International Journal of Community Medicine and Public Health
Oyugi SO et al. Int J Community Med Public Health. 2023 Nov;10(11):4096-4102
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20233435

Original Research Article

Prevalence and predictors to occurrence of adolescent repeat pregnancy among adolescents attending health facilities in Suna East Sub County-Migori Kenya

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Received: 30 August 2023
Accepted: 13 October 2023

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ABSTRACT

Background: A repeat pregnancy at adolescence often comes with much stress and complications. It feeds into a cycle of deprivation that compromises the life of the young mother and her child. Majority of girls might be having one child but many more might be pregnant or having more than one child at that age.
Method: This was a cross sectional mixed method study with semi-structured questionnaires administered to 381 adolescents. Two FGD and 5 key informant interviews were also conducted. Quantitative data was analysed using t-test for continuous variables and chi-square test for categorical data.
Results: The 30.4% of adolescents had repeat pregnancy. Adolescents from Luo ethnic group were 50% less likely to have repeat pregnancy. Those who knew at least one method of family planning were 40% less likely to have repeat pregnancy while those who had more than two sexual partners had higher odds of repeat pregnancy (OR: 2.5; 95% CI: 1.1-5.6; p=0.02). Adolescents who used condoms only sometimes were twice likely to report repeat pregnancy. (OR: 1.7; 95% CI: 1.1-2.7; p=0.01) while those whose mother had a child while under 18 years had 50% chance of having a repeat pregnancy.
Conclusions: The study established a prevalence of repeat pregnancy at 30.4%. There was significant association between ethnicity, level of contraceptive knowledge and having multiple sexual partners to repeat pregnancy. Adolescents with inadequate support and those whose mother had pregnancy when below 18 years were also significantly at risk of repeat pregnancy.

Keywords: Adolescent, Fertility, Repeat pregnancy, Contraception, Gender-based violence

INTRODUCTION

Adolescent repeat pregnancy is defined as any pregnancy that occurs following a previous pregnancy, childbirth, abortion or a miscarriage. Contrary to the common belief, not all adolescent pregnancies are first births. Adolescents who have begun early childbearing are at a higher risk of experiencing another pregnancy.[1]

In Kenya, 15% of women age 15-19 have ever been pregnant. Out of these12% have had a live birth, 1% had a pregnancy loss, and 3% are currently pregnant. The demographic surveys indicate that the percentage of women age 15-19 who have ever been pregnant increases with age; from 3% at age 15 to 31% among age 19.[2]

In Migori county, half of women had first sex at 16 years. An equal proportion aged 25-49 years got married by the age of 17. This suggests a possible higher rate of repeat pregnancies. County was among the top 7 counties with the highest prevalence of adolescent pregnancy at 24%.[3]

Despite far-reaching effects of adolescent pregnancy and the worse implications of repeat pregnancies, there are gaps in understanding factors related to occurrence of a second or higher order pregnancy during adolescence.[4]

METHODS

Study design

This was a cross sectional mixed method study that aimed to identify prevalence and risk factors for occurrence of repeat pregnancy among adolescent girls. A survey was administered to 381 pregnant adolescents, two FGD interviews and 5 key informants.

Study population

The study targeted adolescent girls with single or repeat pregnancy attending health facilities. Two separate groups consisting of 8-12 individuals were selected to Participate in focus group discussions, five key individuals working directly with adolescents participated in the KII.

Sampling procedure

For general questionnaire, systematic selection of pregnant adolescents was conducted. Selected adolescents were given equal chance to participate in the study. A total of 381were interviewed, 9 declined and 12 participants didn't get consent from their parents.

For focus group discussion (FGD), 2 groups of parents/caregivers and adolescent were interviewed. Each group had 8-12 participants. The FGD excluded adolescents that had participated in the normal questionnaire session. The parents or caregivers, were strictly having or living with adolescents who was pregnant or with a history of pregnancy.

For key informant interviews (KII), the study targeted key stakeholders in adolescent health working within Suna East Sub County. Five individuals were interviewed. Each session took less than 1 hour.

Data collection tool

Data was collected between March to May of 2022 at public health facilities in Suna East. Closed and open-ended questionnaire were used in data collection. The information on possible risk factors were categorized into four themes of socio-demographic characteristics, Individual factors, Behavioural factors and social environment. Open ended questions were used for FGD and KII to help give a broader understanding of the factors associated with occurrence of repeat pregnancies.

