



# Factors Associated with Early First Sexual Intercourse (before 16) among Students Currently Aged 14 - 19 in Secondary Schools in Cameroon's Capital City, Yaoundé and Policy Implications

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## Abstract

Early sexual activity, often defined as initiation before 16, is a risky behaviour associated with many negative social and health outcomes. Sexual norms restricting sex till marriage have declined in Cameroon and many other countries, resulting in early initiation of sex. This study seeks to identify and analyse the factors associated with early initiation of sex (before 16) among adolescent secondary school students in Cameroon's capital city, Yaoundé. The study was carried out using a self-administered questionnaire in which the students were asked questions about their ages at first sex, partners, nature and circumstances of this first sexual encounter. Questions were also asked about some characteristics of the students as well as their parents. About half of the students interviewed had a first sexual encounter before 16 with mean ages at first sex being 14.7 and 16.1 years for boys and girls respectively. The mean age at first sex for both sexes is 15.4 years. It is often unprotected thereby exposing young people to STDS and unwanted pregnancies. A binary logistic regression reveals that the key factors associated with the initiation of sex are the student's current educational level, the circumstance of first sex (voluntary or forced), the student's sex, and parents' educational levels. The policy options dictated by these findings are the promotion of early comprehensive sex education for students even before they reach 10, the equipment of parents especially mothers with skills to help their child retard or practice safe sex and the prevention of the submission of children to rape.

## Subject Areas

Sociology

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## Keywords

Early Sex, Health Risk, Unsafe Sex, Students

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### 1. Background

Globally, the rate of early initiation of sexual activity by adolescents is quite high. Early sexual initiation in this study refers to engaging in sexual activity before the age of 16. Norms restricting sexual intercourse till marriage have declined considerably over the past decades in Developing Countries, resulting in early initiation of sex. 580 million adolescents worldwide are victims of early sex with 4/5 of them in Developing Countries [1]. During adolescence, physical, psychological and social changes occur in human beings. This period is risky for young people [2]. As these changes occur, adolescents usually adopt high-risk behaviours such as the use of psychoactive substances and the initiation of sexual intercourse, which come with important negative consequences on their health and the health of society [3]. Early initiation of sexual intercourse increases the risks for adolescents to have multiple sexual partners and unprotected sex [4]. Teenagers who initiate sexual intercourse early often have higher chances of contracting sexually transmitted diseases, including the deadly HIV/AIDS pandemic, early and unwanted pregnancies, as well as unsafe induced abortions. Other consequences are violence, depression, unintentional injuries, alcohol and drug use [1].

The timing of initial sexual activity is a matter of public health concern. The occurrence of giving birth at a young age has been associated with increased rates of maternal and child illness and death, limited educational options, reduced family income in the future, and larger family sizes, which may ultimately result in higher population growth. Other consequences are higher rates of unintended pregnancy, abortion, HIV/AIDS and other sexually transmitted infections among youths [5].

Studies have shown that a good number of factors predispose young people to early initiation of sex. These include not attending religious programs, peer pressure, alcohol consumption, cigarette smoking, poor parental monitoring, not living with both biological parents, having more permissive attitudes towards sex, connectedness and exposure to pornographic materials. A large number of students initiate sexual activity at early age. It is clear that the high prevalence of early sexual debut is associated with sexual and reproductive health problem. The consequences of the problem include unintended teenage pregnancies, high incidences of HIV/AIDS and other STIs, high school drop-out rates and poverty, among others. These consequences can be avoided by delaying sexual debut among adolescents. This study seeks to establish the associated factors for early sexual debut to delay initiation of sexual debut among adolescents in Cameroon's capital, Yaoundé and elsewhere.

**The study was guided by the following research questions:**

- 1) What are the individual factors associated with early sexual debut (before 16)

among students in secondary schools in Cameroon's capital city, Yaoundé?

- 2) What are the societal factors associated with this early sexual debut?
- 3) What are the policy implications of this early sexual initiation?

## 2. Methods

The colleges that participated in this study were selected from the public, denominational, and lay private colleges in Cameroon's capital city, Yaoundé. These colleges were selected from among schools offering the Anglophone and the Francophone subsystems of education. The selected came from all seven subdivisions of the city. Considering the fact that more students in this part of Cameroon belong to the Francophone subsystem of education, about three-quarters of the respondents were made up of students from this sub-system. A deliberate effort was made to include technical colleges as well as general education colleges. The colleges selected, therefore, do not constitute a random sample.

