

Association between Contraceptive Awareness and Use, and Teenage Pregnancy among Prime Gravidas Delivering at Mbarara Hospital Regional Referral, Uganda

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Abstract

Introduction: The promotion of family planning, so that women can avoid unwanted pregnancy, is central to the World Health Organisation work on improving maternal health. This requires that women have access to safe and effective methods of fertility control. It is estimated that 90% of abortion-related and 20% of pregnancy-related morbidity and mortality, along with 32% of maternal deaths, could be prevented by use of effective contraception. 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. The objective of this study was to determine the impact of contraceptive awareness and use on teenage pregnancy among primigravidas at Mbarara Regional Referral Hospital, Southwestern Uganda.

Methods: The study was conducted on postnatal ward at Mbarara Regional Referral Hospital between October and December 2015 using case control design by consecutively sampling 100 primiparas who delivered during the study period at gestation age ≥ 28 WOA

Results: The total number of respondents was 100 where by 30 mothers were below 20 years and 70 above 20 years. The age range was 15- 35 years and the most frequent age was 20 years. Majority of teenage mothers were either married or cohabiting (85%), unemployed (57%), never used contraceptive (93%), lacked knowledge of long term contraception (71%) and emergency contraception (84%).

Lack of Knowledge of contraceptives, long term contraception and Emergency contraception was found to be strongly associated with likelihood of teenage pregnancy [OR (95%CI) and p values: 7.992(2.533- 25.222) <0.0001 , 6.838(1.891-24.730) 0.001, 0.105(0.013-0.837) 0.012] respectively. Other factors associated with teenage pregnancy included rural residence [OR (95%CI) 2.382 (1.022-5.556) p value 0.043], Education Below secondary level [OR (95%CI): 5.167(2.116-12.617) p value <0.0001] and being unemployed [OR (95%CI): 9.374(2.595-33.859) p value <0.000].

Conclusion: Majority of teenage mothers delivering at Mbarara Regional Referral Hospital lack knowledge about contraception, long term contraceptives and emergency contraception. This knowledge gap is associated with low use of contraception and hence of teenage pregnancy.

Key Words: teenage mothers, Contraception, Knowledge, Primigravidas

Introduction

Improving reproductive health is central to achieving the Millennium Development Goals on improving maternal health, reducing child mortality and eradicating extreme poverty (Cleland, Bernstein et al. 2006) . This requires that women have access to safe and effective methods of fertility control. The promotion of family planning, so that women can avoid unwanted pregnancy, is central to the World Health Organisation work on improving maternal health (WHO, 2006) and is core to achieving the Millennium Development Goal on this. In developing countries, maternal mortality is high, with 440 deaths per 100,000 live births (in sub-Saharan Africa, this figure reaches 920). One in three women give birth before age 20 and pregnancy-related morbidity and mortality rates are particularly high in this group. One quarter of the estimated 20 million unsafe abortions and 70,000 abortion related deaths each year occur among women aged 15–19 years, and this age group is twice as likely to die in childbirth as women aged 20 or over. It is estimated that 90% of abortion-related and 20% of pregnancy-related morbidity and mortality, along with 32% of maternal deaths, could be prevented by use of effective contraception (Cleland, Bernstein et al. 2006). 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 (Hubacher, Mavranouzouli et al. 2008). Premarital exposure to pregnancy risk has increased, with a widening gap between sexual debut and age of marriage, and increased sexual activity prior to marriage (Bearinger, Sieving et al.

