

Contraceptive use among youth: a comprehensive account of associated individual-level factors in two informal settlements in Kenya

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ABSTRACT

Understanding sexual and reproductive health of adolescents is of utmost importance and carries with it implications for improving individual health outcomes especially reduction in unintended pregnancies and STIs such as HIV/AIDS. Using data from poor urban youths in the slums Nairobi, we try in this paper to comprehensively look at the individual level factors that may influence contraceptive use and pregnancy outcomes among adolescents as they transition to adulthood, in a bid to understand the needs and challenges that they face. Preliminary results point to the fact that there is a diversity of experiences among adolescents with regards to knowledge, attitude and behavior. Age, education and marital status were often strongly associated with SRH experiences of adolescents, pointing to fact that targeted programs are needed to reach them with range of SRH info and services at different stages – before they initiate sex, as sexually active unmarried youth, or as married individuals and couples.

Introduction

Understanding the drivers of sexual and reproductive health (SRH) outcomes is critical for improving individual health outcomes especially reduction in unintended pregnancies and STIs. We propose to use existing data from a longitudinal study conducted in 2007-2010 among youth (12-22 years) living in two informal (slum) settlements in Nairobi (Kenya) to comprehensively examine individual level factors associated with contraceptive use.

Young people comprise a considerable proportion of populations in sub-Saharan Africa. These young people, face numerous sexual and reproductive health (SRH) challenges during their transition to adulthood. These challenges include, among others, limited access to SRH information and services. The long term impacts of unmet SRH needs are telling - high incidence of HIV among young people and a substantially higher contribution of adolescent childbearing to total fertility rates than in other parts of the world [1]. While ages at puberty and initiation of sexual activity have declined in many parts of sub-Saharan Africa, age at first marriage has increased over time, thus increasing the period that adolescents are susceptible to pre-marital pregnancies and poor SRH outcomes. In sub-Saharan Africa, adolescents who initiate sex are exposed to sexually transmitted infections (STIs) including HIV/AIDS and unintended pregnancies [2] [3, 4]. For example, the proportion of young women who have a child by age 20 ranges from 47% to 75% in this region. [5]. Risk of unintended pregnancies is heightened for adolescents because of low contraceptive use during early sexual experiences. Unintended pregnancies often end up in clandestine and unsafe abortions, which are associated with adverse health consequences, including maternal deaths [6] [3]. Overall, poor sexual and reproductive health outcomes among young women and girls have long term adverse consequences on women's status including poor educational and employment opportunities [4, 5].

In Kenya, adolescents make up a considerable proportion of urban populations in the country because of the high volume of young adults who migrate from rural to urban areas to look for employment in cities. Many such migrants in Nairobi live in the numerous informal settlements, which house between 60 and 70% of the city's residents [7, 8]. Adolescents living in these slums face unique challenges as they transition to adulthood in a hostile environment that is characterized by high levels of unemployment, crime, substance abuse, poor schooling facilities, and lack of recreational facilities [8-10]. Previous studies show that people living in informal settlements are at greater risk for HIV infection, risky sexual behaviors, early childbearing, and other adverse SRH outcomes, than those in non-slums parts of the city [8, 11, 12] [13]. Extant literature posits that young women living in poor slum settlements are at a higher risk of unintended pregnancies compared to their non-slum counterparts, with higher prevalence of premarital childbearing that is unplanned or unwanted. In Nairobi slums for example, adolescents are more likely to engage in sexual activity earlier, and to engage in transactional sex and multiple sexual partnerships compared to adolescents in non-slum parts of the city. [1, 4, 5]. According to 2000 Nairobi Cross-Sectional Slum Survey [1] youth living in urban informal settlements initiate sexual activity much earlier than their counterparts living in rural and urban formal settlements. Sexual activity starts earlier in the slums compared to the general Kenyan population. It is estimated that 40 % of adolescent girls at age 16 had had sex compared to 20% of their counterparts in the general Kenyan populace. In addition, they live in an environment where knowledge about contraception is inadequate and access to contraceptive methods limited [14]. The consequence of high unmet need for contraception and inadequate knowledge of SRH matters is often an unintended pregnancy, which often times is terminated through unsafe abortion. In Kenya it was estimated in 2003 that young women below age 20 accounted for 16% of the over 20, 000 abortion related complications in public hospitals [20]. In the urban areas of Nairobi, it was estimated that 57% of abortions occur among girls and women living in urban slums [8]. Moreover, the socioeconomic impact of unintended pregnancies for these young women is glaring. For example, a study by the Center for the Study on Adolescence reports that an estimated 13,000 Kenyan girls drop out of school annually because of an unintended pregnancy [7].