A self-administered questionnaire, mostly composed of multiple-choice questions, was used for this study. The questions were asked in English and French, considering the fact that the selected schools were of the two educational subsystems. In all, 29 colleges took part in the study, and the questionnaire was administered to 2405 students aged 15 - 19 (1263 of the respondents were girls and 1142 were boys) in January 2015. Students were chosen from classes ranging from the third to the sixth form, while attempting as much as possible to balance the proportion of boys.

The self-administered questionnaire was made up of four parts. The first part of the questionnaire was designed to collect data on the students' demographics; the second part consisted of questions to evaluate students' exposure to sex education, their views on accessibility to contraception and sexual health advice and their preferences in implementing sex education in schools. The third part focused on the first sex, the time of its initiation, its nature, the circumstances of its initiation and its partners. The fourth section collected data on the outcomes of respondents' sexual activities, such as STIs, pregnancies, miscarriages, abortions and live births. Information relevant for this study was obtained from the first and third sections of the questionnaire (information on the demographics of the respondents and data on the age at first sex, nature of first sex (protected or unprotected), partners of first and circumstances of this sex (forced or unforced)).

A questionnaire and an envelope were handed over to each of the 100 students aged 15 - 19 chosen from each school. Before the distribution of questionnaires, an information statement was read out to the students, giving them detailed information on the aims of the study and how the respondents were selected, thereby also providing a platform for the students to ask questions about the study. In order to motivate students to provide honest answers, anonymity was assured and they were free to refuse to complete the questionnaire or any part of it. Responses were returned in sealed envelopes and the students were asked not to write their names on the questionnaires or on the envelopes. Frequencies for each question were

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established after entering the data using the Statistical Package for Social Sciences (SPSS) software.

### **3. Limitations of the Study**

The study of determinants of early sexuality is a very complex issue. It involves a series of biological and non-biological factors which were not all captured by this study. Even though the variable used for this study enabled us to capture some determinants of the onset of sex before 16, the inclusion of variables such as ethnic background, the content of sex education received by respondents, opinion on the option of sex education taught in schools, the type of neighbourhood of residence, etc. could provide more explanatory variables.

### **4. Ethical Considerations**

Letters requesting permission to carry out the survey were addressed to the principals of the various colleges chosen, and upon the principals' approval, the survey was conducted. The questionnaire was examined and approved by the Scientific Committee of the Central Bureau for Censuses and Population Studies of Cameroon.

### **5. Theoretical Considerations**

The key theoretical consideration for early adolescent sexuality used here is the curiosity and experimentation theory. Adolescence especially early adolescence (12 - 15 years) is a precarious stage in terms of sexuality. This age is usually known as the age of curiosity and experimentation especially as sex is concerned. This study uses a broad range of perspectives on curiosity in order to show curiosity influences adolescent behaviour including sexual exploration.

Human sexuality is much more complex than the biological forces that initiate the sexual maturation process. As such, the development of adolescent sexuality includes not only physical development but also cognitive, emotional, social, and moral development. At approximately 12 - 15, young people develop biologically and begin to be interested in sexual issues. They try to satisfy their curiosity by reading information about sex and viewing images with sexual content. This may include anatomy books, photographs of naked people, pornographic material, etc. Today, youths can easily find these images in biology textbooks, some television programmes or on the internet. Frequently watching these scenes may push boys and girls to experiment with sex arousal through flirting and hugging those they are romantically interested in. This curiosity may eventually lead to the early experimentation of sex [6].

### **6. Presentation of Variables**

#### **6.1. The Dependent Variable**

The dependent variable for this study is the declared age at first sex. For the purpose of this study, this variable is recorded into two modalities: first sex inter-

course before 16 and first sex after 16.

## **6.2. Independent Variables**

Independent variables for this study are classed into three categories as follows.

### **6.2.1. Contextual Variables**

Father's educational level, mother's educational level and source of knowledge on contraception and reproductive health.

### **6.2.2. Socio-Relational Context**

Sex, circumstances of first sex (forced or voluntary), partner of first sex.

### **6.2.3. Socio-Cultural Variables**

Religion, type of educational establishment (public, lay private and denominational, type of education (general or technical), subsystem of education (Anglophone or Francophone) and cycle of secondary education currently being attended.

## **7. Data Analysis**

The analysis of data for this study involves two phases: the descriptive and explanatory phases.

### **7.1. Descriptive Phase**

Descriptive analysis here involves two phases: bivariate and multivariate.

