

**Sex and survival, the sexual behavior of the poor in African cities\***

F. Nii-Amoo Dodoo

Population Research Institute

The Pennsylvania State University

Paper presented at the UNDP South East Asia HIV and Development Programme Workshop  
on Inter-relations between Development, Spatial Mobility, and HIV/AIDS. Paris, France,  
September 1-3, 2004.

---

\* I acknowledge the support of the National Institute of Child Health and Human Development (NICHD) and the Office of AIDS Research (OAR) through grant # 1 R01 HD044236-01A1. Author may be contacted at [fdodoo@pop.psu.edu](mailto:fdodoo@pop.psu.edu)

## **Sex and survival, the sexual behavior of the poor in African cities**

### **Abstract**

*This paper brings together recent findings from a handful of published works to highlight the relationship between poverty and sexual behavior. In stressing the particular vulnerability of the urban poor relative to their rural counterparts, the results draw attention to how poverty-sexual behavior interactions affect women, even and including children and married women, two groups that particularly underscore the predicament of poverty for females in urban settings. The paper makes the further argument that much of the risky behavior described can be considered part of a survival strategy whereby women in difficult economic circumstances have to fall back on sex as currency for obtaining the basic needs for themselves and their families.*

### **Introduction**

The spread of HIV/AIDS is one of, if not the most pressing global concerns of our time. Nowhere is the incidence of the disease more problematic than in sub-Saharan Africa where, despite representing roughly only 11 percent of global population, around 70 percent of HIV/AIDS cases are found. With curative options hardly imminent on the horizon, discussions about how to curb the spread of the virus in Africa focus on prevention and highlight the heterosexual basis of the disease and the significance of risk behaviors such as multiple and concurrent sexual partnerships. The outcome has been somewhat of a focus on “high-risk” groups which, for women, has primarily meant attention to sex workers (Caldwell 2000; National Research Council [NRC] 1996) and other special groups engaged in transactional sex, such as those young women noted to have “sugar daddies” or to be the “outside wives” of married men (Caldwell and Caldwell 1993; Caldwell, Caldwell, and Quiggin 1989; Karanja 1987; Meekers and Calves 1997; NRC 1996).

With the recent literature on sex work advocating a focus on high risk *behaviors* rather than groups (Clatts 1995), the emphasis on the latter begs the question of what the vulnerability of other women is. Not surprisingly, a close reading of the literature on sexual behavior might easily yield the interpretation that the average woman has little, if any, agency vis-à-vis initiating sex or instigating sexual encounters. Indeed, there is a growing indication that women’s risks of HIV infection may actually rise after entry into marriage (Carpenter et al 1999; Watkins 2003). Yet, we also know that economic stress provokes some women into

sexual behavior that portends adverse implications for their health (Carael & Allen, 1995; Ulin, 1992). This paper investigates whether poverty and risky sexual behavior are related for women in general, and how such a relationship varies across rural-urban space, marital status, and age.

## **Background**

Although questions about the effects of poverty have been central to research and intervention programs over the years, the urban poor have been relatively underrepresented in the demographic and reproductive health literature of sub-Saharan Africa. Elsewhere (Zulu, Dadoo, and Ezeh 2002), we have argued that this is probably linked to the majority of Africa's population being rural and the presumption that rural residents are more disadvantaged than their urban counterparts with respect to development resources (Lipton 1976; Kelley and Williamson 1984; Gugler 1996). The evidence, though, is that countries in Africa are urbanizing at extremely high rates that should see the traditionally rural continent become majority urban within two decades (United Nations 1998). With rapid in-migration and high fertility rates, amid a negative net economic growth since independence, the infrastructure of African cities has not appreciated in step with demand (United Nations Center for Human Settlements [HABITAT] 1996).

One implication of the confluence of rapid urbanization and economic malaise is an increasing proportion of marginalized poor in Africa's cities. In Nairobi, for example, more than 60 percent of the population is now estimated to live in slums where access to basic amenities such as water, electricity, and sanitation facilities in these settlements is practically nonexistent (Matrix Development Consultants 1993; World Bank 1999). For a city that has grown almost seven-fold in less than three decades—i.e., from a population of 350,000 in 1962 to 2.3 million by 2000—an annual growth rate of around five percent portends nothing but increasing numbers of urban poor, given the dim economic prospects (Central Bureau of Statistics 2001; Lamba 1994; Todaro 1989).

