

**Community-Level Influences on Early Sexual
Initiation in Nigeria**

**Sohail Agha, Ronan Van Rossem,
and Augustine Ankomah**

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Carolina Population Center
University of North Carolina
at Chapel Hill
206 W. Franklin Street
Chapel Hill, NC 27516
Phone: 919-966-7482
Fax: 919-966-2391
measure@unc.edu
www.cpc.unc.edu/measure

Collaborating Partners:

ORC Macro
11785 Beltsville Drive, Suite 300
Calverton, MD 20705-3119
Phone: 301-572-0200
Fax: 301-572-0999
MEASURE.Evaluation@orcmacro.com

John Snow, Inc.
1616 N. Ft. Myer Drive, 11th Floor
Arlington, VA 22209
Phone: 703-528-7474
Fax: 703-528-7480
measure_project@jsi.com

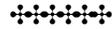
Tulane University
1440 Canal Street, Suite 2200
New Orleans, LA 70112
Phone: 504-584-3655
Fax: 504-584-3653
measure2@tulane.edu

Futures Group International
2605 Meridian Parkway
Durham, NC 27713
Phone: 919-313-7722
Fax: 919-313-7523

Funding Agency: U.S. Agency for
International Development
Washington, DC 20523-3600
Phone: 202-712-4959



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Community-level influences on early sexual initiation in Nigeria

Sohail Agha* Ronan Van Rossem† Augustine Ankomah‡

January 2006

Abstract

Using national survey data from Nigeria, this study examines individual and community-level determinants of early sexual initiation. Community-level factors exercise important effects on the early onset of sexual initiation. Consistent with the social capital hypothesis, young people living in communities that are more knowledgeable about HIV/AIDS transmission and prevention, communities that are open to receiving HIV/AIDS information, and communities that support condom use as well as family planning are more likely to delay sexual initiation than others. The disadvantages associated with living in a community that is less well informed, less supportive of condom use and less open to receiving information on HIV/AIDS are significantly higher for women. Women who live in communities where attitudes about reproductive health are not positive or where there is lack of social support for condom use are at a heightened risk of early sexual initiation.

1 Introduction

Early sexual debut increases the risk of unintended pregnancy, multiple partnerships and increases the duration of exposure to the risk of sexually transmitted infections (STIs) (Miller et al., 1997). The avoidance of sexual intercourse by a person who has not initiated sexual intercourse is a strategy that may be used to avoid STIs and unwanted pregnancy. Hence, there is considerable interest in implementing interventions that promote delaying sexual initiation and in gaining a more complete understanding of factors that influence adolescent sexual decision-making (Thomas, 2000).

Studies of the determinants of sexual initiation usually examine the effects of factors measured at the individual level. Contextual effects—effects measured at a level higher than the individual—have rarely been examined, even though the importance of the social context and of factors operating at the group, community, and societal levels is emphasized by theory (Waldo and Coates, 2000). Because contextual factors are thought to exert an influence on early sexual initiation, a more complete understanding of community-level effects on the timing of sexual initiation is needed. This study examines individual and community-level determinants of early sexual initiation in Nigeria, a non-Western setting, with a view to contributing to the design of more effective programs to delay sexual initiation.

* Research Associate Professor, Department of International Health and Development, Tulane University School of Public Health and Tropical Medicine.

† Assistant Research Professor, Department of Sociology, Ghent University.

‡ Behavior Change Specialist at the Society for Family Health, Nigeria.

2 Background

Much of the past interest in the influence of environmental factors on sexual initiation has been related to the family environment. Parent's education, their remaining married to each other, their disapproval of premarital sex, and their monitoring of their children's behavior have been found to be negatively associated with the early onset of sexual intercourse (Goodson et al., 1997). Studies have also shown that peer influences have important effects on sexual initiation. Perceptions of friends not being sexually active and perceived peer disapproval of early sexual initiation are associated with delayed onset of sexual intercourse (Beal et al., 2001). Many previous studies have examined how an adolescent's perceptions of their peers' or parents' attitudes and behaviors influence their own sexual initiation. However, there has been little investigation of how community members' attitudes and beliefs influence an adolescent's sexual initiation. Attitudes and perceptions of community members, including community leaders, religious leaders, parents, friends, teachers, and peers, are likely to be important in shaping the environment in which an adolescent makes sexual decisions.