### **7.2. Bivariate Analysis**

It involves the analysis of the results of cross-tabulation of each characteristic of respondents such as sex, religious affiliations, class currently attended, type of education, subsystem of education, type of educational establishment and exposure to sex education and age at first sex. It also involves a crosstabulation of parents'/guardians' characteristics notably their educational level and participants' ages at first sex.

### **7.3. Descriptive Multivariate Analysis**

This involves using the software SPAD to come out with the profiles of students who begin sex early (before 16) and those who begin later (after 16).

Explanatory Analysis:

Since the dependent variable for this study, the start of the first sex at 16 or after is a quantitative dichotomy, binary regression is the appropriate multivariate explanatory method to use. This method estimates the probability for an event to occur as a function of the independent variables. The dependent variable takes the modality 1 when the event occurs (early sexual intercourse) and 0 when it does not. In this way, the logistic regression estimates the possibility, that the student starts sex early (before 16). It precisely estimates the net effect of associated vari-

ables on the early onset of sexual activity.

If  $P$  is the possibility that the event under investigation occurs,  $1-P$  is the possibility that it does not occur. The logistic regression probability in a linear form is  $L = \log(P/1 - P)$  or  $L = b_0 + b_1X_1 + b_2x_2 + \dots + b_nx_n$  where  $X_1, X_2 \dots X_n$  are independent variables and  $b_0, b_1, b_2 \dots b_n$  are regression coefficients of the model. The non-linear probabilistic form of the model is  $P = 1/(1 + \exp(-L))$ . This provides coefficients of regression.

“ $b_i$ ” from which odd ratios are calculated. An odd ratio greater than 1 indicates that there is a higher probability of the respondents starting sex before 16 in relation to the group of variables under consideration and vice versa.

#### 7.4. Hierarchy of Explanatory Factors of Early Sexuality (before 16)

In order to come out with a hierarchical order of the multiple explanatory factors which influence early sexuality (before 16), the relative contribution of the different explanatory variables is calculated using the following formula.

$$\text{Contribution of a Variable} = \frac{\text{Chi-Square of the Saturated Model} - \text{Chi Square without the Variable}}{\text{Chi-Square of the Saturated Model}}$$

#### 7.5. Characteristics of Respondents

The sample for this study comprised 2405 participants (1142 of them (47.5%) were boys and 1262 (52.5) were girls). The ages ranged from 15 to 19 with a mean age of 17. Most participants were of a Christian background, and especially of the Catholic faith, making up 58.21% of the sample. Protestants made up 22.62% of the sample, while Moslems constituted only 7.52% and the rest of the respondents were of other religions. All these participants were drawn from public, lay private and denominational schools, with 54.3% coming from public schools. Participants were also drawn from technical and grammar schools, with 70% coming from grammar schools. This sample included participants from the two educational sub-systems in Cameroon (the Francophone and the Anglophone subsystems) with 83% of them coming from the Francophone sub-system. A summary of these demographics of the respondents is found in the Appendix ([Table A1](#) and [Table A2](#)).

#### 7.6. Data Analysis

Data analysis for this study is carried out in two stages. The first stage is descriptive data analysis and the second is explanatory.

##### 7.6.1. Descriptive Data Analysis

Descriptive data analysis here involves bivariate analysis, the analysis of the strength association between the dependent variable and independent variable using Crammer’s  $V$  and multivariate descriptive analysis through factorial analysis.

##### **Bivariate Analysis:**

The bivariate analysis consists of the analysis of the frequency distribution of

the dependent variable, first-sex intercourse before 16 and various modalities of the independent variables. The outcome of this analysis is presented in the following paragraphs.

As far as respondents' sex is concerned, this study shows that the proportion of boys that begin sexual activity before 16 (59.19%) is largely higher than that of girls (34.80%). The chi-square Test shows a significant association between sex and the early onset of sex at a 5%. 60.42% of respondents who are Moslems and 58.82% of persons without a religious affiliation began sexual activity before 16. These proportions are 47.73%, 45.60%, 44.94% for Catholics, Protestants and members of other religions respectively. The chi-square shows that at a 5% significant level, the religious affiliations of respondents and onset of sexual activity before 16 are associated.

The proportion of students whose fathers have either primary education (60.42) or secondary education (58.82%) that begin sexual activity before 16 is higher than for students whose fathers have no education (47.73%) or higher education (29.03%). The chi-square Test shows an association between the respondents' fathers' educational levels and the early onset of sex at 5% significance.