These trends are probably not unrelated to the urban character of the HIV/AIDS epidemic evident on the continent (DesGrees du Lou 1999). After all, economic vulnerability has been acknowledged to compound women's sexual vulnerability (Carael & Allen, 1995; Ulin, 1992). Yet, despite Africa's rapid urbanization, and its global position as a trailer with respect to both economic circumstances and HIV/AIDS, there has been little effort to explore the linkage between urban poverty and the incidence of the disease.

The relationship between poverty and sexual behavior is central to this study. A growing literature that also includes our work (Zulu et al. 2002), argues that poverty may have graver implications for urban than rural contexts insofar as health and education are concerned (Brockerhoff and Brennan 1998) and, with cash or money currency being much more of a requisite for urban transactions and exchanges, it makes sense that the pressures to earn money, even by self-destructive means, will be higher (Zulu et al. 2002). Higher relative costs of living, and the relative closure, from extended families, of conjugal relationships in urban settings (Oppong 1974), should presumably also foster greater need for a larger segment of the female population. Still, recognizing that considerable poverty also exists in rural areas, it makes sense to question whether poverty manifests itself similarly in rural and urban areas (Dodoo et al. 2004). We present findings from some of our previous work to show that there are unique implications of *urban* poverty for women—including adolescents and married women—insofar as sexual behavior is concerned (Zulu et al. 2002; Dodoo, Sloan and Zulu 2003; Zulu, Dodoo and Ezeh 2003; Dodoo et al. 2004).

### **Theoretical Considerations**

Research on sexual behavior or decisions can be framed against a number of existing theoretical perspectives. Rational choice approaches, for instance, have been incorporated into the study of AIDS-related behavior (Philipson and Posner 1995). Slovic (2000) presents the notion of risk and the gap between perception and reality as critical elements of rational choice modeling, suggesting that rather than considering risk as objective, fluidity of the

concept translates into actors evaluating how much risk they can afford to avoid in their risk-benefit calculations. In poor settings, therefore, it makes sense to think that varying degrees of economic need will imply a continuum of cost-benefit equilibria that for the most poor likely translates into an equilibrium point associated with greater risk than the non-poor would consider “rational.” Philipson and Posner (1995) speak similarly to the fact that “rationality” is contextually defined. It is also not unrealistic to consider rationality a function of age and other demographic factors. It makes sense, then, that the magnitude of sexual activity will be higher among poor populations than in the general populace. In this vein, behavioral explanations are not directly transferable from non-poor settings and a study of the poverty-sexual behavior relationship will be profitable also for the insight it yields about validity of HIV-related knowledge, perceptions of risk, parameters that factor into calculations of risk, and the motivations and cost associated with un/safe behavior in poor contexts.

A couple of other theories have, arguably, received more attention in health research, although they both acknowledge rationality as the basis of behavior. Rosenstock’s (1974) health belief model and Ajzen and Fischbein’s (1980) theory of reasoned action are useful for distinguishing people who practice healthy lifestyles from those who do not (Terry, Gallois, and McCamish 1993). Both examine health behavior from the perspective of an individual’s knowledge base. The health belief model is premised on a personal evaluation of the threat associated with a disease, perception of self-risk, and the evaluation of the benefits, costs, and barriers of a given action (Becker et al. 1977; Janz and Becker 1984). The more recent theory of reasoned action further acknowledges the role of normative influences vis-à-vis an individual’s factoring of others’ expectations of them into their decision-making (Terry et al. 1993). To this end, it appears imperative to interrogate rationality in the poverty context even where it is not clearly evident. Certainly, the norms governing sexuality as well as those surrounding HIV/AIDS—plausibly considered, in poverty settings, as signifying a longer time horizon until death relative to, say, malaria or famine—are bound to differ from non-

poor contexts. Thus, recognizing that prevailing norms, subjective personal beliefs and attitudes, and perceptions about community expectations factor into the assessment of risk and rational calculations should be very useful.

## **Data and Methods**

The aforementioned published studies have examined quantitative and qualitative data for evidence that can be brought to bear on the study questions. For the quantitative analysis, data from the 1989, 1993, and 1998 Kenyan Demographic and Health Surveys (DHS) were pooled to examine the relationship between poverty and sexual behavior (Zulu et al. 2002; Dodoo et al. 2004). We focused on two dependent variables in the quantitative study: early onset of sexual activity (age at first sex), and the number of sexual partners people have. Our exploration of rural-urban differences considered three categories of residence—Nairobi city, other urban areas, and rural areas—and examined socioeconomic differentials within and across these, with controls imputed for age, marital status, survey year, place of childhood residence, religious affiliation, and number of years of schooling.

