, Ethiopia

[2]Department of Nursing, Debre Berhan University, Debre Birhan, Ethiopia

[3]Department of Nursing, Mekelle University, Mek'ele, Ethiopia

[*]**Corresponding author:** Solomon Adanew Worku, Department of Midwifery, Debre Berhan University, Debre Birhan, Ethiopia, E-mail: solhabtu@gmail.com

Received: April 09, 2020; Manuscript No. IPJMRHE-20-3745; **Editor assigned:** April 14, 2020; PreQC No. IPJMRHE-20-3745 (PQ); **Reviewed:** April 28, 2020; QC No. IPJMRHE-20-3745; **Revised:** August 22, 2022; QI No. IPJMRHE-20-3745; Manuscript No. IPJMRHE-20-3745 (R); **Published:** September 19, 2022; DOI: 10.36648/2393-8862.6.4.13

Citation: Worku SA, Mitku YM, Girma F, Tilahun W (2022) Factors of Teenage Pregnancy among Women Attending Maternal and Child Health Clinic in Ephratana Gidem Woreda Public Health Facility, Amhara, Ethiopia, 2016/2017. J Med Res Health Educ Vol.6 No.4:13

Abstract

Objective: Teenage pregnancy is defined as a teenage girl, usually within the ages of 13-19 years, becoming pregnant. The study was aimed to assess magnitude and factors associated with teenage pregnancy among women attending maternal and child health clinic in Ephratana Gidem Woreda public health facility for health care service. A facility based cross-sectional study design using quantitative method was used and a total of 421 women were interviewed. Bivariate and multivariable analyses were done.

Results: Out of the total 421 women, 84 (20%) were teenage pregnants. The statistically significant independent predictors for teenage pregnancy found in this study were early marriage, contraceptive use and age at menarche. Women married at the age of 18-30 years had 96% (AOR=0.040, 95% CI; 0.012, 0.136) lower chance of having teenage pregnancy than those women early married. Those women contraceptive non-user were almost 12 times more likely to be experienced to teenage pregnancy than from those who use contraceptive (AOR=12.176; 95% CI; 4.865, 30.485). Women whose age at menarche of 12-15 years were almost 5 times more likely to experience teenage pregnancy compared to those women whose age at menarche 16-20 years (AOR=5.217; 95% CI; 2.070,13.150).

Keywords: Teenage pregnancy; Bivariate; Contraceptive

Abbreviations

AOR: Adjusted Odds Ratio; CI: Confidence Interval; EDHS: Ethiopia Demographic and Health Survey; MCH: Maternal and Child Health; SPSS: Statistical Package for Social Science

Introduction

Teenage pregnancy is defined as a teenage girl; usually within the ages of 13-19 years, becoming pregnant. About 16 million babies are born to adolescent mothers each year. These are high-risk births from the perspective of the health of both mother and child. Early pregnancy and childbearing both within and outside marriage is a common experience throughout the world. Throughout the world, estimates indicate that 46 million pregnancies are voluntarily terminated every year; 27 million legally and 19 million outside the legal system. Importantly, from a public-health perspective, 2.5 million (almost 14%) of all unsafe abortions in developing countries are in women younger than 20 years [1].

Sub-Saharan Africa had the highest prevalence of teenage pregnancy in the world in 2013. Births to teenage mothers account for more than half of all the births in this region an estimated 101 births per 1000 women aged 15 to 19 yeras. As a result of high levels of early childbearing in developing countries, pregnancy and childbirth are the leading cause of death among the women age 15-19 years.

In Ethiopia, the problem is not different; the rate of teenage pregnancy keeps on high. According to the 2011 Ethiopian Demographic and Health Survey (EDHS), the number of teenagers between 15 and 19 years who were already mothers or pregnant with their first child at the time of the survey was 79 per 1000. Rates in the rural communities were about three times that of the urban communities, 99 and 27 per 1000 women respectively [2].

Varies reports and publications have identified determinants of teenage pregnancy and fertility but most of the finding were from nationwide studies rather than specific to regions. Hence, this research was carried out to assess the magnitude and associated factors of teenage pregnancy among women attending maternal and child health clinic in Ephratana Gidem woreda public health facility for healthcare service.

Methodology

Study design, study population and sampling

The study was conducted from October 2016 to June/2017 in Ephratana Gidem Woreda public health facility, North Shoa Administrative Zone, Amhara regional state, Ethiopia. Ephratana Gidem Woreda is located 270 km far from capital Addis Ababa and has 1 District hospital and 6 health centers. A facility based cross-sectional study design was conducted. All sampled women attending maternal and child health clinic in Ephratana Gidem Woreda public health facility for health care service were our study population. To determine the number of women to be included in the study a single population proportion formula was used. The final sample size was 429 [3].