2007), (Mensch, Grant et al. 2006), placing young women at increased risk when they are most socially and economically vulnerable. Reported sexual activity among adolescents in developing countries is generally high, although there is considerable variation between countries (Singh, Bankole et al. 2005), and data validity is often poor (Plummer, Ross et al. 2004). In sub-Saharan Africa, 75% of young women report having had sex by age 20 (Blum 2007). However, few sexually active adolescents in developing countries use modern contraceptive methods such as oral contraceptives and condoms, and although there is considerable variation between countries, uptake is generally much lower than in developed countries. Overall, it is estimated that 37% of unmarried, sexually active women aged 15–24 years in sub-Saharan Africa use contraception but only 8% use a non-barrier method (Cleland, Ali et al. 2006). Hubacher, Mavranouzouliand McGinn suggest that the choice of implant rather than oral or injectable contraceptives could have a big impact on unintended pregnancy in this age group. However, greater promotion of any modern method has to be informed by better understanding of why uptake is so low among adolescents in the first place. Previously identified limits to contraceptive use among adolescents in developing countries include lack of knowledge, sex education and access to services; risk misperceptions; and negative social norms around premarital sexual activity and pregnancy (Campbell, Sahin-Hodoglugil et al. 2006),(Gage 1998). (Barbour and Barbour 2003),(Baum 1995). The objective of this study was to determine the impact of contraceptive awareness and use on teenage pregnancy among primigravidas at Mbarara Regional Referral Hospital, Southwestern Uganda.

Methods and materials

Study site: The study was conducted on postnatal ward at Mbarara Regional Referral Hospital. The hospital is a 265 bed capacity serving as a general hospital with Surgical, Medical, Obstetrics and Gynaecology, Paediatric, ENT, Dental, Orthopaedic and other specialized units. It is government funded through the ministry of Health offering free services to Mbarara and the surrounding districts of Bushenyi, Isingiro, Shema, Ibanda, Kiruhura, Lyantonde and Ntungamo. There is a neonatal intensive care unit on paediatrics ward in the hospital and a busy maternity ward with a labour suite and Antenatal and Postnatal wards and major operation theatre delivering about 10,000 mothers annually. The hospital doubles as a teaching hospital for medical students with a number of specialists and consultants

Study design: This was Case control study.

Study population: All teenage primiparas mothers, who delivered at MRRH and admitted to postnatal ward during the study period and met the inclusion criteria for the study.

Sampling method: We used consecutive sampling.

Inclusion criteria: We included all teenage primiparas mothers after delivery at MRRH, at gestation age ≥ 28 WOA or birth weight ≥ 1000 g admitted on postnatal ward after consenting to the study.

Exclusion criteria: We excluded all teenage mothers whose parity was greater than one, and those who refused to consent and those who were too sick or with altered level of consciousness

Study variables: The Outcome variable was teenage pregnancy while exposure variable was contraceptive use. Other variables were sociodemographic, medical and gynaecological factors

Sample size determination: We used Fleiss formular with continuity correction, the power was 80%, and CI 95% and OR 0.26. The sample size was calculated as 100 primiparas, with 30 teenagers (cases) and 70 above 20 years of age (controls)

Data analysis:

The data was entered in an EXCEL spreadsheet and analysed using SPSS statistical software, version 20 (SPSS, Chicago, IL, USA). Descriptive statistics was presented in frequency tables Cross tabulation was done and Pearson Chi-square statistics was used to determine the association at bivariable analysis. Variables with p-value < 0.05 at bivariable analysis were considered statistically significant. Results of bivariated analysis are presented in tables with odds ratios and the corresponding 95% Confidence Intervals and $p < 0.05$.

Ethical clearance: Approval to carry out the study was obtained from Mbarara University of Science and Technology Institutional Review Board (MUST IRB)

Results

The total number of respondents was 100. The data was collected between October and December 2015. Mothers below 20 years were 30 and those above 20 years 70. The age range was 15- 35 years and the most frequent age was 20 years. The age at marriage ranged from 15 to 31 years with the most frequent age of marriage being 20 years. The most common reason given for early marriage were "I thought I was old enough" and lack of school fees. Other reasons given were raped into marriage, orphaned, forced into marriage and got pregnant at school. Majority of teenage mothers were either married or cohabiting (85%), unemployed (57%), never used contraceptive (93%), lacked knowledge of long term contraception (71%) and emergency contraception (84%).