The qualitative data were gathered in a 1999 study in four Nairobi slums to explore the contextual influences on sexual behavior among the poor. Those data comprise focus group discussions (FGDs) conducted among women and men of four age groups (13-17, 18-24, 25-49 and 50+ years). In each slum, two additional FGDs were conducted among community leaders and service providers, respectively, meaning that we analyzed a total of 40 FGDs for the four slums.

We have used two measures of deprivation in the cited work. In our urban focused work, in Nairobi city, we characterized the poorest households as those living in houses or structures that simultaneously did not have electricity, running water, and flush toilets (Zulu et al. 2002). We compared these most-poor, whom we argue are likely to be slum dwellers, to respondents living in households that have all three amenities. The intermediate category of households with one or two amenities received less analytical interpretation. In a subsequent paper that explored the different implications of rural and urban poverty, we acknowledged

that spatial (i.e., rural-urban) differences in resource availability are such that this definition of poverty is likely not meaningful for rural settings (Dodoo et al. 2004). Thus, we employed two measures of deprivation: the urban focused basic-amenity measure described here, and the sort of wealth-possession measure of poverty more traditionally used in rural contexts: comprising housing structure material (in this case, floor type) and ownership of possessions (Montgomery, Mark, Gragnolati, Burke & Paredes, 2000). Houses with floors constructed from only mud were distinguished from those made from more durable materials (e.g., cement, tiles, parquet, vinyl, and ceramic tiles) and we, again, compared respondents with none of the three items to those with all three. Because the findings from both sets of analysis were extremely identical, we only present the findings from the basic-amenity measure for the sake of parsimony.

## **Quantitative findings<sup>1</sup>**

### ***Timing of first sex***

Means and medians of age at sexual debut are presented in Table 1: the means are calculated for those who have ever had sex while the medians represent life table measures that incorporate the experience of virgins.

--- Table 1 about here ---

Table 2 assesses the relationship between relative disadvantage and age at sexual debut, net of control variables, and shows in Models 1-3 that for each residence type deprivation predicts earlier onset of sex among those who have ever had sex. In Model 4, we examine the effect of deprivation across space and show that only the most deprived in urban settings have a statistically significant *and* lower age at initiation of sexual activity than do the most deprived rural residents. These findings were affirmed by similar findings from Cox regression techniques (not shown here) that incorporated respondents who had not yet initiated sexual activity in a hazard analysis.

--- Table 2 about here ---

### ***Engaging multiple sexual partners***

Table 3 presents data on the prevalence of multiple sexual partnerships among female respondents in the sample. For women, in general, Nairobi's poorest seem to have the highest incidence of multiple partnerships. As well, there appears to be a positive relationship between deprivation and multiple partnerships *within* residence type, with the singular exception being among rural women, where the wealthiest have a higher incidence of multiple partnerships compared to their more disadvantaged counterparts.

--- Table 3 about here ---

To examine the extent to which marriage may insulate women from the risks associated with multiple sexual partnerships we narrow our focus to *currently married* women in the right hand panel of the table and find a similar positive relationship between deprivation and multiple partnerships, albeit it at lower levels of incidence. Startlingly, we find that, among Nairobi's poorest, married women actually have a *higher* incidence of multiple partnerships than do women in general.

In going further to examine how deprivation predicts the number of partners women have, Table 4 employs OLS regressions to confirm that the most deprived in urban settings—both Nairobi and other urban areas—have significantly more sexual partners than do their less deprived counterparts (Models 2 and 3). This is not the case in rural contexts (Model 1), suggesting that factors other than poverty may determine multiple partnerships in rural settings. In Model 4, we compare the effect of deprivation *across* residence type and find that the poorest in urban areas do indeed have significantly more partners than their rural counterparts.<sup>2</sup>

--- Table 4 about here ---

---

<sup>1</sup> The quantitative findings presented here are culled from a previous paper (Dodoo, et al. 2004)



### Qualitative findings<sup>3</sup>

How can we explain the quantitative evidence of an urban poverty disadvantage presented above? We look to the qualitative data for elucidation and find some plausible explanations of the phenomenon. Economic difficulties are paramount for the urban poor, most of who live in Nairobi's slum communities. With household monthly incomes below 3000 shillings (roughly \$40 at the time of the data collection in 1999), many struggle to pay, among other expenses, average monthly rents of about 800 shillings (less than \$11) and food expenses of around 2800 shillings (about \$38) (Matrix Development Consultant, 1993; NISCC, 1997). Against this backdrop, high unemployment, fragmented employment opportunities, and financial insecurity, among other things, coalesce to raise women's vulnerability to sexual exploitation (Dodoo et al. 2004).