All of these challenges constitute social barriers that may impinge upon young people's ability to have control over their sexual and reproductive life and to experience to the fullest extent the kind of sexual and reproductive life they value. Consequently, living in slum settlements remains a perpetual hazard to young people's development [8,12,15]. While much has been done to provide insights into adolescents SRH outcomes in the country, little attention has been paid to understanding and meeting the SRH challenges and needs of adolescents living in resource-poor urban settings. Yet, the wellbeing of the urban poor, a substantial proportion of whom are adolescents, will increasingly drive national development indicators including health and poverty indicators in Kenya. Therefore, a comprehensive understanding of individual level factors associated with contraceptive use and pregnancy outcomes among young people is critical for informing the development of policies and programs to enhance the sexual and reproductive health of young people. We draw on data from the Transition-to-Adulthood (TTA) project conducted among young people in two informal slum settlements in Nairobi to explore: 1) Factors associated with contraceptive use and knowledge of young people during their transition to adulthood in two slums in Nairobi - Viwandani and Korogocho; and 2) exploring the relationship between contraceptive use and knowledge on pregnancy outcomes during transition to adulthood among urban slum adolescents

Methods

This paper is based on data from the Transition-to-Adulthood (TTA) project that was conducted in 2007-2010 by the African Population and Health Research Center (APHRC), among 12-22 year olds living in Viwandani and Korogocho, two informal settlements in Nairobi, Kenya. The TTA study investigated the inter-linkages between migration, socioeconomic status and schooling and initiation of sex, risky behaviors (including multiple sexual partnerships, alcohol and drug abuse), and transition to adulthood among the urban poor through a longitudinal set-up. The study identified protective and risk factors in the lives of adolescents (aged 12-24 years) growing up in Nairobi's informal settlements and examined how these factors influence their transition to adulthood. The TTA survey was nested in the Nairobi Urban Health and Demographic Surveillance System (NUHDSS), a longitudinal platform set in 2002 by APHRC to collect and monitor health and demographic data from residents living in Korogocho and Viwandani slums.

The study uses the baseline data from the first wave collected in 2007, among approximately 4058 young people between the ages of 12 and 22. Qualitative data were also collected during the TTA project, through in-depth interviews with respondents purposively selected from participants in the baseline survey conducted in 2007-8 and represented varying trajectories of experience with regards to the key markers of the transition from adolescence to adulthood. Ethical approval was received from the Kenya Medical Research Institute's ethical review board. All interviews were conducted using a semi-structured interview guide developed by a team of researchers with experience working with Kenyan youth. The interviews were done in Kiswahili, audio-taped transcribed, and translated to English. The interviews focused on what it meant to the youth to be an adult, their relationships with parents/guardians and any experience of pregnancy. For this paper, a thematic analysis approach was used, in which data were broadly coded into categories, following the outline of the paper.

Analysis

This study uses descriptive statistics and logistic regressions to assess the patterns and linkages between contraceptive use and knowledge and pregnancy outcomes among young people in two informal settlements in Kenya. Paper also includes evidence based on qualitative data that was conducted through 75 in-depth interviews with youth 12-24 years to not only supplement the results from quantitative analysis, but further understand patterns and trends emerging from the qualitative analysis. This paper focuses on questions on sexual behavior (*contraceptive use at first and most recent sexual intercourse, initiation of sexual activity, recent sexual activity*), and reproductive life (*Pregnancy experience, initiation of childbearing, experience of unwanted pregnancy*).