The proportion of students whose mothers have either primary (55.52) or secondary education (56.52%) that begin sexual activity before 16 is more than for those whose mothers have no education (44.14%) or higher education (35.50%). The chi-square Test shows an association between the respondents' mothers' educational levels and the early onset of sex that is significant at 5%.

The distribution of respondents who begin sex before 16 by sources of knowledge on sexual health and contraception is as follows: family members (43.62%), schools (42.35%), health specialists (42.37%), the church (33.08%), friends (44.37% and other sources (40.91%). The chi-square shows that at a 5% significant level, the source of information on contraception/sexual health and onset of sexual activity before 16 are associated.

The proportion of respondents who were forced to undergo first sex and who did so before 16 (62.50%) is significantly higher than that of respondents who voluntarily had first sex before 16 (53.83%). The chi-square Test shows a significant association at 5% between the occurrence of first sex before 16 and whether it was voluntary or not.

This chi-square Test reveals a significant association at a 5% significant level between first sex before 16 and the type of partner of this sexual act. The distribution of respondents who had their first sex before 16 by partners of this first sex is as follows: classmates (48.78%) and unspecified persons (27.20%), friends (56.00%), family members (72.73%) and teachers (64.54%).

In terms of the type of school establishment currently being attended, the proportion of respondents that had their first sexual act before reaching 16 for public schools (55.07%) is higher than that of lay private and confessional schools (46.12% each). The chi-square Test shows a significant association between respondents' type of school establishment currently being attended and the practice of early

first sex (before 16).

There is a near equality in the proportions of respondents who had their first sex before 16 that is undergoing general education (48.58%) and technical/ commercial education (47.85%). There is no significant association at a 5% level between early first sex and type of secondary education.

No significant difference in the proportion of respondents in the Anglophone subsystem who had their first sex before 16 (48.46%) and that of the Francophone subsystem (47.51%) exists. The chi-square Test shows no significant association between respondents' subsystem of education currently being attended and the practice of early first sex (before 16).

The proportion of respondents currently attending the second cycle of secondary education who had their first sex before 16 (29.4%) is significantly lower than that of respondents in the first cycle (66.45%). There is a significant association at a 5% significant level between early first sex (before 16) and the cycle of secondary education.

#### **Strength of Association between Independent Variables and Age at First Sex:**

The chi-square Test tells us whether an independent variable is significantly statistically associated with the dependent variable or not. However, this test gives us no information on the strength of this association. The strength of association is given by the Crammer's V (see **Table 1**).

**Table 1.** Strength of association between independent variables and the dependent variable (age at first sex).

Variable	Strength of Association	Rank
Religion	0.760	1
Educational Subsystem	0.340	2
Partner of First Sex	0.256	3
Respondent's Sex	0.243	4
Source of Knowledge on Sexual Health and Contraception	0.139	5
Mother's Educational Level	0.129	6
Father's Educational Level	0.119	7
Circumstances of First Sex	0.105	8
Type of Educational Establishment	0.077	9

Nine of the twelve variables show some degree of significant association according to Crammer's V with the dependent variable, age at first sex. The variable with the strongest association is religious affiliation.

#### **7.6.2. Explanatory Analysis**

Considering the fact that the dependent variable, first sex before 16 or not is qual-

itative and dichotomist, the appropriate technique for explanatory multivariate analysis is binary logistic regression. The step-by-step technique is used to come out with the net and gross effects of independent variables on the dependent variable, first sex before 16. This methodology helps us to:

- 1) identify explanatory variables for early first sex (before 16);
- 2) rank explanatory variables following their explanatory power;
- 3) to come out with the mechanisms of intervention of explanatory variables of early first sex (before 16).

The step-by-step introduction of variables into the logistic regression model is as follows.

**Mo:** crude model.

**M1:** Father's education.

**M2:** M1 + Mother's education.

**M3:** M2 + Source of information on sexual health and contraception.

**M4:** M3 + Sex.

**M5:** M4 + Circumstance of first sex.

**M6:** M5 + Partner of first sex.

**M7:** M6 + Type of educational establishment.

**M8:** M7 + Type of education.

**M9:** M8 + Subsystem of education.

**M10:** M9 + Respondent's current educational level.

**M11:** M10 + Religion.

The Mo model gives the effects of each potential explanatory on the dependent variable in the absence of others and M11 is the saturated model which gives the net effects of each potential explanatory variable in the presence of all others. The net explanatory capacity of the first sex before 16 is retained at 5% significance level.