Although theorists have devoted considerable attention to the importance of group or community membership for an individual's development, few empirical investigations have been conducted on how community-level factors influence sexual initiation. It is thought that community resources enhance an individual's social development and functioning (Coleman, 1998), and that norms within a community and the social support available enables individuals to live within a community and cooperate for mutual benefit (Putnam, 1995). Studies from the U.S. have suggested that adolescents who have fewer interpersonal and community resources to draw upon are likely to initiate their sexual activity earlier (Coleman, 1988; Brewster, 1994). This hypothesis has been tested in terms of socioeconomic resources available at the community level: studies have found strong effects of access to neighborhood-level economic resources in delaying sexual initiation (Hogan and Kitagawa, 1985; Brewster, 1994). However, many other resources that are available at the community level, such as correct knowledge, openness of community members towards HIV information, and community members' support of healthy reproductive health practices, may also exert important effects on sexual behavior. Moreover, much remains to be learned about the effects of community-level influences on adolescent sexual initiation in non-Western settings, where communities may be closer knit and community members' attitudes and beliefs may exercise a powerful influence on adolescent sexual behavior.

It may be expected that an adolescent living in a community in which there is: a) correct information regarding the risk of HIV; b) openness in the discussion of sexual health matters; and c) social support for healthy reproductive health practices is more likely to make informed, healthier choices relative to an adolescent living in a community where such resources are lacking. Similarly, belonging to a community that is more cohesive in terms of adolescents being attentive to the opinions of community members and/or parents may enable an adolescent to make better sexual health choices. We hypothesize that an adolescent living in a community that has a higher level of knowledge of reproductive health, and that is more supportive of healthy reproductive health practices, is more likely to delay sexual initiation. This hypothesis is tested in Nigeria, a setting in which adolescents face a major HIV/AIDS epidemic.

3 Data and Methods

3.1 Sampling

The National HIV/AIDS and Reproductive Health Survey (NARHS) 2003 represents the first wave in a series of surveys intended to monitor changes in reproductive health and HIV/AIDS risk behavior in Nigeria. Eligible respondents for this survey were women aged 15 through 49, and men aged 15 to 64. A multi-stage sampling procedure was used to select the sample. At the first stage, urban and rural localities were selected from a sampling frame of all urban and rural localities in Nigeria maintained by the National Population Commission. At the second stage, enumeration areas were randomly selected within each of the localities. At the third and final stage, individual respondents were selected within each of the enumeration areas. The sample was self-weighting at the state level, as all individuals had an equal probability of being included. Weights were created for national level analysis. A final sample size of 10,258 was calculated based on the need for precision of estimates within various strata. The non-response rate was 1.6%, yielding a final sample size of 10,090 (Federal Ministry of Health, 2003).

This analysis was limited to men and women aged 15-24. Limiting the analysis to an age group that initiated sex relatively recently enables us to relate the outcome, i.e. sexual initiation, to independent variables collected at the time of the survey. A total of 4,081 males and females aged 15-24 were interviewed in the NARHS. All respondents in this age group were included in the analysis.

3.2 Questionnaire

The questionnaire used in the survey was based on the UNAIDS general population HIV/AIDS survey questionnaire. The questionnaire collected information on socio-demographic characteristics of the population, sexual behavior, HIV risk perception, condom availability and use, knowledge and use of family planning, accessibility and affordability of contraceptives, violence against women, and communication about sexual and reproductive health issues with members of the community. The questionnaire was reviewed by MEASURE Evaluation and pre-tested prior to the survey being fielded.

3.3 Individual Level Variables:

Residential and socio-demographic characteristics include residence in urban or rural areas, age (continuous variable), gender (female/male), marital status (married/cohabitating vs. other), the highest level of school attended (no formal education, Koranic school only, primary school, secondary school, or higher education), and an index of assets. The asset index counts assets and amenities including refrigerator, radio, television, car, video player, cable connection or satellite dish, washing machine, GSM phone, telephone, electricity generator, gas or electric cooker, grinding machine, motorcycle, bicycle, fan, stove, cow(s), goat(s), farm, boat, donkey, dwelling (single family home, duplex, flat, room and parlor), water closet, tap water, and electricity, and serves as proxy for household wealth.

A variable measuring religious affiliation differentiates between Muslims, Protestants, Catholics, and those belonging to a traditional religion. Community connectedness is measured by summing two binary variables. The first variable has a value of 1 if a person started living in the current community prior to age 12 and continued living in that community until the date of interview, and 0 otherwise. The

second variable is also a dichotomy and indicates that a person did not leave the community for more than a month during the past year.

Values and orientations are measured by three variables. The first indicator measures whether respondents believe that the number of children they will have during their lifetime is in their control. This is a binary variable which takes a value of 1 when respondents report that the number of children they have is up to God, and 0 otherwise. Norms about gender relations were measured by two scales. The first scale counts the number of situations in which a respondent states that it is acceptable for a man to hit a woman. A high score on the wife-beating scale is indicative of a traditional view of gender relations. The second scale counts a respondent's perception of the number of situations in which a woman may refuse to have sex with her husband. A high score on this scale indicates a progressive view of gender relations.