Preliminary Results

this paper presents preliminary results for descriptive statistics, cross tabulations and qualitative analysis

Socio-demographic Characteristics

The sample was almost equally distributed between males and females (51% vs. 49%). Overall, 30% of respondents were aged 12-14 years, 46% between 15 and 19 years and 24% were aged 20-22. The distribution of respondents by age group did not differ by gender. Most (89%) of adolescents had never been married and only 10% were married at the time of the survey. About two-thirds (68%) of young people had at most a primary level of education. Educational level did not differ by

gender. Fifty-eight percent of adolescents were still in school at the time of the survey, with boys being more likely than girls to be in school (61% vs. 54%).

Attitudes towards contraception

With regards to attitudes towards contraceptive use, majority of both boys and girls agreed that it was smart to use contraceptives to prevent unplanned pregnancies. Majority of adolescents also believed that it was a good idea to use condoms as a way to prevent being infected by HIV/AIDS. With regards to how easy they thought it was to obtain contraceptives, over 70 % of adolescents (both boys and girls) agreed, implying that they believe obtaining birth control or contraceptives was not a difficult task for adolescents.

Qualitative interviews reveal similar patterns with regards to attitudes towards contraception and condom use. Most respondents were of the view that abstinence was the best way to avoid pregnancy, among other things such as STDs and HIV/AIDS. However, in cases where abstinence was not attainable, they were of the view that it was smart for couples to use contraceptives to prevent pregnancy. In a few interviews, such as the one with the female in Viwandani below, it was implicitly suggested that abortion was applied as a method of contraception.

“...It is just about sex, some people just have sex for fun, they don’t know what it means and again, early marriage, having babies at the wrong time, I mean when they are still too young...Interviewer: What are some of the strategies that young people in this neighborhood use to cope with these challenges? Respondent... Some abstain, others use contraception...some do abortions (Viwandani, female, separated, 20)

There were, however, notable misconceptions expressed by the respondents, which often had a negative impact on many young people’s understanding and attitudes towards contraception. The example below from Viwandani exemplifies these misconceptions:

“There are some girls who are involved in sexual activities and use preventives[contraceptives] like birth control pills, she advises us that starting to use those pills in early stages of life for a girl they are likely to make you barren in future. We are also told at school that the use of condoms is not good because there are some chemicals used in their manufacture and constant use of them can affect you in one way or another.” (Viwandani female, 16, single)

Sexual behavior including contraceptive use

In this paper, initiation of sexual activity, recent sexual activity, circumstances of sexual debut, circumstances of most recent sexual intercourse, and coercion into sexual activity is used to measure sexual behavior of urban youth. In total, about 32% of boys and 35% of girls were already sexually experienced. Older adolescents were more likely to have engaged in sexual intercourse; with both male and female adolescents who were still in school less likely to have engaged in sex than their counterparts who are no longer in school. Expectedly, almost all married adolescents had engaged in sexual intercourse. Early sexual debut, defined as sexual experience before age 15, was associated with being out of school for both boys and girls, with about 19% of boys and 13% girls who were out of school reporting their first sexual experience before age 15 compared to 6% and 2% respectively of boys and girls who were still in school.

Youth were also asked during in-depth interviews if they used protection during their first sexual encounter and if not, what the reasons were. Females were more likely to report not using any protection or contraception during their first sexual intercourse. Lack of knowledge was often cited

as reason for not using a condom or contraception. Other reasons cited for non-use of protection during the first sexual intercourse were love/trust and being in a marital union. The aspect of trust was distinctively associated with the perception that the couples were young and therefore, they did not expect that their partner had, at that age, had sexual relations with other partners for them to be at risk of contracting sexually transmitted diseases. Responses illustrating the role of trust include:

... I didn't suspect she would be infected or anything (Male, single, 16 years)

... I trusted her, both of us were innocent (Male, single, 22 years)... We were married and didn't see the need [to use protection] (Female, married, 21 years)