Validity and reliability of the tool

The tool was validated through quantitative and qualitative test analysis. For reliability, the questionnaire was tested using pilot study results conducted at the neighbouring County and Cronbach's alpha of more than 0.8 was determined.

Data management

Data collection

Eight research assistants participated in data collection. Data was collected in public health facilities. Community focal persons supported in mobilization of participants for FGD and KII.

Data privacy

Research assistant signed confidentiality agreement. Unique codes were assigned to every client to preserve their identity All client data was entered into encrypted personal computers with passwords and data for all clients was published in aggregates without mentioning individual details.

Data analysis

Data was entered in statistical software, SPSS version 16 and coded. Factors related to occurrence of repeat pregnancy were determined using t test for continuous variables while other categorical data such as marital status were analysed using chi-square test. All data analysed based on 4 categories of socio-demographic characteristics, Individual factors, Behavioural factors and social environment. All statistical tests performed at 95% level of significance. Multivariate logistic regression was used to examine the predictors of repeat pregnancy.

RESULTS

Socio-demographic profile of the respondents

Majority of respondents were aged between 10-19 years with a mean age of 18.2 and a SD of±1.0 and a range of 12-24, 53.0% married compared to 45.9 who were single. Proportion of those with primary (48%) and secondary (47%) education was comparable. Respondents were predominantly Christians (98.2%) and rural residents (90.8%), 44.4 of Luo ethnicity and majority (76.9%) indicated that they were unemployed. Most of those who working had been on job for more than 12 months (47.7%) with majority (90.0%) making own decision on how to spend their income (Table 1).

Prevalence of repeat pregnancy and obstetric history of adolescent females

The 30.4% had experienced repeat pregnancy. More than 2/3rd (69.3%) had visited health facility for ANC services. 41% reported having had an abortion/miscarriage before. More than half (54.0%) of those who non-primigravidas had 2 children, with 65.3% having had birth interval of 1-2 years between preceding child and current case/pregnancy, 55% rated experience with prev pregnancy as very bad/ bad while another 44.9% had no complications during prev pregnancy. Notable

complications included abortion-related pain (8.7%) while 18.5% had pregnancy-related stress (Table 2).

Relationship between socio-demographic characteristics and repeat pregnancy

Adolescents from Luo 50% less likely to have repeat pregnancies compared to those other tribes (OR: 0.5; 95% CI: 0.3-0.9; p=0.02), respondents with none/primary education up to 2.2 times more likely to have repeat pregnancies, though this was not statistically significant (p=0.11) (Table 3).

Individual factors and repeat pregnancy

Relationship between adolescent contraceptive knowledge, utilization and repeat pregnancy

The adolescents who knew at least one method of FP were 40% less likely to have the repeat pregnancy (OR: 0.6; 95% CI: 0.3-1.0; p=0.04). Those who had not used any FP method were upto twice higher rates of repeat pregnancy, although the relationship was not statistically significant (OR: 1.0; 95% CI: 0.6-2; p=0.88).

Table 1: Socio-demographic characteristics of respondents.

Variables	Categories	N	Percentages (%)
Age group (in years)	10-19	372	97.6
	≥20	9	2.4
Mean age in years ±SD (Range)		18.2±1 (12-24)	
Marital status	Single	175	45.9
	Married	202	53.0
	Divorced	1	0.3
	Separated	3	0.8
Level of education	None	8	2.1
	Primary	183	48.0
	Secondary	179	47.0
	College/University	11	2.9
Religion	Christian	374	98.2
	Muslim	7	1.8
Residence	Rural	346	90.8
	Urban	35	9.2
Ethnicity	Luo	169	44.4
	Kuria	68	17.8
	Luhya	93	24.4
	Somali	34	8.9
	Other	17	4.5
Employment status	Not working	293	76.9
	Yes, full-time	19	5.0
	Yes, part-time	29	7.6
	Other	40	10.5
If working, duration of employment	< 6 months	18	20.5
	7-12 months	28	31.8
	>12 months	42	47.7
If employed, who decides on how you spend your income	Self	80	90.9
	Parents	4	4.6
	Partner	4	4.6

Table 2: Prevalence of repeat pregnancy, obstetric history of adolescent females.