Outcome Variable: Sex before Age 15. The outcome variable is based on self-reported information. It is constructed from a question asking respondents about the age at which they first had sexual intercourse. In order to avoid censored observations, a binary variable was created to measure whether first sex occurred prior to age 15.

3.4 Community-Level Variables:

Community-level variables were created by aggregating individual-level data. This approach was used due to the absence of independent data on normative and attitudinal influences at the community level. Our approach is similar to that used in previous studies where individual-level data has been used to create community-level variables (Benefo, 1995; Gupta, 2000). To minimize the correlation between individual and community-level variables, we used a higher level of aggregation than the cluster from which the respondent was selected. We aggregated the data at the "locality" level. There were a total of 198 localities included in the NARHS data.

Community variables were calculated as the means of individual-level variables at the locality level.¹ The creation of community/locality variables involved two steps. First, locality-level variables were aggregated from individual-level variables measuring social influence, norms, self-efficacy, condom attitudes, risk behaviors, AIDS knowledge and attitudes, and exposure to reproductive health information. A total of 42 aggregate variables were created.

Second, a principal components analysis was conducted on these 42 variables. A varimax-rotated solution with five factors produced the simplest structure. The first of these factors, which explains 27% of the variance, captures correct knowledge of AIDS transmission and prevention, openness to receiving HIV/AIDS information through the mass media, and positive attitudes towards condoms. This factor measures the "pro-reproductive health culture" in a community. The second factor, which explains 20% of the variance, captures social support for couples to use family planning. It measures the importance ascribed to the opinions of and perceived support from religious and community leaders, parents, and friends towards family planning. The third factor, communication about sexual matters and family planning, captures comfort in discussing

¹ Since both adults and peers influence protective behaviors (Wolf and Pulerwitz, 2003), we constructed locality-level variables which used information available on respondents aged 15-49. As individual-level variables were based on data from 15-24 year olds, the inclusion of respondents aged 25-49 into locality-level variables further minimized the correlation between the individual and locality-level variables. The mean number of respondents in the 15-49 age range per locality was 50.7.

sexual matters and respondents' actual discussion of family planning with teachers, religious leaders, health workers and friends. This factor includes exposure to television and radio programs about HIV/AIDS and family planning and explains 12% of the variance. The fourth factor also explains 12% of the variance and captures social support for condom use in the community. It measures religious and community leaders' and parents' support for young peoples' use of condoms to protect against HIV. The fifth factor measures incorrect information regarding ways of contracting and avoiding AIDS. In other words, this factor measures myths about AIDS transmission and prevention. It explains 4% of the variance.

3.5 Multilevel Analysis

To account for the hierarchical sampling structure of the data a multilevel modeling approach was taken. Standard regression techniques assume that observations are independent of each other. Given the three-stage sampling design used, individual respondents are clustered within enumeration areas within localities, and share characteristics that introduce a common source of variance for respondents in the same locality. Multilevel analysis takes into account the hierarchical nature of the data and adjusts standard error estimates for the clustering of observations. It enables the examination of effects of variables at individual and community levels simultaneously. Finally, by allowing coefficients of individual-level variables to vary over the higher level units, it permits the study of interactions between the community and individual levels.

3.6 Study Limitations

This study has many of the same limitations present in observational studies that make inferences based on correlations from cross-sectional data. In addition, community-level variables were based on the aggregation of individual-level data. A stronger design would link independent community-level data with individual-level data.

4 RESULTS

4.1 Characteristics of Respondents

Table 1 shows characteristics of male and female respondents aged 15-24. The effective sample consists of 4,081 respondents aged 15 to 24 years, 2,236 women (54.8%) and 1,845 men (45.2%). About 35% of men and 31% of women in the sample resided in urban areas. The mean age of respondents was 19 years. A significantly higher proportion of women than men were in stable unions: 45% of women compared to less than 9% of men were married or cohabitating. Men tended to be more educated than women: 55% of men had a secondary education, compared to 41% of the women. Men were from wealthier households than women: men belonged to households with an average of 7.3 assets while women belonged to household with an average of 6.5 assets. This reflects a woman moving from her parents' home to her husband's home after marriage. Her

husband's home may have fewer assets in comparison to her parents' home because her husband is likely to have had a shorter period of time in which to accumulate wealth.²

Religious affiliation did not vary greatly by gender: Islam is the most common religion (46%), followed by Protestantism (38%) and Catholicism (15%). About 1% of the respondents reported affiliation with a traditional religion. Women had a slightly lower score on the community connectedness variable (1.45 vs. 1.5), possibly because they leave their natal communities after marriage.