With regards to sexual activity in the 12 months preceding the survey, about a fifth of boys (21%) and more than a quarter of girls (28%) reported recent sexual activity, with older adolescents being more likely to do so. A larger proportion of adolescents with secondary level of education reported recent sexual activity compared to those with primary or lower education. However, a lower proportion of in-school adolescents than out-of-school adolescents reported recent sexual activity (7% vs. 42% among boys, and 5% vs. 55% among girls). As expected, married adolescents were much more likely than their non-married counterparts to report recent sexual activity. It was also important to examine the number of sexual partners in the 12 months preceding the survey. Majority of sexually active adolescents had only one partner: 67% for boys and 94% for girls, with young women reporting fewer sexual partners over the past 12 months than their male counterparts. There was little difference based on education with respect to the number of partners over the last 12 months among boys. In addition, it is striking and counterintuitive that girls who were still in school were more likely to have multiple partners than their counterparts who are no longer in school (17% vs. 6%), although they were less likely to report recent sexual activity. The opposite is observed among boys but the difference by schooling status is very marginal (32% vs. 34%).

Adolescents were asked whether they have used contraception during their first sexual experience. Results indicate that only 30% of males and 26% of females had used contraceptives during their first sexual intercourse with age significantly associated with the likelihood of contraceptive use. Those aged above 15 years were more likely to have used a contraceptive method than those below 15; more educated adolescents were more likely use contraception during their first sexual encounter, with the gap being wider among females. Adolescents who were still in school were more likely to have used contraception at sexual debut among females whereas the reverse was observed among their male counterparts. The proportion of adolescents who used contraception during their first sexual encounter was higher among unmarried adolescents than among those who were currently married. Similarly, use of condoms at first sexual intercourse was low with about a quarter of boys and a fifth of girls indicating that they used condoms on their first sexual encounter. Education was positively associated with condom use at first sex as adolescents with secondary level of education were more likely than their counterparts with primary or lower level to have used condoms. Condom use at first sex was slightly more prevalent among adolescent boys who were not in school (25% vs. 23%); the opposite was observed among girls although the small number of cases ($n = 79$) among in school girls warrants cautious interpretation. The proportion of adolescents who used condoms at first sex is higher among never married adolescents for both boys and girls. Reasons for condom use at sexual debut ranged from trying to prevent against both STD and HIV to preventing pregnancy, with boys seemingly more likely to have used condoms because they want to avoid pregnancy although the difference is very marginal.

Reason why adolescents used condom at sexual debut was also asked. Overall, the majority of young men and women reported having used condom to prevent against both STD/HIV and pregnancy

(72% for boys and 75% for girls). Boys seem to be more likely to have used condoms because they want to avoid pregnancy although the difference is very marginal (13% vs. 11%). No gender difference is observed as equal percentages of boys and girls (14% vs. 13%) indicated that preventing STD/HIV is the main reason that pushed them to have used condom at their first sexual intercourse.

Childbearing

The proportion of youth who have initiated childbearing is often used as a direct indicator of early childbearing. 21% of females had ever been pregnant; this proportion increases to 61% if only young women who were sexually experienced were considered. As expected, the proportion of females who had ever been pregnant was higher among the older cohorts. Among sexually experienced females, education was negatively associated with pregnancy experience, with those with primary education or lower being more likely than their counterparts with at least secondary education to have ever been pregnant (72% vs. 42%). This is corroborated by the fact that the percentage of sexually active young women who have ever been pregnant is substantially higher among those who are out of school (68% vs. 5%). Not surprisingly, married females were more likely to have been pregnant. Education is negatively associated with childbearing initiation, with those with primary education or lower being more likely than their counterparts with at least secondary education to have ever had a child. In addition, sexually experienced young women who were out of school were more likely to have had a child than their in-school counterparts.