According to pre-assessment done, the total sample size was met by systematic random sampling technique of daily caseload, every 4th women were included in the sample until the total sample size for this study is obtained. The sample size for each of public health facility was determined proportionally to the number of average monthly women attending maternal and child health clinic in each public health facility.

Data collection and data analysis

Data was collected by face to face interview using a structured and pre-tested questionnaire first prepared in English and translated to Amharic and then back to English to check for its consistency. The instrument was adapted from different literatures developed for similar purpose by different authors [4].

The data was intensively cleaned up before its analysis and was entered using Epi Data 3.1 version and analysis was carried out using Statistical Package for Social Sciences (SPSS) version 22. Frequency distribution tables and statistical graphs were used to describe some variables. Cross-tabulation and logistic regression were done to examine the association between dependent and independent variables and significant variables (p-value less than 0.2) were entered into multivariate analysis and Adjusted Odds Ratio (AOR) was seen to check confounding factors. A 95% confidence level and a p-value of less than 0.05 were considered to get statistically significant [5].

Results

Socio-demographic characteristics

A total of 421 women were selected for the study in the study area and interviewed. The response rate was 98.1%. The largest proportion of the study respondents 244 (58 %) were in the age group of 20-29 years. In terms of educational levels, 115 (27.3 %) were illiterate (unable to read and write). Majority of participants, 264 (62.7 %) were rural residents and 157 (37.3%) lived in urban areas. As to the religious composition of the respondents the majority of the study respondents 295 (70.1%) were orthodox (**Table 1**).

Table 1: Socio-demographic characteristics of women attending MCH clinic in Ephratana Gidem woreda public health facility, Amhara, Ethiopia, 2017.

Socio-demographic variables	Number	Percent
Age of respondent(n=421)		
16-19	90	21.4
20-29	244	58
30-39	79	18.8
40-49	8	109
Mean ± SD=24.49 ± 5.718		
Residence (n=421)		
Urban	157	37.3
Rural	264	62.7
Educational status (n=421)		
Grade 12+	30	7.1
Grade 9-12	66	15.7
Grade 5-8	134	31.8
Grade 1-4	76	18.1
Illiterate	115	27.3
Religion (n=421)		
Orthodox	295	70.1
Muslim	106	25.2
Protestant	20	4.7
Ethnicity (n=421)		
Amhara	362	86
Oromo	52	12.4
Tigre	4	1
Gurage	3	0.7
Marital status (n=421)		
Single	10	2.4
Married	405	96.2
Divorced	6	1.4

Age at 1st Marriage (n=405)		
43070	169	41.7
18-30	236	
Median=18		
Duration of marriage (n=405)		
≤ 5	244	60.2
44840	84	20.7
42309	49	12.1
16-20	22	5.4
21-25	6	1.5
Mean ± SD=6.08 ± 5.312		
Occupation (n=421)		
Student	6	1.4
Housewife	345	81.9
Housemaid	8	1.9
Merchant	25	5.9
Govt-employee	37	8.8
Have you ever been a victim of abuse (n=421)		
Yes	22	5.2
No	399	94.8
Does taking alcohol and drugs (n=421)		
Yes	46	10.9
No	375	89.1

Cultural factors

Majority of the study participants 315 (74.8%) perceived that some cultural practices exposed teenagers to pregnancy, 106 (25.2%) of them however, did not agree that cultural practices expose teenagers to teenage pregnancy [6]. As to the history of the respondents 421 (100%) women were active. Among the respondents the majority, 254 (60.3%) of them had their first intercourse before they were 18 years old. The mean age at first was 17.2 ± 2.144 years [7].

Economic factors

Among the respondents the majority, 410 (97.4%) had partners and 11 (2.6%) had not partners. However, 395 (96.3%) out of the 410 who had partners stated that they received financial support from their partners. The largest proportion of the study participants 361 (85.7%) lived with partners followed by 15 (3.6%) lived with relatives [8].