Table 1. Characteristics of male and female respondents

	Women (n=2236)	Men (n=1845)	p ^a
Socio-demographic characteristics			
Urban residence	30.5%	35.2%	0.001 ^b
Age (mean)	19.12 (2.76) ^c	19.21 (2.72)	0.303
Married/cohabitating	45.4%	8.5%	0.000
Education			0.000 ^b
No formal education	26.0%	10.8%	
Koranic school	8.5%	7.2%	
Primary education	19.6%	19.0%	
Secondary education	41.0%	55.0%	
Higher education	5.0%	8.0%	
Number of assets (mean)	6.50 (3.63)	7.33 (3.87)	0.000
Religion			0.154 ^b
Islam	47.6%	44.3%	
Protestant	36.8%	38.5%	
Catholic	14.1%	15.8%	
Traditional	1.4%	1.3%	
Community connectedness (mean score)	1.45 (0.63)	1.50 (0.61)	0.004
Values and orientations			
Locus of control: External	35.5%	27.0%	0.000 ^b
Husband justified beating wife (mean score)	2.32 (2.27)	1.48 (2.00)	0.000
Wife justified refuse sex (mean score)	2.75 (1.45)	2.73 (1.47)	0.622
Outcome variable			
Initiation of sex before age 15	17.9%	6.1%	0.000 ^b

^a Significance levels were derived from independent sample *t*-test, unless mentioned otherwise.

^b Significance level derived from a χ^2 -test.

^c Figures in parentheses are standard deviations.

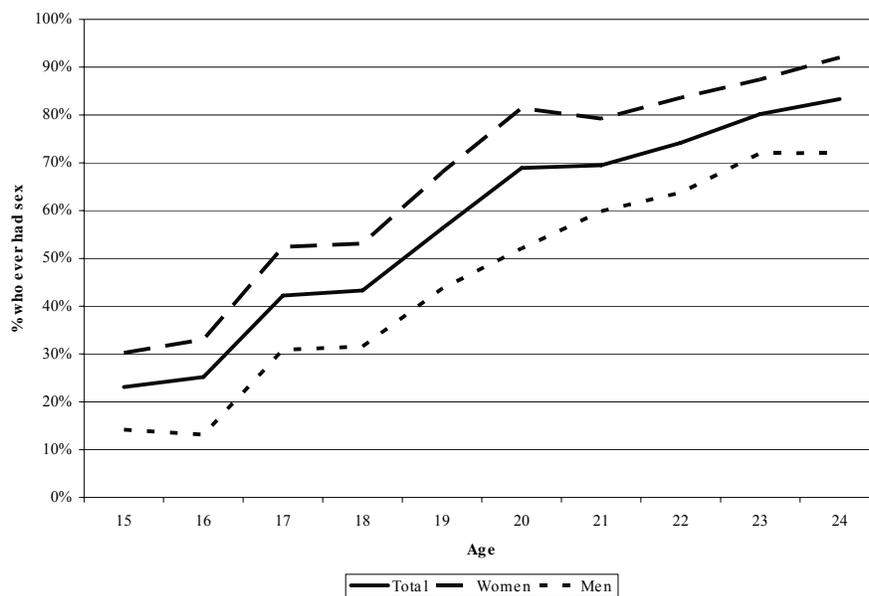
² Married men also lived in households with fewer assets than unmarried men. However, since a small proportion of men in the 15-24 year age group were married, men in this age group lived in wealthier households.

Women espoused more traditional values than men on the variables measuring values and orientation. Compared to men, a higher proportion of women perceive an external locus of control: 35% of women and 27% of men stated that the desired number of children is “up to God.” Women scored higher on the wife-beating scale: they reported more situations in which they felt that it was justified for a man to beat his wife. There were no gender differences, however, in the scale measuring the number of situations in which it was justified for a wife to refuse sex.

Finally, there were significant gender differences in the outcome variable, onset of sexual activity: women were more likely than men to have had sexual experience before age 15: about 18% of women and 6% of men reported having had sex before age 15. Gender differences in sexual initiation are examined more closely in the next section.

Figure 1 shows the proportion of males and females who had ever had sex by single year age groups.³ By age 15, about 30% of the women and 14% of the men had gained sexual experience. The risk of onset of sexual activity was highest between the ages of 16 and 20. By age 17, 50% of women and 30% of men had initiated sex. Most women (92%) and men (72%) were sexually experienced by age 24. At any given age, women were more likely to have initiated sexual activity.

Figure 1. The percentage of respondents who ever had sex, by age and gender.



4.2 Characteristics of Communities

Figure 2 shows the distribution of the community-level variables over the 198 localities in the sample. Community variables are factor scores with a mean of 0 and a standard deviation of 1. The mean score can be considered the unweighted average level of the community characteristic. The boxplots show differences in the distribution of the five community-level variables.

³ The variable “ever had sex” is different from the outcome variable “sex before age 15.”