Variables	Categories	N	Parentages (%)
Reason for visiting health facility	General treatment	111	29.1
	ANC	264	69.3
	Others (consultation)	6	1.6
First pregnancy	Yes	265	69.6
	No	116	30.4
Has had an abortion or miscarriage	Yes	109	41.1
	No	156	58.9
If has more than one child, number alive	One	117	44.1
	Two	143	54.0
	Three	5	1.89

Continued.

Variables	Categories	N	Parentages (%)
Birth interval between preceding child and current case/pregnancy	Less than 1	71	26.8
	1-2	173	65.3
	3-5	20	7.6
	>5	1	0.4
Rating experience with previous pregnancy	Very bad	51	19.2
	Bad	96	36.2
	Fair	40	15.1
	Good	78	29.4
	Very good	0	0.0
Why the rating	No complications	119	44.9
	Pregnancy-related complications	50	18.9
	Pregnancy-related stress	49	18.5
	Abortion-related pain	23	8.7
	Not ready for pregnancy	9	3.4
	Sent away from school	10	3.7
	Other (operated, sent away from home, led to eary marriage, rape)	5	1.9

Table 3: Relationship between socio-demographic characteristics of respondents and repeat pregnancy.

Independent variables	Categories	N	Repeat pregnancy		OR	95% CI	P value
			Yes	No			
Age (in years)	<18	80	67.5	32.5	0.9	0.5-1.5	0.65
	≥18	301	70.1	29.9			
Marital status	Single	175	71.4	28.6	1.2	0.7-1.8	0.46
	Married / others	206	68.0	32.0			
Level of education	None / primary	191	73.3	26.7	1.4	0.9-2.2	0.11
	Secondary and above	190	65.8	34.2			
Residence	Rural	346	69.4	30.6	0.9	0.4-1.9	0.80
	Urban	35	71.4	28.6			
Ethnicity	Luo	279	66.3	33.7	0.5	0.3-0.9	0.02
	Other tribes	102	78.4	21.6			
Employment	Not working	293	70.3	29.7	1.2	0.7-1.9	0.56
	Working	88	67.1	32.9			
Who decides on how you spend your income	Self	80	67.5	32.5	0.9	0.5-1.5	0.65
	Others	301	70.1	29.9			

Table 5: Relationship between sexual debut, sexual relationships and repeat pregnancy.

Independent variables	Categories	N	Repeat pregnancy		OR	95% CI	P value
			Yes	No			
Age at which sexual intercourse started (In years)	<15	224	68.7	31.3	0.9	0.6-1.4	0.68
	≥15	157	70.7	29.3			
What prompted you to start having sex at that age	Influence from friends	233	71.7	28.3	1.3	0.8-2.0	0.26
	Sexaul abuse, personal needs etc.,	148	66.2	33.8			
Still in active sexual relationship	Yes	328	70.7	29.3	1.5	0.8-2.7	0.21
	No	53	62.3	37.7			
Number of sexual partners	More than two	50	84.0	16.0	2.5	1.1-5.6	0.02
	One or two	331	67.4	32.6			
Reason for having more than one sexual partner	For upkeep and support	35	85.7	14.3	2.8	1.1-7.5	0.03
	Sexual pleasure, peer pressure	346	67.9	32.1			
Approximate age gap between you and your partner (Years)	<5	147	64.6	35.4	0.7	0.4-1.1	0.10
	≥5	234	72.6	27.4			

Continued.

Independent variables	Categories	N	Repeat pregnancy		OR	95% CI	P value
			Yes	No			
Still in relationship with partner responsible for pregnancy	Yes	210	70.0	30.0	1.0	0.7-1.6	0.83
	No	171	69.0	30.1			
Reasons for separation	Disagreements	90	67.8	32.2	0.9	0.5-1.5	0.67
	He is in school, he is married, abuses	291	70.1	29.9			

Table 6: Relationship between individual risky behavior and repeat pregnancy.