Lack of Knowledge of contraceptives, long term contraception and Emergency contraception was found to be strongly associated with likelihood of teenage pregnancy [OR (95%CI) and p values: 7.992(2.533- 25.222) <0.0001, 6.838(1.891-24.730) 0.001, 0.105(0.013-0.837) 0.012] respectively. Other factors associated with teenage pregnancy included rural residence [OR (95%CI) 2.382 (1.022-5.556) p value 0.043], Education Below secondary level [OR (95%CI): 5.167(2.116-12.617) p value<0.0001] and being unemployed [OR (95%CI): 9.374(2.595-33.859) p value <0.000].

Discussion

Lack of Knowledge of contraceptives, long term contraception and Emergency contraception was found to be strongly associated with teenage pregnancy. This is because most of sexual activity among teenagers in our setting is unplanned and unprotected hence resulting in pregnancies. Among those who are married, the need to have babies as a way of fulfilling marital obligation over rides the contraception needs leading to teenage pregnancy. Similar findings were observed by Barbour and Barbour 2003 and Campbell, Sahin-Hodoglugil et al. 2006

Conclusions:

Teenage mothers at Mbarara Regional Referral Hospital lack enough knowledge about contraception, long term contraceptives and emergency contraception. This knowledge gap is associated with low use of contraception and hence a high likelihood of teenage pregnancy.

Recommendations:

Knowledge about contraception and specifically long term methods and emergency contraception should be widely disseminated to teenage girls so as reduce on teenage pregnancies.

Competing interests: Authors did not have any conflict of interest

Authors' contributions:

- 1: Masembe Sezalio.MD, involved in data collection, entry, analysis and manuscript writing
- 2: Chakura Andrew. MD, manuscript writing
- 3: Ngonzi Joseph. MD, developed the concept, manuscript writing and submission
- 4: Wasswa Ssalongo, MD, concept development
- 5: Mayanja Ronald.MD, Principal investigator, conceived the idea, developed the concept, involved in data collection, entry, analysis and manuscript writing

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TABLES OF RESULTS

Table of characteristics

Characteristics	Frequency	Percentage
Age (years)		
<20	30	30.0
20-35	70	70.0
Residence type		
Rural	38	38.0
Urban	62	62
Education		
Below Secondary	43	43.0
Secondary+	56	56.0
Missing	1	1.0
Marital status		
Single	15	15.0
Married /cohabiting	85	85.0
Age at marriage		
15-19	36	36.0
20+	48	48.0
Missing	16	16.0
Occupation		
Not employed	57	57.0
Employed	40	40.0
Missing	3	3.0
HIV		
Negative	86	86.0
Positive	11	11.0
Missing	3	3.0
History of contraceptive use		
Yes	7	7.0
No	93	93.0
Knowledge of contraceptives		
No knowledge	63	63.0
Has knowledge	37	37.0
Knowledge of long term contraceptives		
No		
Yes	71	71.0
Missing	28	28.0
	1	1.0
Use of long term contraceptives		
No	94	94.0
Yes	5	5.0
Missing	1	1.0
Knowledge of emergency contraception		
Yes		
No	15	15.0
Missing	84	84.0
	1	1.0

Association between contraception and teenage pregnancy

Variable	Type of pregnancy by age		OR (95% CI)	P-value
	Teenage	Adult		
Knowledge of contraceptives				
No	31	32	7.992(2.533- 25.222)	<0.0001
Yes	4	33		
Knowledge of Long term contraception				
No	32	39	6.838(1.891-24.730)	<0.0001
Yes	3	25		
Knowledge of emergency contraception				
Yes	1	14	0.105(0.013-0.837)	0.012
No	34	50		

Other factors associated with teenage pregnancy

Variable	Type of pregnancy by age		OR (95% CI)	P-value
	Teenage	Adult		
Residence				
Rural	18	20	2.382(1.022-5.556)	0.043
Urban	17	45		
Education				
Below secondary	24	19	5.167(2.116-12.617)	<0.0001
Secondary+	11	45		
Occupation				
Not employed	29	33	9.374(2.595-33.859)	<0.0001
Employed	3	32		