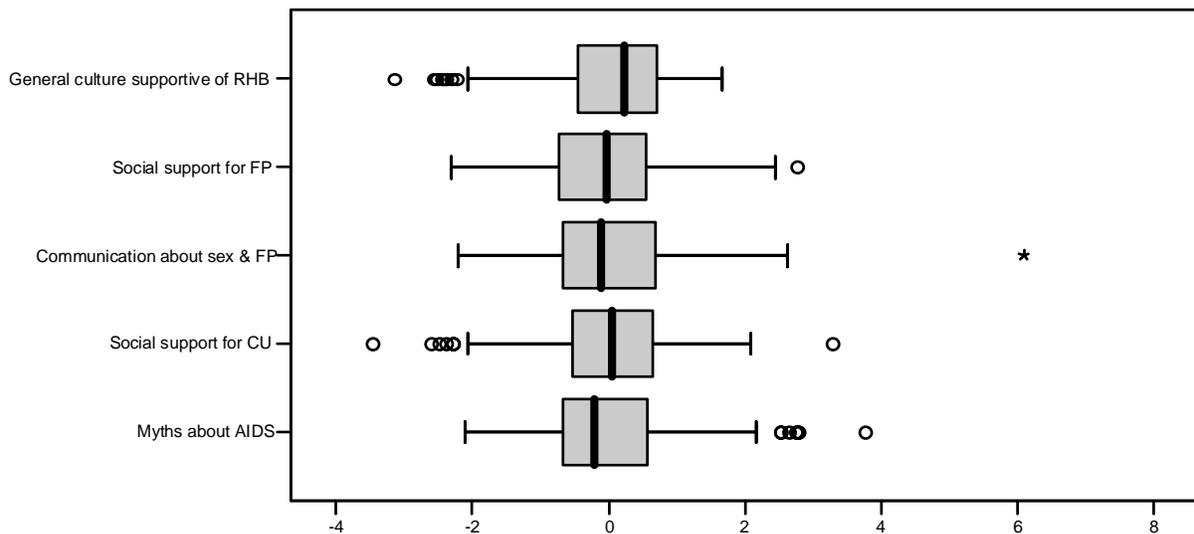
The first boxplot in Figure 2 shows that the majority of communities score above the mean on the pro-reproductive health culture variable. None of the communities score very high on this variable. The variable is skewed to the left. About 6% score very low—indicating community cultures that provide little or no support towards reproductive health issues.

The second and fourth boxplots show that the distribution of social support for FP and social support for condom use is fairly symmetric. For both variables, almost as many communities score below the mean as above it. In the case of social support for condom use, a small proportion of communities - about 4% - score very low on this variable.

Communication about sexuality and family planning (third boxplot) is fairly symmetrically distributed over the various communities, with the exception of a single community that scores extremely high on this variable. Respondents in this community report extremely high levels of communication about sexuality.

The community-level variable measuring myths associated with AIDS is skewed towards the right. The majority of communities fall below the mean in terms of myths about AIDS. About 5% of communities score very high on this variable, suggesting more work remains in reducing myths associated with AIDS transmission and prevention.

Figure 2. The distribution of community level variables (N=198).



4.3 Multilevel Regression Findings

Multilevel logistic regression analysis was conducted to determine the effect of community-level variables on sexual initiation. The results are shown in Table 2. Three equations were estimated. The first model (*a*) included only individual-level variables. The second model (*b*) included individual and community-level variables. In the third model (*c*), we included interaction terms between community and individual-level variables for those individual-level variables that had significant random coefficients. The interaction terms may explain (part of) the random effects. Of the individual-level variables, only the gender variable had a significant random component.

Equation *a* shows that several individual-level variables are associated with the early onset of sexual behavior. Residence was associated with onset of sexual activity: compared to respondents living in rural areas, urban respondents had a lower likelihood of initiating sex before age 15. The risk of early sexual initiation declines with the age of the respondent: older respondents were less likely than younger respondents to have initiated sexual activity before they were 15 years old. It is important to note that this finding was observed after controlling for education, marital status, and other variables. Gender was associated with sexual initiation: men were less likely than women to initiate sex before age 15. Respondents who were currently married or cohabiting initiated sex earlier than those who were not in stable unions.

Education was associated with delayed sexual initiation: compared to respondents with no formal education, respondents with primary or secondary education were less likely to have initiated sex before age 15. There was no significant association between household wealth and early sexual initiation. Religious affiliation and community connectedness were also not associated with early sexual onset.

One of the three variables measuring values and orientations was significantly associated with early sexual initiation. Respondents who reported a higher number of circumstances in which they felt that it was justified for a husband to beat his wife were more likely to initiate sexual activity before age 15. This suggests that individuals who hold values that are consistent with a more traditional view of husband-wife roles in marriage initiate sex earlier than those holding less traditional views.

