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RESEARCH ARTICLE

THE DETERMINANTS OF EARLY PREGNANCY AMONG ADOLESCENT ATTENDING POSTNATAL CLINIC IN THE COAST OF KENYA

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ABSTRACT

Background: Globally, approximately 18 million adolescents get pregnant annually. This global health problem is notably common in developing African countries than in developed countries. The effects of adolescent pregnancy, particularly in Sub-Saharan Africa, are detrimental. Adolescent pregnancy has been linked to high maternal and neonatal morbidities and mortalities, vicious poverty, high school dropout rates, and increased financial burden in respective governments. In Kenya, according to KDHS statistics, the prevalence of adolescent pregnancy is 18.8% with some counties recording as high as 40%. Problem statement: In 2014, TaitaTaveta County recorded a 13% prevalence of adolescent pregnancy. However, the incidences of adolescent pregnancy are sharply increasing and stand at 16% in 2018 as per the findings of UNPFA. The increase in adolescent pregnancy has seen a rise in school dropout and early marriages. Therefore, the general purpose of this proposal was to investigate the determinants of adolescent pregnancy in TaitaTaveta County. Study objectives: This study was to determine how personal characteristics, sociocultural factors, economic factors, electronic media factors, health care factors influence adolescent pregnancy in Taita Taveta County. Methodology: The study used a descriptive cross-section design. The study took place in Taita Taveta County with a sample size of 185 postnatal adolescent mothers. The following factors were found to have an influence on early adolescent; level of education, social culture factors, economic factors and electronic media. The policy makers should come up with policies which will regulate the use of electronic media among the adolescents.

INTRODUCTION

Adolescence is a transitional phase of growth and development between the age of 10 and 19 years (WHO, 2014). Globally, it is estimated that in every 6 people, one is an adolescent. Adolescent pregnancy is pregnancy that occur in girls aged between ten to nineteen years (UNESCO, 2016). In Africa, the prevalence of adolescent pregnancy is at 19.3% with an adolescent birth rate of 101 births per 1000 women between 10-19 years (Mayor 2015; UNFPA, 2018). The prevalence is highest in East Africa at 21.5% and lowest in Northern Africa at 9.2%. Multiple factors have been linked with this increased number of adolescent pregnancies in Africa. In Kenya, despite the concerted efforts by the government to lower adolescent pregnancy's prevalence from 18.8%, statistics still point more has to be done. According to KDHS (2019), Narok County has a high prevalence of teenage pregnancy of 40% whereas Murang'a county has as low as 6%. According to KDHS (2019), TaitaTaveta County recorded a 13% prevalence of adolescent pregnancy, which was lower than the national level of 18.8%. The county also recorded the fifth least cases of adolescent pregnancy in the country and the second least number of adolescent pregnancies in the coastal region of six counties.

Nevertheless, data from MOH 711 for TaitaTaveta County shows an upsurge in adolescent pregnancy in the last.

METHODOLOGY

Study design: This study adopted a descriptive cross-sectional research design to assess the determinants of adolescent pregnancy in TaitaTaveta County. This study design gave a snapshot of adolescent pregnancy burden in the county, as well as describe the relationship between various variables and adolescent pregnancy.

Sample size: The sample size was calculated using the Cochran formula, using a marginal error of 5% at the precision of 95% confidence interval. The proportion of female adolescents in the county was at 14% (Kenya National Bureau of Statics [KNBS] 2019).

Cochran formula

$$n = \frac{z^2 pq}{e^2}$$

Where e is the desired level of precision (margin of error?)
p is the (estimated) proportion of the population which has the attribute in question

q is 1-p

The z-value is found in a z table

$$n=1.96 \times 1.96 \times 0.14 \times 0.86$$

$$\frac{0.05 \times 0.05}{n=185}$$

It is worth noting that non-response occurs during data collection. The two main non-responses during data collection are unit non-response and item non-response. According to Göritz (2006), good quality questionnaires and monetary incentives have been shown to reduce non-response. Post survey, weighting adjustment methods help compensate for unit non-response whereas single imputation compensates for item non-response. Weighting adjustments aims at increasing the sampling weights of respondents while imputation is a process where plausible values are produced to replace missing values