A key motivation for exchanging sex for money comes about when somewhat regular sources of money either do not pan out or are unavailable at times of need, making women engage in sex so they can afford their basic needs (Zulu et al. 2003):

“#1: ‘People have different problems. Maybe this one wants to pay rent. Another wants to buy clothes; maybe another one just wants to buy milk. It happens yes, that you might be having a (regular) source of getting money but at that time, you do not have a way of getting money. So, you just have to go (and have sex) even if they tell you that they will give you 50 shillings (\$0.71), you will go - depending on the problem you have’... #2: ‘That time, you might not be thinking about the diseases because you have problems. That is the problem that women have. Now you see, I will not know if the man has a disease, because he has the money and I have a problem’ ” (Embakasi, Female Aged 18-24)

“#1: Now it is say 8:00 pm at night and you see that he has got money and you, you do not have flour, won't you just enter there?’...#2: ‘Even there on the grass, even if it is on the grass we finish, and you are then given money to go and buy food for the children’...#3: ‘You first run to buy food for the kids after they have eaten and are satisfied, then you get one to sleep with or do it to get more money’ ” (Embakasi Female, 25-49).

In the same vein, engaging multiple partners becomes a survival strategy and the precarious economic circumstances lead slum residents to think that a good strategy involves

---

<sup>2</sup> Dodoo et al. (2004) provide additional evidence of the reported urban disadvantage in a logistic analysis of the *incidence* of multiple partnerships.

<sup>3</sup> The qualitative findings presented here have previously been presented elsewhere (Dodoo et al. 2003; Zulu et al. 2003).

women having a stable of male partners so that, at any given point in time, some of the men will be gainfully employed (Zulu et al. 2003):

“Mainly women have many sexual partners, some have children and maybe they do not have food. They try to go to people to ask for money and they are told there is no money, she goes on from one person to another until she gets money” (Embakasi Female, 13-17)

“Today she is with you. Tomorrow if you do not have money, you will find her with someone else. That is not love. This is selling the body. The problem is not selling the body. The problem is lack of food. Can she sleep on a hungry stomach for two days when she knows that a certain man somewhere has money?” (Embakasi Male, 50+)

Question: “What about the practice of someone having more than one sexual partner?” #1 “They are many.” #2 “Yah, that is money... because the money you are given by one person is not enough.”; #1 “Yes, it is not enough... you go to this one, to this one.. so that you can be given more.”; #2 “Maybe you have children here, or there is one who pays rent, there is another one who educates the children...” (Kibera Service Providers).

“Girls may have many friends (men) because of this, if her problem is money and today she has been given 20 shillings, she goes with him, tomorrow she won't come back to him. May be he is broke. She will get somebody else who has money and she will take from him. So that is not friendship, when it is being forced by circumstances” (Embakasi Community Leaders)

Economic circumstances put stress on marriage and the high incidence of single household heads among women compounds the situation (Zulu et al. 2003):

“If you go to a woman who is selling chang'aa (local gin) and buy a lot of it for yourself and friends, since you have promoted her (business), she can also offer to give you the other (sexual) service” (Embakasi Service Providers)

“Especially in this village, there are very many women who stay on their own without husbands...’ ...‘This other one has a man and he is working and he has his wife. She will go to this one because of poverty... and you hear that she is married. Because you slept hungry and you have a husband who is not working, you will go to this one’s husband because he is working so that you can get flour.’...‘In fact that husband is ours both because...’ (Laughter) ... ‘Yes because he has money’” (Kahawa North Female, 50+)

“For instance if a woman stays/lives alone, that is she is a single mother with children, and she wants to buy her children milk, the only solution would be to look for someone with money. She sells her body and gets the 20 shillings (\$0.28) to buy milk...” (Kibera Female, 13-17)

Men frequently do not help the situation, as many are poised to exploit women’s economic vulnerability by offering as little as possible for sexual favors, and particularly so

during lean times of the month. As well, the difficulties women face mean that men can have a chain of female sexual partners (Zulu et al. 2003):

"#1: Now may be this one is poor... me as a man, I am a man now, and I have seen this woman. I have gone to her place or I know her problems and because she has problems..., I will go to her and cheat her and give her this 10 shillings [roughly \$0.14] and she will go and buy food and now a disease results from that'. MODERATOR: 'So they look at the women who have problems?' #SEVERAL: Yes... they look at the women with problems' #3: Yes, because they will be able to cheat them" (Kahawa North Female, 50+)