Equation *b* shows that there were significant contextual effects on the onset of sexual activity. Most community-level variables had significant effects on the timing of sexual initiation. After controlling for individual-level differences among respondents, young men and women living in communities with a more pro-reproductive health culture (i.e., correct knowledge of AIDS transmission and prevention, openness to receiving HIV/AIDS information on the mass media, and positive attitudes towards condoms) were less likely than others to have sexual intercourse before age 15. Respondents living in communities which were more supportive of family planning use were less likely to engage in sex before the age of 15. Social support for condom use had an independent beneficial effect on sexual initiation: in communities where social support for condom use was higher, adolescents delayed sexual initiation.

We were also able to assess the role of incorrect information or myths about HIV transmission and prevention. Young men and women suffered the consequences of living in communities where misinformation about HIV/AIDS was higher: their risk of early sexual initiation increased by living in such communities. The only community-level variable that was not associated with early sexual initiation was communication about sexual matters and family planning.

The significant difference between urban and rural areas in sexual initiation observed in equation *a* disappeared after controlling for community-level variables. This indicates that sex is initiated at later ages in urban compared to rural Nigeria because factors such as positive attitudes towards reproductive health, social support for family planning, social support for condom use, and myths about HIV/AIDS play an important role in delaying sexual initiation. Urban communities in Nigeria are more knowledgeable and open towards receiving information about HIV/AIDS, more supportive of family planning and condom use, and less prone to nurture myths about HIV/AIDS. These

attributes of urban communities in Nigeria enable Nigerian adolescents to make better sexual health choices.

In equation *c*, when interaction effects of gender and community-level variables were introduced, the variables measuring the pro-reproductive health culture and community support for condom use had significant interaction effects with gender. These interactions indicate that gender differences in the onset of sexual behavior vary with the community context. The findings are illustrated Figures 3 and 4.

Table 2. Odds ratios from multilevel logistic regression predicting the onset of sexual intercourse before age 15

INDIVIDUAL LEVEL VARIABLES			
Constant	0.841 (0.317 - 2.232)	0.303** (0.126 - 0.730)	0.321* (0.131 - 0.788)
Socio-demographic characteristics			
Urban residence	0.597* (0.378 - 0.942)	0.802 (0.472 - 1.361)	0.827 (0.510 - 1.342)
Age	0.897*** (0.857 - 0.938)	0.916*** (0.881 - 0.952)	0.909*** (0.874 - 0.946)
Gender: Man (ref: woman)	0.451** (0.256 - 0.793)	0.415** (0.227 - 0.757)	0.676 (0.396 - 1.155)
Married/Cohabiting	5.233*** (3.706 - 7.389)	4.909*** (3.580 - 6.730)	4.730*** (3.390 - 6.601)
Education (ref: no formal education)	***	***	**
Koranic school	0.815 (0.559 - 1.187)	0.856 (0.580 - 1.261)	0.908 (0.616 - 1.338)
Primary education	0.404*** (0.280 - 0.582)	0.456*** (0.307 - 0.678)	0.476*** (0.317 - 0.714)
Secondary education	0.364*** (0.236 - 0.560)	0.441*** (0.281 - 0.693)	0.454*** (0.287 - 0.720)
Higher education	0.493 (0.223 - 1.093)	0.558 (0.258 - 1.208)	0.569 (0.261 - 1.241)
Assets	0.959 (0.917 - 1.003)	0.970 (0.928 - 1.015)	0.964 (0.921 - 1.008)
Religion (ref: Muslim)	n.s.	n.s.	n.s.
Protestant	0.855 (0.571 - 1.280)	1.177 (0.757 - 1.829)	1.225 (0.801 - 1.874)
Catholic	0.926 (0.563 - 1.523)	1.254 (0.738 - 2.128)	1.324 (0.791 - 2.218)
Traditional	1.623 (0.690 - 3.814)	1.956 (0.802 - 4.772)	1.878 (0.762 - 4.626)
Community connectedness	1.103 (0.901 - 1.350)	1.153 (0.947 - 1.402)	1.127 (0.932 - 1.364)

Values and orientations

Locus of control: External	1.147 (0.851 - 1.545)	1.090 (0.801 - 1.482)	1.060 (0.782 - 1.436)
Husband justified to beat wife	1.062* (1.007 - 1.120)	1.057* (1.002 - 1.114)	1.061* (1.004 - 1.121)
Wife justified to refuse sex	1.027 (0.948 - 1.113)	1.045 (0.961 - 1.137)	1.058 (0.972 - 1.151)