Sampling procedure: A stratified sampling method was used to obtain the sample size. The sample was obtained from four major referrals hospital spread across the county. The health facilities formed four strata. The four major hospitals are; Taveta, Wesu, Mwatate, and Moi hospitals whose catchment populations are 67665, 56021, 71,609, and 87803 respectively. The facilities have been chosen because they are spread across the county and distributed in the four constituencies. They also have comprehensive reproductive health services for adolescents. Through a simple random technique, the final subjects will be selected proportionally from each stratum. The proportionate ratio will be dependent on the catchment population for each hospital. From the above proportions, the participants will be 45, 37, 46, and 57 for the strata of Taveta, Wesu, Mwatate, and Moi hospitals respectively. The proportionate ratio was dependent on the catchment population for each hospital. The proportions of the respondents have been highlighted in the table below.

Table 1. Respondents per study area (hospital)

Referral hospitals (spread across the county)	Referral hospital population catchment	Respondents
Taveta	67665	45
Wundanyi	56021	37
Mwatate	71,609	46
Moi	87803	57

Methods of Data Collection: Data was collected through open-ended and close-ended questionnaires. The self-administered questionnaire was divided into four sections in line with the four specific objectives. The process was done in person and questionnaires were distributed to respondents across the research setting.

RESULTS

Table 2. shows variation in percentage regarding early adolescent pregnancy in relation to level of education, where got information of family planning, Frequency of sexual intercourse, Age of sex intercourse and number of sex partner. Chi-square (x2) test reveals that there is a significant association between level of education (P value = 0.121 <.05) majority of the respondents were having secondarily education and the age of sex partner (P value=0.004<.05) majority of the respondents engaged sex intercourse between the age 11-13

years. The rest of the variables being Where got information on FP (P value =0.778<.05), number of sex partners (P value=0.794> .05) majority of the respondents were having more than two sex partners and Frequency of sexual intercourse (P value=0.800< .05), do not have a significant association regarding early adolescent pregnancy. Table 3 shows variation in percentage regarding early adolescent pregnancy in relation to Frequency of Disco-Matanga, COVID-19 increase the rate of adolescent pregnancy, Marital status of your parents, How often sex education offered in and How often you talk about sex with your peers. Chi-square (x2) test reveals that there is a significant association between Frequency of Disco-Matanga (P value = 0.001 <.05) majority of the respondents were always going for disco matanga and Marital status of your parents (P value = 0.001 <.05) majority of the respondents were from single parents families and COVID-19 increase the rate of adolescent pregnancy (P value = 0.001 >.05) majority of the respondents agreed that Covid- 19 increased the rate of adolescent pregnancy. How often sex education offered in school (P value=0.778< .05) and how often you talk about sex with your peers (P value = 0.987 >.05) majority of the respondents were always talking about sex with their peeps do not have a significant association regarding early adolescent pregnancy.

Table 4. shows variation in percentage regarding early adolescent pregnancy in relation to Total earnings of both of parents, Type of house do your parents live, who supported you financially before become pregnancy and What prompted you to have a boyfriend. Chi-square (x2) test reveals that there is a significant association between Total earnings of both of parents (P value = 0.002 <.05) majority of the respondents parents were earning less than KSH 5,000 ,who supported you financially before become pregnancy (P value=0.019<.05) majority of the respondents were supported by boyfriends before becoming pregnancy and what prompted you to have a boyfriend (P value=0.001<.05) majority of the respondents were prompted to have boyfriends because of financial challenges. Type of house do your parents live (P value=0.619<.05) majority of the respondents parents were living in mud houses do not have a significant association regarding early adolescent pregnancy. Table 5 shows variation in percentage regarding early adolescent pregnancy in relation to Items access to, Access to internet before pregnancy, Media which greatly influenced your pregnant and Activities engage in before you got pregnant. Chi-square (x2) test reveals that there is a significant association between Access to internet before pregnancy (P value = 0.019 <.05) majority of the respondents were able to access to internet most days before pregnancy ,Media which greatly influenced your pregnant (P value=0.001<.05) majority of the respondents were greatly influenced to become pregnant by internet enabled phone and Activities engage in before you got pregnant (P value=0.002<.05) majority of the respondents were most engage with whatsapp before got pregnant. Items access to (P value=0.493< .05), do not have a significant association regarding early adolescent pregnancy.