Independent variables	Categories	N	Repeat pregnancy		OR	95% CI	P value
			Yes	No			
Frequency of condom use with sexual partner	Sometimes	242	74.0	26.0	1.7	1.1-2.7	0.01
	Every time, Not at all	139	61.9	38.1			
Has courage to refuse sex/ ask partner to the use condom	Yes	208	71.6	28.4	1.2	0.8-1.9	0.33
	Somehow, No	173	67.1	32.9			
Has had sex with a stranger	Yes	79	69.6	30.4	1.0	0..6-1.7	1.00
	No	302	69.5	30.5			
Has been in multiple sexual relationships in life	Yes	215	74.4	25.6	1.7	1.1-2.6	0.02
	No	166	63.2	36.8			
Has been to nightclubs or discos	Yes	170	73.5	26.5	1.4	0.9-2.2	0.13
	No	211	66.4	33.6			
Has been involved in drug abuse	Yes	45	75.6	24.4	1.4	0.7-2.9	0.35
	No	336	68.7	31.3			
Has been taking alchohol	Yes	36	75.0	25.0	1.3	0.6-3.0	0.46
	No	345	69.0	31.0			

Relationship between sexual debut, sexual relationships and repeat pregnancy

Adolescents who had more than two sexual partners had significantly higher odds of repeat pregnancy (OR: 2.5; 95% CI: 1.1-5.6; p=0.02). Notably, adolescents who had more than one sexual partner for upkeep and support three times more likely to have experienced repeat pregnancy (OR: 2.8; 95% CI: 1.1-7.5; p=0.03). Respondents who said they influenced by their friends to start having sex up to two times more likely to have reported repeat pregnancy, results being non-significant (p=0.26) (Table 5).

Behavioural factors and repeat pregnancy

Relationship between individual adolescent risky behavior and repeat pregnancy

Adolescents who used condoms only sometimes about twice as likely to report repeated pregnancy compared to their colleagues who used condom every time or never used at all (OR: 1.7; 95% CI: 1.1-2.7; p=0.01).

Similarly, adolescent girls who had been in multiple sexual relationship in life had higher odds of experiencing repeated pregnancy, (OR: 1.7; 95% CI: 1.1-2.6; p=0.02) (Table 6).

Social factors and repeat pregnancy

Relationship between living arrangement, family characterisics and repeat pregnancy

There was borderline significant relationship between adolescents whose mothers had the first child at less than 18 years and repeat pregnancy. Such adolescents are 50% likely to have reported repeated pregnancy (OR: 0.5; 95% CI: 0.3-1; p=0.06). It was further noted that adolescents who were currently staying with their mothers and those who sleep in the same room were less likely to have reported repeated pregnancy (p=0.08). However, this was not statistically significant.

Relationship between potential partner, family support and repeat pregnancy

The respondents who rated support they get from partner as inadequate were twice as likely to reported repeated pregnancy (OR: 2.1; 95% CI: 1-4.3; p=0.04).

DISCUSSION

Prevalence of repeat pregnancy among adolescents visiting health facilities in Migori County

Though this study only focused on adolescents attending health facilities, it reveals a high prevalence of repeat

pregnancy, 30.4% of the respondents had experienced repeat pregnancy. The finding of the current study is lower than that reported in another study conducted in Brazil in 2013, where 42.6% of the pregnant adolescents interviewed had repeat pregnancy. The Brazilian study observed that non-use of contraceptive method was the main reasons for the occurrence of repeat pregnancies.[5] On the contrary, this study noted that majority (86.6%) had used a contraceptive method at one point. Therefore, high number of repeat pregnancies cannot be attributed to non-use of family planning. The high prevalence further confirms the KDHS data of 2014 which showed that 20.9% of adolescents in Migori are already mothers. Since a quarter of girls aged 15-19 in Migori have begun childbearing and the adolescent age specific fertility rate is 136 per 1000, it is possible that repeat pregnancy can be higher.

Association between adolescent repeat pregnancy and other factors

Association between socio-demographic characteristics and occurrence of repeat pregnancy

Ethnicity was significantly associated with occurrence of repeat pregnancy. Adolescent girls from Luo ethnic group were 50% less likely to have repeat pregnancies (OR: 0.5; 95% CI: 0.3-0.9; p=0.02). This can be attributed to cultural practices by various ethnic groups. The Luo tribe does not particularly practice female genital cut (FGC) which is dominant in other tribes like Kuria and Somalis living in Suna east. Girls who undergo the rite are given a sense of womanhood and are deemed ready for marriage and childbearing. A study conducted in 2013 on the influence of Female genital cut (FGC) and school retention, confirmed that it was a major contributor to early marriage among the Kuria and Somali tribes.[6] A similar study conducted in Aberdeen Scotland noted that cultures that tolerate or encourage young parenthood contribute significantly to repeat adolescent pregnancy. In such cultures, a teenager who gives birth is never rebuked but is seen to be in line with past generational rite of passage. In such tolerating societies, young mothers are well taken care of, hence encouraging adolescent who are already mothers to get pregnant again.[7]