COMMUNITY LEVEL VARIABLES

Pro-RH culture		0.714** (0.570 - 0.894)	0.633*** (0.519 - 0.771)
Social support for family planning		0.801* (0.649 - 0.988)	0.739** (0.595 - 0.919)
Communication about sex & FP		1.052 (0.838 - 1.321)	1.084 (0.862 - 1.364)
Social support for condom use		0.799* (0.098 - 6.509)	0.730** (0.577 - 0.923)
Myths about HIV/AIDS		1.338** (1.100 - 1.627)	1.363** (1.095 - 1.698)

INTERACTION EFFECTS

Interaction between gender & Pro-RH culture			2.361*** (1.646 - 3.386)
Community support for FP			1.385 (0.958 - 2.003)
Communication about sexuality			0.929 (0.611 - 1.413)
Community support for CU			1.623* (1.073 - 2.454)
AIDS stigmatization			0.962 (0.664 - 1.393)

N	4081	4065	4065
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Significance: *: 0.050; **: 0.010; ***: 0.001

Figure 3 shows gender differences in sexual initiation by low medium and high scores on a variable measuring a pro-reproductive health culture in a community.⁴ Women living in communities with a low score on the pro-reproductive health culture had a 36% risk of early onset of sexuality, compared to about 10% of women in communities with medium and 8% of women in communities with high scores on the pro-reproductive health culture variable. No significant differences were observed for men. These findings indicate that communities that are less knowledgeable about HIV/AIDS, less open to receiving information about HIV/AIDS, and less favorably inclined towards condoms place women at a higher risk of onset of early sexual intercourse.

⁴ The low, medium, and high levels were based on community scores in the bottom, middle, and top thirds of a standardized normal distribution on this indicator.

Figure 3. Gender differences in the early onset of sexual activity by level of community pro-RH culture.

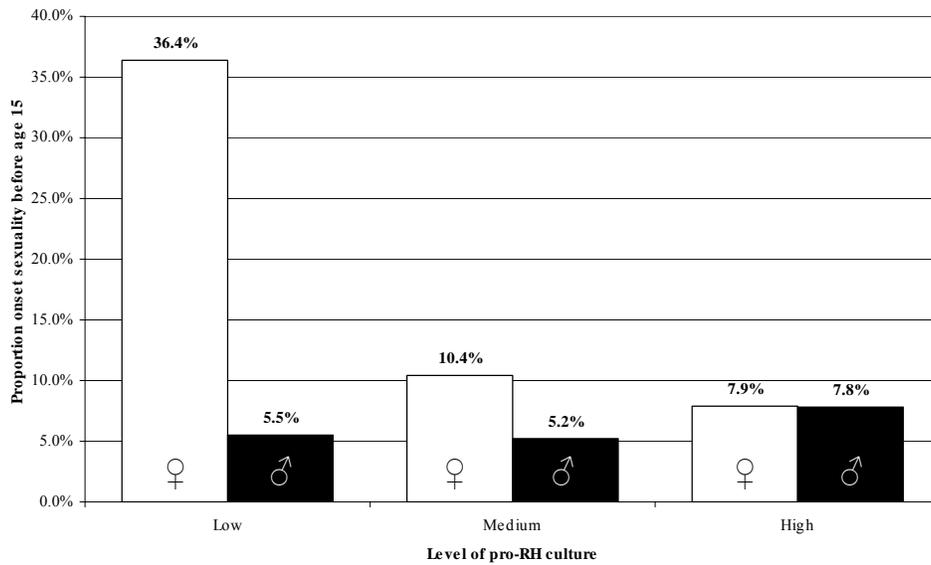
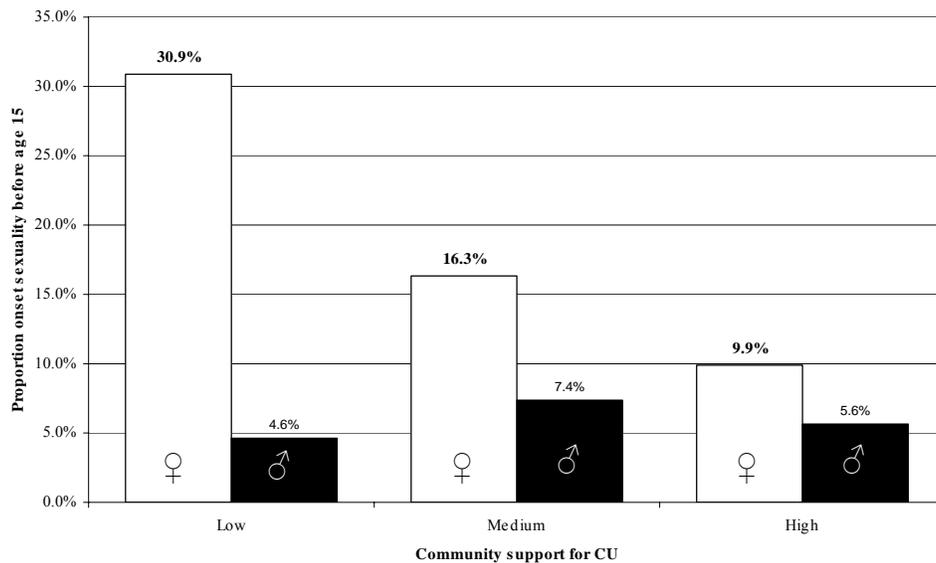