DISCUSSION

The relationship between adolescent characteristics and early adolescent pregnancy: Level of education influenced early adolescent pregnancy. In this study, adolescents who had no formal education, primary education and secondary education had higher number of pregnancy when compared

Table 2. Relationship between Adolescent characteristics and early adolescent pregnancy

Variables	Early adolescent pregnancy n%			p value
	11-13	14-16	17-19	
Level of Education				0.121
No formal	1(10.00)	5(9.80)	9(7.03)	
Primary	3(60.00)	26(50.09)	25(19.53)	
Secondary	1(10.00)	20(40.09)	82(64.06)	
Tertiary	0(0.000)	0(0.000)	12(9.38)	
Where got information on FP				0.778
School	0(0.000)	0(0.000)	10(7.81)	
Church	0(0.000)	0(0.000)	0(0.000)	
Hospital	0(0.000)	5(9.80)	12(9.37)	
Parents	0(0.000)	3(5.88)	4(3.12)	
Friends	2(40.00)	18(35.29)	46(35.93)	
Internet sources	3(60.00)	26(50.98)	60(46.88)	
Frequency of sexual intercourse				0.800
Weekly	0(0.000)	2(3.92)	36(28.12)	
Monthly	3(60.00)	37(72.54)	60(46.88)	
Quarterly	1(10.0)	10(19.60)	30(23.43)	
Bi-annually	1(10.00)	3(5.88)	2(1.56)	
Age of sex intercourse				0.004
10 yrs below	2(20.00)	10(19.61)	40(31.25)	
11-13 years	3(60.00)	42(82.35)	83(64.84)	
14-17 years	0(0.000)	0(0.000)	5(3.90)	
18 yrs and above	0(0.000)	0(0.000)	0(0.000)	
Number of sex partner				0.794
One	3(40.00)	20(39.21)	60(46.88)	
More than two	2(10.00)	32(62.74)	68(53.13)	

Table 3: Relationship between sociocultural factors and Early Adolescent pregnancy

Variables	Early adolescent pregnancy n%			p value
	11-13	14-16	17-19	
Frequency of Disco-Matanga				0.001
Never	1(20.00)	3(9.62)	38(17.97)	
Sometime	1(20.00)	23(44.23)	45(35.15)	
Always	3(60.00)	28(53.85)	45(35.15)	
COVID-19 increase the rate of adolescent pregnancy				0.002
Yes	3(60.00)	31(59.62)	75(58.59)	
No	2(40.0)	21(40.38)	50(39.06)	
Marital status of your parents				0.001
Single	3(60.00)	31(60.78)	78(60.94)	
Married	1(20.00)	14(27.45)	42(32.81)	
Separated	1(20.00)	4(7.84)	8(6.25)	
Divorced	0(0.00)	2(3.92)	-	
Widowed	-	-	-	
How often sex education offered in school				0.778
Never	4(80.00)	40(78.43)	98(76.56)	
Sometimes	1(20.00)	9(17.64)	25(19.53)	
Always	0(0.00)	2(3.92)	5(3.90)	
How often you talk about sex with your peers				0.987
Never	1(20.00)	11(21.56)	-	
Sometime	2(40.00)	20(39.21)	59(46.09)	
Always	2(40.00)	20(39.21)	69(46.09)	

Table 4. Relationship between Economic factors and Early Adolescent pregnancy

Variables	Early adolescent pregnancy n%			p value
	11-13	14-16	17-19	
Total earnings of both of parents				0.002
Less than ksh 5,000	4(80.00)	41(80.39)	99(77.34)	
Ksh 5,001-25,000	1(10.00)	9(17.64)	24(18.75)	
Ksh 25,001- 50,000	0(0.00)	2(3.92)	25(19.53)	
Above ksh 50,000				
Type of house do your parents live				0.619
Permanent house	1(20.00)	2(3.92)	10(7.81)	
Semi-permanent	1(20.00)	4(7.84)	17(13.28)	
Mud house	2(40.00)	31(60.78)	79(61.17)	
Rented	1(20.00)	41(80.39)	22(17.19)	
Who supported you financially before become pregnancy				0.001
Father	1(20.00)	2(3.92)	12(9.38)	
Mother	1(20.00)	4(7.84)	21(16.41)	
B/friend	3(60.00)	39(76.47)	73(57.03)	
Relative	0(0.00)	6(11.76)	22(17.18)	
Self-earning				
What prompted you to have a boyfriend				0.001
Financial challenges	3(60.00)	30(58.82)	104(81.3)	
Pressure from peers	2(40.00)	21(41.18)	24(18.75)	
Pressure from parents	0(0.00)	0(0.00)	0(0.00)	
Pressure from boyfriend				
Curiosity				