*****Further multivariate analysis will explore the relationship between contraceptive use and knowledge on pregnancy outcomes during transition to adulthood among urban slum adolescents**

REFERENCES

1. Glasier, A., et al., Sexual and reproductive health: a matter of life and death. *The Lancet*, 2006. 368(9547): p. 1595-1607.
2. National Research Council and Institute of Medicine, *Growing Up Global: The Changing Transitions to Adulthood in Developing Countries*. Panel on Transitions to Adulthood in Developing Countries. Committee on Population and Board on Children, Youth, and Families. Division of Behavioral and Social Sciences and Education, ed. C.B. Lloyd 2005, Washington, DC: The National Academies Press.
3. Patton, G.C., et al., Global patterns of mortality in young people: a systematic analysis of population health data. *The Lancet*, 2009. 374(9693): p. 881-892.
4. Gupta, N. and M. Mahy, Sexual initiation among adolescent girls and boys: Trends and differentials in sub-Saharan Africa. *Archives of Sexual Behavior* 2003. 32(1): p. 41-53.
5. Singh, S., *Adolescent childbearing in Developing Countries: A Global Review*. *Studies in Family Planning*, 1998. 29(2): p. 117-136.
6. Mensch, B.S., S. Singh, and J.B. Casterline, Trends in the timing of first marriage among men and women in the developing world, in *The Changing Transitions to Adulthood in Developing Countries*, C.B. Lloyd, et al., Editors. 2005, National Academies Press: Washington, DC. p. 118-171.

7. UN-HABITAT, *The State of African Cities 2008 - A framework for addressing urban challenges in Africa* 2008, Nairobi: UN-HABITAT.
8. African Population and Health Research Center, *Population and Health Dynamics in Nairobi's Informal Settlements: Report of the Nairobi Cross-sectional Slums Survey (NCSS) 2000, 2002*, African Population and Health Research Center: Nairobi.
9. Mugisha, F. and E.M. Zulu, *The Influence of Alcohol, Drugs and Substance Abuse on Sexual Relationships and Perception of Risk to HIV Infection Among Adolescents in the Informal Settlements of Nairobi*. *Journal of Youth Studies*, 2004. 7(3): p. 279-293.
10. Taffa, N., *A comparison of pregnancy and child health outcomes between teenage and adult mothers in the slums of Nairobi, Kenya*. *International Journal of Adolescent Medicine and Health*, 2003. 15(4): p. 321-9.
11. Kabiru, C.W., et al., *Transition into first sex among adolescents in slum and non-slum communities in Nairobi, Kenya*. *Journal of Youth Studies*, 2010. 13(4): p. 453-471.
12. Zulu, E.M., F.N.-A. Dodoo, and A.C. Ezeh, *Sexual risk-taking in the slums of Nairobi, Kenya, 1993-98*. *Population Studies*, 2002. 56(3): p. 311-323.
13. Beguy, D., et al., *Timing and sequencing of events marking the transition to adulthood in two informal settlements in Nairobi, Kenya*. Submitted to *Journal of Urban Health*, 2009.
14. Ezeh, A.C., I. Kodzi, and J. Emina, *Reaching the Urban Poor with Family Planning Services*. *Studies in Family Planning*, 2010. 41(2): p. 109-116.
15. Okonofua, F., *New research findings on adolescent reproductive health in Africa*. *African Journal of Reproductive Health*, 2007. 11(3): p. 7-9.
16. DFID's Working Paper: *Improving Reproductive, Maternal and New born Health: Reducing Unwanted Pregnancies*. Evidence Overview (Version 1.0), DFID, 2010.
17. Blanc, A. K., and Way, A. *Sexual behavior and contraceptive knowledge and use among adolescents in developing countries*. *Studies in Family Planning*, 1998. 29, 106-116.
18. Castle, S., and Konaté, M. K. *The context and consequences of economic transactions associated with sexual relations among Malian adolescents*. In *The African population in the 21st century: Proceedings of the third African population Conference (Vol.3, pp. 105-128)*. 1999. Durban, South Africa: Union for African Population Studies.
19. Muganda-Onyando Rosemarie and Martin Omondi.. *Down the Drain: Counting the Cost of Teenage Pregnancy and School Dropout in Kenya*. 2008. Center for the Study of Adolescence. www.csakenya.org .
20. Gebreselassie, H., Gallo, M. F, Monyo, A., and Johnson, B.R (2005). *The magnitude of abortion complications in Kenya*. *BJOG* 112: 1229-1235.