"I think there is no definite figure that is paid for sex because you may come here and find that women are many and they are not married, and she has rented a house, and she must pay rent, she has children, she has to feed them. You see like this one she has no definite figure. When it is dry (economically difficult times) lets say around 10<sup>th</sup> onwards to 20<sup>th</sup>, that time the charges are low. The price is hiked a bit around the end of the month." (Kibera Male, 50+)

"#1: 'You can even give (pay) her 5 shillings [almost \$0.07] so that she can buy "sukuma wiki" (a vegetable staple)'. #2: 'Or if you buy her meat from the butchery, even if it's a quarter kilo and it costs only 30 shillings [\$0.42]'... #3: 'The rate is not fixed it depends on how much you negotiate' " (Embakasi Service Providers)

"Others look for the stupid ones who accept chips or 20 shillings (\$0.28) or a sausage. Others want only a soda!...'...There are girls who live in California. They are called "Wabutoro." A packet of chips and soda is enough.'... 'Others can accept second-hand clothes from Gikomba [second-hand or used clothes sources] for twenty shillings only" (Majengo Female, 18-24)

The same economic circumstances that compromise women—unmarried and married—also have adverse implications for adolescents and younger children. It is not unusual for parents to resort to sending their young children out to the streets to bring home money to supplement family budgets. With little education these girls, realistically, have nothing but their bodies to exchange for anything (Doodoo et al. 2003):

"Now if a girl is 13 years old or even 12 and she is told by the parent to go and search, and she goes and meets an old man like this one and she wants money and the old man wants the young girls. The old man will give money to the girl. And that child, her body is still tender and does not have energy, and this man has energy, so when they have intercourse this man will spoil the girl. The reproductive organs will be spoilt" (Majengo Service Providers).

"Now you see, if you had three such rooms, which you are renting out and charge at least 500 shillings (\$7.14) for each, even our daughters would stop this prostitution because we can feed them. They do this because of hunger. This is where and why they get cheated. Do you understand?" [Kibera Women, 25-49]

“Sometimes it is we parents to blame. If I tell my daughter that I want a certain thing and she is a student and she does not have money; where will she get what I have asked for? (Majengo Community Leaders)

Beyond financial need, the physical spaces in which slum residents reside in cities confound the sexual circumstances of children. The very small residential spaces—it is not implausible to find a family of three or more sharing a single room, sometimes only six by nine feet large, with internal partitions comprising mere curtains—mean there is little privacy during adult sexual activity, with the corollary that children are exposed to sexual activity in the rooms they share with parents at very tender ages (Dodoo et al. 2003):

“The houses are like this and you know there is no privacy. There is another paper that is put called curtain, which divides “the bedroom” and “main room”. The so called bedroom is for wife-husband and children sleep on the floor of the same room.”  
Embakasi Male 25-49)

“#1 I think there is no secrecy in our houses when the parents are having sex. You see a child of about fifteen years sharing the same room and only separated by a curtain. When the parents start having sex, they start wondering the kind of noise the parents are doing... So they will pretend that they are asleep when they are actually hearing everything. So next time, they will want to try the same things...” (Kahawa North Male, 18-24 years)

“The major problem here is the house. If people had proper houses, some things would be private. Children would not be trying to imitate what they hear. Because now even children of 9 years are conceiving and giving birth. It is not strange, they do give birth at 9 years of age.” (Majengo Male, 50+)

Despite parental attempts to shield children from their sexual activity, it is inevitable that the latter will still be exposed, if not to the activity of the adults they live with, then to that of neighbors who are a flimsy tarpaulin, cardboard, or plywood wall away in these very densely populated communities (Dodoo et al. 2003):

Moderator: “What do parents do?”

Respondent #1: “They wait for the children to sleep, then they do their things.”

Moderator: “So can one hear?”

Respondent #2: “If you hear noise you, you will just listen, you cannot wake up. You wouldn’t bother. (*laughter*) If it is my age mate, I wouldn’t be bothered. But parents – it is a very bad story.”

(Kawaha North Male, 13-17)

Respondent #1: “Maybe you have bad bedding...*laughter*... When you have bad beddings for instance a mattress, the curtain will cover it.”

Respondent #2: “In my view, it does not help at all.”