Figure 4 shows gender differences in sexual initiation by levels of the variable social support for condom use. Women living in communities with low levels of support for condom use are at particularly high risk for early onset of sexual intercourse: about 31% of women living in communities with low support for condom use initiated sex before age 15, compared to only 16% in communities with medium levels of support for condom use, and 10% in communities with high levels of support for condom use. No significant differences were observed for men.

Figure 4. Gender differences in the early onset of sexual activity by social support for condom use.



5 DISCUSSION

In Nigeria, as in many other developing countries, it is often believed that a community's acceptance of family planning and condom use will encourage young persons to initiate sex early. The findings of this study contradict this belief. This study shows that social support for family planning and condom use, correct knowledge about the transmission and prevention of HIV/AIDS, and openness to receiving information about HIV/AIDS encourages youths to delay sexual initiation. One possible explanation for these findings may be that young persons in pro-reproductive health communities are better able to withstand peer pressure, which is often a major factor in early sexual initiation. Young women who live in communities that are less aware of reproductive health risks, or communities that lack openness to receiving information about HIV/AIDS, are at particularly higher risk of early sexual initiation.

In recent years, there has been considerable emphasis placed on abstinence as a major and viable HIV prevention strategy in Nigeria. These study findings show that Nigerian communities that are supportive of another HIV prevention method, the condom, enable young persons living in those communities to make an informed choice by delaying sexual initiation. Greater openness to receiving HIV/AIDS information and awareness of reproductive health issues appear to support a healthier reproductive health choice. Indeed, differences in the effects of urban and rural residence on sexual initiation may be explained by the fact that urban communities are characterized by providing a more pro-reproductive health environment and greater social support for making informed reproductive health choices to adolescents than rural communities. Moreover, rather than providing permissive environments for sexual experimentation, communities that support condom use offer young women an environment that enables them to delay sexual initiation.

The delay in first sex among young people living in communities that are pro-reproductive health and communities that support condom use was observed primarily among women. This suggests that a positive environment for reproductive health decision-making has a stronger effect on women than on men. Living in a community that is more open to receiving HIV/AIDS information, and that has correct information about HIV prevention and transmission and is supportive of condom use enables women to delay sexual initiation. This may be because the role expectations of young women as mothers may be stronger in communities that are less open and may result in early sexual initiation. Parents, teachers, religious and other community leaders who may prefer that young people adopt abstinence as a method of HIV prevention, should recognize the importance of creating an environment within their community in which other reproductive health choices, particularly the use of condoms and family planning, are available.

The study found that support for gender-related violence was associated with early sexual initiation. In communities where people disapprove of wife beating, young persons are more likely to delay sex. This holds true, even after controlling for other individual and community-level characteristics. Women who do not consider wife beating acceptable, are often independent-minded, career conscious and future oriented. For such women, the determination to delay sexual initiation may be quite strong.

The findings of the study suggest that comfort with discussion of sexual matters and communication about family planning has no impact on the onset of first sex. In many Nigerian communities, particularly in the rural areas, communication about sexual matters is often superficial. For example, the content of the communication may involve warnings ‘to be careful’. Thus, comfort with discussion of sexual matters or actual discussion of family planning may not be as important as the actual content of the communication.

Myths about HIV/AIDS transmission and prevention are an important barrier to healthy reproductive health practices. Misinformation or incorrect information exercises an independent effect on young peoples’ sexual initiation. In other words, not only does living in communities that are better informed promote delayed sexual initiation but living in communities that are poorly informed encourages early sexual initiation. This implies that AIDS prevention programs should not only increase correct information about HIV/AIDS but actively work to reduce incorrect information and myths about this infection.

The study findings have important implications for reproductive health interventions targeting youth in Nigeria. By showing that the attitudes and beliefs of community members can exercise an important influence on sexual initiation, the study emphasizes the importance of targeting prevention messages at a range of individuals within a community rather than just adolescents or their parents. Interventions that succeed in developing well-informed communities that support healthy reproductive health practices are likely to be extremely effective in reducing the risk of early sexual initiation. It is not only important to create environments within communities that are supportive of positive reproductive health choices, including the use of condoms and family planning, but also necessary to identify communities that are particularly behind in terms of having a culture that promotes positive decision-making regarding sexual initiation. Finally, these findings suggest that the attitudes and beliefs of community members have strong effects on the sexual behavior of adolescents in Nigeria.

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