Table 5. Relationship between Electronic media and Early Adolescent pregnancy

Variables	Early adolescent pregnancy n%			p value
	11-13	14-16	17-19	
Items access to				0.493
Radio	1(20.00)	12(23.52)	10(7.81)	
Television	1(20.00)	9(17.65)	22(17.18)	
Smart phone	1(20.00)	23(45.09)	73(57.03)	
Computer				
Internet access	1(20.00)	7(13.73)	23(17.96)	
Access to internet before pregnancy				0.019
Never	1(20.00)	5(9.80)	13(10.15)	
Rarely	3(60.00)	12(23.52)	23(17.97)	
Most days	1(20.00)	20(39.21)	72(56.25)	
Daily		14(27.45)	22(17.18)	
Media which greatly influenced your pregnant				0.001
Television	2(40.00)	18(35.29)	23(17.97)	
Radio	0(0.00)	0 (0.00)	0(0.00)	
Internet enabled phone	3(60.00)	30(58.82)	99(77.34)	
Non internet enabled phone	0(0.00)	2(3.92)	-	
Internet Computer			6(4.68)	
Activities engage in before you got pregnant				0.002
Whatsapp	2(40.00)	18(35.29)	64(50.00)	
Facebook	1(20.00)	16(31.37)	24(18.75)	
You -Tube	1(20.00)	12(23.57)	27(21.09)	
Watched pornography	1(20.00)	5(9.80)	13(10.15)	
Explicit Music				

with those who had tertiary education. Higher education provided knowledge, better understanding and awareness creation, which ultimately reduce early adolescent pregnancy (Gomes et al. 2016). Age of sexual intercourse had significant association with adolescent pregnancy. In this study, majority of the respondents engaged sex intercourse between the age 11-13 years. This study is in agreement with Kenya demographic health survey (2014), which reported that 12% of women aged 12 to 49 years reported to have engaged in sex before 15 years while 48% had sex by 18 years.

The sociocultural factors that influence early adolescent pregnancy: Frequency of Disco-Matanga had an influence on early adolescent pregnancy. In this study, majority of the respondents were always going for disco matanga. This study finding is consistent with Barmao, Kindiki & Lelan, (2015) conducted in Bungoma county reported that adolescents sneak from their homes at night and use disco matanga events to meet their sexual predators. This study finding further agrees with Yakubu et al. (2018). Marital status of the adolescent parents had a significant association with Early adolescent pregnancy. In this study, majority of the respondents were from single parents' families. This could be attributed to fact that most single parents work long hours to meet the financial needs of the family and consequently spent less time with their children. The study finding is consistent with Mumah et al., (2014) whose finding reported that single mother who dwell in urban slums of Nairobi work long hours to meet the financial needs of the family.

The economic factors that influence early adolescent pregnancy: Total income of the parents had an influence to early adolescent pregnancy. This study found out, majority of the respondents parents were earning less than KSH 5,000. In Kenya, according to KNBS (2019), an adult living in a rural area and earning less than Ksh 3,000 per month or living in an urban area and earning less than Ksh 6,000 is considered poor.

Electronic media and Early Adolescent pregnancy: Access to internet before pregnancy had influence to Early Adolescent pregnancy. In this study, majority of the respondents were able to access to internet most days before pregnancy.

According to Kimemia&Mugambi, (2016) There is evidence that exposure to sex-related in electronic media causes desire of becoming sexually active among the adolescents. This study finding agree with Kiare (2015) study conducted in meru among the adolescents indicated that 52.5% had access to mobile phones that they used to communicate with their partners.

CONCLUSION

This study sought to determinants of adolescent pregnancy in TaitaTaveta county. The study concluded that level of education, age of sexual intercourse and self-esteem were identified as adolescent characteristics influencing early adolescent pregnancy.

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