(Kibera Female, 13-17)

“Even if the children get to know that parents are having sex, they just keep it to themselves.” (Embakasi Male, 13-17)

“Maybe if I add, you find like such parents, if they have a grown up child, they borrow for her a sleeping place, there could be another grown up girl like her. And these other parents, may not care whether they have grown up girls or not. So there is nothing that such a practice helps, because when this girl goes there, and when the other parents are doing that, she will either hear what they are saying or come to find out what is happening. And if parents were left with a small child, and you see you cannot block a child’s mind. The child is also there and is listening to what is going on.” (Majengo Female, 13-17)

It is not unusual for sexual activity to take place outdoors, given the absence of indoor privacy (Dodoo et al. 2003):

Moderator: “What do boys do when they want to sleep with their girlfriends [youth]?”

Respondent #1: “You just stand on the road and do it.”

Respondent #2: “You ask for a friend’s room.”

Respondent #3: “We go to the toilets.”

Respondent #4: “Even behind the houses!”

Respondent #5: “In the bushes!”

Respondent #1: “Those who are under age go to the bush.”

Moderator: “What do you mean by under age?”

Respondent #1: Under 10 years, up to 13 years.”

(Kawaha North Male, 13-17)

“Because as you know this one at her place (*i.e., the girl*) and he is at his place (*i.e., the boy*). And also as it concerns jobs, none of them is able to afford a lodging. You find that they do such things in the open.” (Majengo Female, 13-17).

“They do it in the toilet.”

“They do it behind the churches.” (Embakasi Male, 13-17).

Similarly, the social context of slums compounds these difficulties that children face vis-à-vis socialization about appropriate sexual behavior. Beyond mimicking activities they are exposed to early in life (and frequently so), children are aware of the considerable extent of prostitution, often supported by wealthier men from outside the slum, in these settings, and more critically of the better economic circumstances of prostitutes (Dodoo et al. 2003):

“And the fact that, you see if you walk in the hidden streets here in Majengo you find a woman seated on a stool outside her door. You want to tell me that the small child does not know? ... ‘There are those who sell sex. When a child sees a woman sitting outside her house and then a man goes in there, and the woman follows her and they lock the door...’ ... ‘May be I can control it in my house. Maybe, like me, I have my wife and two children. My children are small. I could wait until they are asleep. You see something like that! I could use all my tricks. But from the fact that my neighbor is a sex dealer, will I have helped anything?’” (Majengo Female, 13-17).

“Maybe I stay with them (prostitutes) and they depend on that. It is a business, and if I stay with them, I see them clean and they live well. Then I will envy them; I will therefore be influenced to start that job.” (Embakasi Female, 18 – 24 years)

Not unrelated, the extent of alcohol and substance use in slums further compromises adults and children alike, while also leading to violence, which is itself not a particularly favorable context for sexual activity (Dodoo et al. 2003):

“Because of drunkardness some people do not care whether children are watching them and this is what contributes to spoiling children early, when they are still very young.” (Kahawa North Female 18-24).

“Plus this alcoholism it has spoiled very much. You come when you are drunk, your wife is also drunk. Now you “beat the drums in front of the children” because you are drunk. We are teaching these children bad manners because of poverty.” (Kibera Community Leaders).

## **Discussion**

The findings outlined in this paper illuminate a clear relationship between urban poverty and risky sexual behavior, measured by early age at sexual debut and multiple sexual partnerships; indeed, in rural settings, it is also true that deprivation predicts early entry into sex (although not multiple partnerships). The most at-risk seem to be the poorest of urban dwellers and, as far as multiple partnerships are concerned those in Nairobi, the capital city of Kenya. Unfortunately, even married women are susceptible to the adverse consequences of big city poverty, and it appears that even children are affected.

The rural poor are likely somewhat insulated from the level of survival pressures their urban counterparts face (HABITAT, 1996). Many rural folk hardly have to concern themselves with rent payments, and they typically also grow all or part of their food. The social context of child-rearing differs from urban settings where, for instance, both extended family and normative influences have been considerably eroded. Certainly, rural parents do not have to contend with feeling deprived of moral authority over their children; neither do they have to worry about their children being exposed to high levels of open prostitution in the heart of their communities.

The implications of these findings are clear. As Africa continues its march of rapid urbanization, the time has come for us to extend our demographic and health concerns to the increasingly poor urban communities, which are already havens for the behaviors that corrupt children and facilitate the spread of HIV/AIDS. Even governments, as in Kenya, are prone to overlook the urban poor. However, this promises to be an expensive oversight as the continent becomes majority urban in the next couple of decades. It is imperative that poor urban contexts receive our attention, and policies that address the dire circumstances that women and children face in these communities are sorely needed.