Adolescent knowledge of family planning also had significant association with occurrence of repeat pregnancy. Adolescents who knew at least one method of FP were 40% less likely to have repeat pregnancy. This finding is in line with many previous studies that have attributed adolescent pregnancies to non-use of family planning. A study conducted in Caruaru Province, Brazil revealed that non-use of contraceptive methods increased the chances of adolescent pregnancy by up to seven times.[8] In South Africa, researchers noted that the discontinuation of Family planning among adolescents contributed to the occurrence of adolescent pregnancies and alluded that although many adolescents may present history of using contraceptive before pregnancy, the use of family planning is generally interrupted within a year.[9] Encouragingly, the current study revealed that parents and peers have little influence on adolescent choices of family planning. Majority said it was their own decision to use the family planning method. This was confirmed during FGD where adolescent respondents said they did not want their parents or peers to know because they were on a method for fear of being judged.

Association between behaviour of adolescents and the occurrence of repeat pregnancy

Adolescents with two or more sexual partners had higher odds for repeat pregnancy. Whereas only 20.7% confirmed to ever having sex with someone they did not know so well, 56.4% agreed to have had multiple sexual partners at any given time. Interestingly, 54.6% of the respondents said they have the courage to refuse sex or ask a partner to use a condom, but most of them said they only do this when they feel unsafe and at risk of getting pregnant. Since majority (59.3% alluded that this is driven by financial need rather than sexual pleasure, the present findings underscore how socioeconomic vulnerability is associated with unplanned pregnancy. It is possible that adolescents with multiple sexual partners are less likely to practice safe sex making it easy for them to have un intended pregnancy. This finding relates to themes from Uganda and other countries in the East African region where young women engage in transactional sex with older male partners in exchange for school fees, pocket money and basic necessities.[10]

Condom use also significantly influenced occurrence of repeat pregnancy. Adolescents who had ever used condom were 60% less likely to have repeat pregnancy. Remarkably, 63.5% of adolescents reported using condoms only sometimes and 32.6% not using it at all. The findings are in line with other studies have confirmed condom use as the most effective behavioural methods for the prevention of HIV and unplanned pregnancies. However, it is noted that the habit of condom use is low with most researchers alluding that condom use in most countries is below 60%.[11] Interestingly, this study revealed that condom use was seen as a boy responsibility. Most girls said they are never bothered to carry or buy a condom because they will be seen to be sexually immoral. In addition, girls always give in to boys demands for unprotected sex for fear of losing their boyfriends.

Association between social environment on occurrence of repeat pregnancy among adolescents

Respondents who rated the support they get from their partner as inadequate were twice as likely to report repeat pregnancy. (OR: 2.1; 95% CI: 1-4.3; p=0.04). This study attributes this to the need to get additional support to supplement what they are getting from their partners. Most adolescent mothers will be pushed to engage in risky sexual behaviour for financial help. Expectedly,

majority of the respondents (82.4%) indicated that they received monetary support from the partners who also encouraged them to get pregnant again. About 63.3% got this motivation from their sexual partners while only 5.5% got such an advice from their parents.

There was borderline significant relationship between adolescents whose mothers had the first child at less than 18 years and repeat pregnancy. Adolescents of such mothers were 50% more likely to have repeat pregnancy. Other studies have also alluded that adolescent girl who had at least one older sister or mother having a pregnancy before the age of 20, had a higher risk of becoming pregnant.[12] This was also confirmed in another study in South Africa on the association between household and community single motherhood and adolescent pregnancy. It alluded on the likelihood of daughters of such mothers suffering the same fate of becoming pregnant early in life.[13]

CONCLUSION

The study established a prevalence of repeat pregnancy at 30.4%. There was significant association between ethnicity, level of contraceptive knowledge and having multiple sexual partners to repeat pregnancy. Adolescents with inadequate support and those whose mother had pregnancy when below 18 years were also significantly at risk of repeat pregnancy.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Oyugi SO, Arudo JO, Ambetsa MA. Prevalence and predictors to occurrence of adolescent repeat pregnancy among adolescents attending health facilities in Suna East Sub County-Migori Kenya. Int J Community Med Public Health 2023;10:4096-102.