Health-related factors

The majority of study participants 410 (97.4%) of them reported that they knew about family planning methods and where to find them. Three hundred seventy-four (88.8%) had used modern contraception and 47 (11.2%) had never used any modern contraception. The most frequently used method was Injectable (Depo-Provera) 240 (64.2 %) followed by implants 72 (19.3%). More than two-third 276 (73.8%) respondents who ever used family planning, suggest it to use family planning. Concerning age at first menstruation, 314 (74.6 %) of respondents had had first menstruation at the age of 12-15 years. The mean duration of age at first menstruation was 14.71 ± 1.376. One hundred twenty-three (29.2%) of the respondents reported that knew about reproductive health service that women can use [9].

Prevalence of teenage pregnancy

Among the surveyed respondents 345 (81.9%) of them were pregnant and 76 (18.1) not pregnant. Largest proportion of the respondents (currently pregnant women) 176 (51%) had been pregnant for two or more times and 169 (49%) of the study subjects had pregnancy for the first times. Out of the total surveyed respondents 84 (20%) were teenage pregnancies (**Figure 1**).

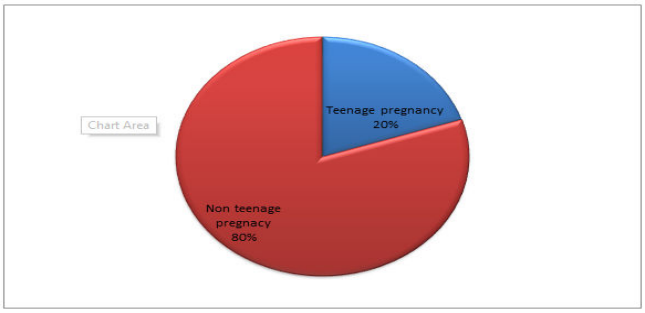

Figure 1: Percentage distribution of teenage pregnancy and non-teenage pregnancy among surveyed respondents in MCH clinic Ephratana Gidem woreda public health facility, 2016/17. Note: Non-teenage pregnancy; Teenage pregnancy

Factors affecting teenage pregnancy

In the multivariable model of logistic regression, variables which had significant level of p<0.2 were entered into the model. The Adjusted OR (AOR) findings showed. Concerning age at first marriage the odds of teenage pregnancy among women married at the age of 18-30 years had 96% (AOR0.040, 95% CI=0.012, 0.136) lower chance of having teenage pregnancy than those women early married at p<0.001 [10].

The odds of teenage pregnancy among contraceptive non-user were almost 12 times more likely to be experienced to teenage pregnancy than from those who use contraceptive (AOR=12.176; 95% CI; 4.865,30.485) at p<0.001 [11].

Concerning age at first menstruation the odds of teenage pregnancy among women whose age at menarche of 12-15 years were almost 5 times more likely to experience teenage pregnancy compared to those women whose age at menarche 16-20 years (AOR=5.217; 95% CI; 2.070,13.150) at p<0.001 (**Table 2**).

Table 2: Multivariable analysis result of dependent variable (teenage pregnancy) with independent variables.

Variables	Teenage pregnancy		COR (95%)	AOR (95%)	p-Value
	Yes	No			
Age at first marriage					
43070	69 (40.8)	100 (59.2)	1	1	
18-30	13 (5.5)	223 (94.5)	0.084 (0.045,0.160)	0.040 (0.012,0.136)	0
Contraceptive use					
Yes	57 (15.2)	317 (84.8)	1	1	
No	27 (57.4)	20 (42.6)	7.508 (3.946,14.286)	12.176 (4.865,30.485)	0
Age at menarche					
42339	75 (23.9)	239 (76.1)	3.417 (1.646,7.093)	5.217 (2.070,13.150)	0
16-20	9 (8.4)	98 (91.6)	1	1	

Note: p-value significant at level of p<0.05; COR: Crude Odds Ratio; AOR: Adjusted Odds Ratio

Discussion

This study was conducted with the aim of assessing the magnitude and factors associated with teenage pregnancy among women attending maternal and child health clinics. In the multivariate analysis, early marriage, contraceptive use and age at menarche were found to have statistically significant on teenage pregnancy [12,13]. The prevalence of teenage pregnancy among study participants was found to be 20%. This finding is relatively comparable with a similar study conducted at Assossa general hospital in 2014 and consistent with the report of EDHS 2011 in which the prevalence was 20.4% and 19.3% respectively and higher as compared to the study conducted in Kpone-on-Sea, Ghana in 2009, Ethiopia Demographic and Health Survey in 2016 and Chonburi hospital which was 11.4%, 13% and 9% respectively [14].

This confirms that teenage pregnancy is a key health problem in the Ephratana Gidem woreda. However, this prevalence is high in contrast to the availability of health care providers and availability of health services. This indicates that having health services by themselves will not avoid teenage pregnancy. Giving appropriate counseling and instruction of contraceptive with proper contraceptive methods and delay of marriage is necessary [15].