### **References**

APHRC (African Population and Health Research Center). (2002). *Population and Health Dynamics in Nairobi's Informal Settlements*. Nairobi: African Population and Health Research Center;

Brockerhoff M. & Brennan E. (1998). The Poverty of Cities in Developing Countries. *Population and Development Review*. 24(1): (pp. 75-114).

Caldwell J.C. & Caldwell P. (1993). The Nature and Limits of the Sub-Saharan AIDS Epidemic: Evidence from Geographic and other Patterns. *Population and Development Review*. 19: (pp. 817-848;).

Caldwell J.C., Caldwell P. & Quiggin P. (1989). The Social Context of AIDS in Sub-Saharan Africa. *Population and Development Review*, Vol. 15: (pp. 185-234).

Caldwell J.C. (2000). Rethinking the African AIDS Epidemic. *Population and Development Review*, , 26: (pp. 117-135)

Carael M. & Allen S. (1995) Women's Vulnerability to HIV/STD in Sub-Saharan Africa: an Increasing Evidence, in Paulina Makinwa and An-Magritt Jensen (eds.), *Women's Position and Demographic Change in Sub-Saharan Africa*. Liege - Belgium: International Union for the Scientific Study of Population (IUSSP), (pp. 201-2222).

Dodoo F.N., Sloan M. & Zulu E.M. (2003). Space, Context, and Hardship: Socializing

Children into Sexual Activity in Kenyan Slums, pp. 147-160 (Chapter 8) in S. Agyei-Mensah and J. B. Casterline (eds.), *Reproduction and Social Context in Sub-Saharan Africa*. Westport, CT: Greenwood Press.

Dodoo, F.N., Zulu, E.M., & Ezeh A.C. (2004). Urban-Rural Differences in the Socioeconomic Deprivation-Sexual Behavior Link. Under review at *Social Science and Medicine*.

HABITAT, (1996). *An Urbanizing World: Global Report on Human Settlements*, Oxford: Oxford University Press for the United Nations Centre for Human Settlements.

Lipton M. (1976). *Why Poor People Stay Poor: Urban Bias in World Development*. Cambridge, MA: Harvard University Press,.

Matrix Development Consultants. (1993). *Nairobi's Informal Settlements: An Inventory*. Nairobi: USAID.

Montgomery, Mark M., Michele Gragnolati, Kathleen Burke, and Edmundo Paredes. 2000. "Measuring Living Standards with Proxy Variables." *Demography* 37(2): 155-174.

NISCC, Nairobi Informal Settlements Coordination Committee (1997). *A Development Strategy for Nairobi's informal settlements - Workshop Report*. Nairobi: Nairobi City Council.

Oppong C. (1974). *Marriage Among a Matrilineal Elite*. Cambridge: Cambridge University Press.

Todaro M. (1989). Urbanization and Rural-Urban Migration: Theory and Policy, Chapter 9, in *Economic Development in the Third World*. (pp. 263-289). New York: Longman.

Ulin P.R. (1992). African Women and AIDS: Negotiating Behavioural Change. *Social Science and Medicine*, 34(1): (pp. 63-73).



United Nations. (1998). *World Urbanization Prospects: The 1996 Revision*. New York: United Nations, Department of Economic and Social Affairs, Population Division.

Zulu E.M., Dodoo F.N., & Ezeh A.C. (2002). Sexual Risk-taking in the Slums of Nairobi, Kenya, 1993-98. *Population Studies.*, 56(3): (pp. 311-323).

Zulu E.M., Dodoo F.N. & Ezeh A.C., (2003). Urbanization, Poverty and Sex: Roots of Risky Sexual Behaviors in Slum Settlements in Nairobi, Kenya, (pp. 167-174). (Chapter 12) in E. Kalipeni; S. Craddock; J. Oppong and J. Ghosh (eds.), *HIV/AIDS in Africa: Beyond Epidemiology*. Oxford: Blackwell Publishers.

Table 1: Mean and median age at first sex

	Mean	N	Median	N
ALL WOMEN	16.2	18476	16	21793
YEAR				
1989	15.9	5589	16	6465
1993	16.3	6296	17	7468
1998	16.3	6591	17	7860
<u>Residence/ Number of Amenities:</u>				
Rural None	15.9	12626	16	14860
Rural 1-2	16.8	1991	17	2418
Rural 3	18.5	125	19	149
Other Urban None	15.8	962	16	1064
Other Urban 1-2	17.0	840	17	991
Other Urban 3	18.1	580	19	746
Nairobi City None	15.6	362	15	385
Nairobi City 1-2	16.1	457	16	503
Nairobi City 3	17.7	533	18	677

Note: Table is culled from Dodoo et al. (2004). The mean age at first sex is based on women who had ever had sex, while the median is a life table measure that incorporates the experience of women who had never had sex at the time of the respective survey.

Table 2: OLS regression on age at first sexual intercourse (standard errors in parentheses)

	MODEL 1	MODEL 2	MODEL 3	MODEL 4
<u>Residence/ Number of Amenities:</u>				
Rural None	reference			reference
Rural 1-2	0.458 (.06) ***			0.473 (.06) ***
Rural 3	1.586 (.24) ***			1.578 (.24) ***
Other Urban None		reference		-0.245 (.09) ***
Other Urban 1-2		0.663 (.14) ***		0.413 (.10) ***
Other Urban 3		1.364 (.16) ***		1.169 (.12) ***
Nairobi None			reference	-0.436 (.14) ***
Nairobi 1-2			0.370 (.20) *	-0.135 (.13)
Nairobi 3			1.225 (.20) ***	0.699 (.12) ***
N	14235	2284	1332	17851
R <sup>2</sup>	0.1203	0.2092	0.1899	0.1424

Notes:

- Table is culled from Dodoo et al. (2004). The results are net effects, after controlling for the effect of: year of study, religion, place of childhood residence, age, and years of schooling

- \*\*\* Significant at 0.01 level; \*\* = Significant at 0.05 level; \* = significant at 0.10 level

Table 3: Incidence of multiple sexual partnerships: Percentage with multiple partners and mean number of partners

	All Women			Currently Married Women		
	% with Multiple Partners	Mean Number of Partners	N	% with Multiple Partners	Mean Number of Partners	N
All WOMEN	3.3	0.8	15315	1.7	1.0	9412
YEAR						
1993	3.7	0.8	7524	1.8	1.0	4568
1998	2.8	0.8	7791	1.6	1.0	4844
<u>Residence/ Number of Amenities:</u>						
Rural None	2.9	0.8	10834	1.6	1.0	6874
Rural 1-2	2.9	0.8	1753	1.5	1.0	1029
Rural 3	3.3	0.8	120	2.8	1.0	71
Other Urban None	6.4	0.9	687	3.0	1.0	397
Other Urban 1-2	4.5	0.8	708	1.2	1.0	402
Other Urban 3	3.2	0.7	432	0.9	1.0	223
Nairobi None	9.1	1.2	143	9.5	1.1	94
Nairobi City 1-2	6.3	1.0	238	2.0	1.0	147
Nairobi City 3	4.0	0.7	400	2.3	1.0	175
Note: Table is culled from Dodoo et al. (2004)						

Table 4: OLS regression on number of sexual partners (standard errors in parentheses)

	All Women				Currently Married Women			
	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5	MODEL 6	MODEL 7	MODEL 8
<u>Residence/ Number of Amenities:</u>								
Rural None	ref			ref	ref			ref
Rural 1-2	.004 (.01)			.002 (.01)	.010 (.009)			.009 (.01)
Rural 3	.027 (.04)			.028 (.04)	.010 (.03)			.008 (.03)
Other Urban None		ref		.089 (.02) ***		ref		.019 (.01)
Other Urban 1-2		-.031 (.03)		.041 (.02) **		-.027 (.02) *		-.008 (.01)
Other Urban 3		-.084 (.04) **		.035 (.02)		.029 (.02)		-.014 (.02)
Nairobi None			ref	.218 (.04) ***			ref	.123 (.03) ***
Nairobi 1-2			-.098 (.07)	.109 (.03) ***			-.115 (.05) **	.022 (.02)
Nairobi 3			-.222 (.07) ***	.009 (.02)			-.133 (.05) **	.018 (.02)
N	12355	1756	766	14877	7696	978	404	9078
R-squared	0.248	0.1599	0.163	0.2196	0.0051	0.0194	0.0374	0.0072
<p>NOTES:</p> <ul style="list-style-type: none"> <li>- Table is culled from Dodoo et al. (2004). The results are net effects, after controlling for the effect of: year of study, religion, marital status, female household headship, place of childhood residence work status, age, and education).</li> <li>- The 1993 survey asked about number of sexual partners in the last six months, while the 1998 one referred to partners in the past 12 months</li> <li>- *** Significant at 0.01 level; ** = Significant at 0.05 level; * = significant at 0.10 level</li> </ul>								