Among cultural characteristics of the women age at first marriage was found to be positively associated with teenage pregnancy. Those women married at the age of 18 and above years were 96% (AOR0.040, 95% CI=0.012, 0.136) lower chance of having teenage pregnancy than those women early married. This study finding is supported by the study conducted in Nigeria on factors associated with teenage pregnancy and fertility in Nigeria, in which early marriage plays a significant role in the occurrence of teenage pregnancy. But in contrast to the study conducted in Kpone-on-Sea, Ghana in 2009 that indicated as early marriage and teenage pregnancy has no significant association. This inconsistency of findings might be due to difference socio-demographic (marital status) characteristics of the study population .

The possible justification for early married women to teenage pregnancy could be women who married in early age (age less than 18) had a chance to pregnancy at the age of teen. This is due to the frequency of activity is higher in adolescents who are in stable relationships-marriage or union than in those who are not, hence the greater likelihood of pregnancy in the absence of contraception. It is more expedient for there to be targeted programs/interventions directed at enlightening teenagers, households and communities on behavior change that will encourage delayed entry into marital unions.

In the present study teenage pregnancy was associated among women contraceptive non-user were almost 12 times more likely to be experienced to teenage pregnancy than from those who use contraceptive (AOR=12.176; 95%CI; 4.865,30.485). The present finding is supported by the study conducted in Assosa General Hospital on assessment of magnitude of the teenage pregnancy and its associated factors among teenage females.

This might be due to most of teenage women did not know family planning methods and where family planning methods was available and most of teenage women did not use family planning methods. The reason did not using family planning methods by teenage women is lack of husband's consents. This is related to its role in providing women with awareness on family planning and increasing use of contraceptive which may result in low percentage of teenage pregnancy [16].

Results showed that there was a significant relationship between age at menarche and teenage pregnancy, i.e teenage pregnancy among women whose age at menarche of 12-15 years were almost 5 times more likely to experience teenage pregnancy compared to those women whose age at menarche

16-20 years (AOR=5.217; 95% CI; 2.070,13.150). This study finding is supported by the study conducted in Ghana a teenager who attains menarche later in life is more likely to delay age at teenage pregnancy as compared to teenagers who attain menarche early.

Conclusion

The present study revealed that one in five of (20%) the pregnant women attending maternal and child health clinics in Ephratana Gidem woreda public health facility had teenage pregnancy experience. This indicates teenage pregnancy is one of the major reproductive health problems in the study area. No single factor accounted for the high rates of teenage pregnancy; more than one factor was associated with for this regard. Early marriage, contraceptive use and age at menarche of women had been among statistically significant associated factors with teenage pregnancy.

Recommendation

Facilitate the establishment of adult-teenage communication programs with guidelines to give adults information and skills to communicate effectively with young people about reducing risky behavior.

Limitations

Cross- sectional study design was used in the present study. This type of study design shows the exposure and outcome at the same point in time, so that we cannot formulate a cause and effect relationship. As the study was conducted among women attending MCH clinics from the public health facility social desirability bias may not have been completely eliminated.

Ethical Considerations

Ethical clearance was obtained from the Institutional Review Board (IRB) of the Mekelle University, college of health science. Written consent was obtained from public health facility administration before starting data collection. During the data collection written informed consent was obtained from each respondent; for minor's participants, the consent was obtained from parent/guardian on behalf of participants by explaining the objective of the study and the rights of the respondent to participate or not and they can refuse at some point of the questionnaire. To keep confidentiality of the client's personal identifiers were not used in the questionnaire format.

Consent for Publication

Not applicable.

Availability of Data and Materials

We sent all data which are available with us; there are no any remaining data and materials.

Competing Interests

The authors declare as there are no conflicts of interest.

Funding and Sponsorship

There was no funding or sponsoring organization in this paper.

Authors' Contributions

SA had the primary responsibility in all steps of the study and supervised fieldwork together with FG, WT and YM. SA, FG, WT and YM developed the study design and analyzed data together. All authors have involved the writing of the manuscript. All authors read and approved the final manuscript.

Acknowledgment

We feel more than privileged to express my profound thanks to Mekelle University, college of health science, department of nursing for giving this golden opportunity to conduct research. We would like to express my heartfelt gratitude to the participants of this study for devoting their valuable time during the interview. We would like to express my deepest thanks to the Ephratana Gidem woreda health office that collaborate in giving information for this research.

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