#### **Evaluation of the Model:**

Before using a model, it is necessary to evaluate its strengths and weaknesses. This evaluation shows that the independent variables introduced into the model significantly explain the variance of the dependent variable. This evaluation shows that the twelve independent variables used do not completely explain the social phenomenon under study—first sex before 16.

#### **Identification and Influence of Determinants of First Sex Before 16:**

##### **Identification of Determinants of First Sex Before 16:**

The results furnished by the saturated model, the model that includes all the variables show that the key variables that explain the start of sex before 16 among the students studied are: students' current level of education measured by the cycle of secondary education, partner of first sex, sex, the circumstance of first sex, mother's and father's educational levels. These variables can be ranked based on their relative contributions using the formula (see **Table 2**).

Contribution of a Variable =  $\frac{\text{Chi-Square of the Saturated Model} - \text{Chi Square without the Variable}}{\text{Chi-Square of the Saturated Model}}$

**Table 2.** Classification of determinants of first sex before 16 by their relative contributions (%).

Variables	chi-square of saturated model	chi-square of the unsaturated model	Relative Contributions (%)	Rank
<b>Respondents' Current Educational Level</b>	209.42	149.79	28.47	1
<b>Partner of First Sex</b>	209.42	181.55	13.31	2
<b>Circumstance of First Sex</b>	209.42	182.71	12.75	3
<b>Father's Education</b>	209.42	192.89	8.08	4
<b>Mother's Education</b>	209.42	201.97	3.56	5
	209.42	203.70	2.73	6

#### **Influence of Explanatory Variables:**

##### **Influence of the Living Environment of the Student:**

The living environment here refers to the students' or respondents' source of information on contraception and sexual health, and parents' educational levels. Among these variables, only the parents' education levels significantly influence the first sex before 16. All things being equal, respondents whose fathers have secondary education are 1.5 times more likely than those whose fathers have tertiary education to be involved in sex before 16. There is no significant difference in the likelihood of being involved in sex before 16 among respondents whose fathers have no education, primary or tertiary education.

Respondents with mothers who have university education are 40% less likely to practice first sex before 16 compared to those whose mothers have either no or secondary education. However, no significant differences exist in the likelihood of encountering first sex before 16 for respondents with mothers with no education and primary education.

##### **Influence of Relational Environment Variables:**

Three relational environment variables considered here are: the sex of the respondent, the circumstance of the first sex and the partner of the first sexual intercourse. These variables significantly influence the practice of the first sexual act before 16. Everything being equal, girls are 2.3 times more likely than boys to begin sex before 16.

Respondents whose first sex was forced are 60% less likely to have their first sex before 16 compared to those whose first sex was voluntary. Respondents whose first sex was with a partner who was not a classmate or family member or teacher are 2.4 times more likely to have their first sex before 16 than those whose partner sex was with a friend. There is no significant difference between respondents whose partners of first sex were friends and those whose partners were others (unspeci-

fied persons).

#### **Influence of Socio-cultural Variables:**

The socio-cultural variables used for analysis are the type of school establishment (public, lay private or confessional), the respondents' educational, educational subsystem (Francophone or Anglophone) and religion. Only the current level of education has a significant link with the first sex before 16. Respondents who are currently attending the second cycle of secondary education are 70% less likely than those currently attending the first cycle to begin sex before 16.

**Table 3.** Estimation of marginal effects of explanatory variables.

<b>Variables and Modalities</b>	<b>ME1</b>	<b>EM2</b>
<b>Father's Educational Level</b>	**	**
<i>No education</i>	0.09 (ns)	-0.09 (ns)
<i>Primary</i>	-0.09 (ns)	0.09 (ns)
<i>Secondary</i>	-0.10**	0.10**
<i>Higher</i>	<i>Ref.</i>	<i>Ref.</i>
<b>Mother's Educational Level</b>	**	**
<i>No Education</i>	0.12 (ns)	-0.12 (ns)
<i>Primary</i>	0.02 (ns)	-0.2 (ns)
<i>Secondary</i>	<i>Ref.</i>	<i>Ref.</i>
<i>Higher</i>	0.10**	-0.10**
<b>Circumstance of First Sex</b>	***	***
<i>Forced</i>	0.23***	-0.23***
<i>Voluntary</i>	<i>Ref.</i>	<i>Ref.</i>
<b>Partner of First Sex</b>	***	***
<i>Classmate</i>	-0.08 (ns)	0.08 (ns)
<i>Friend</i>	<i>Ref.</i>	<i>Ref.</i>
<i>Family Member</i>	0.18 (ns)	-0.18 (ns)
<i>Teacher</i>	0.11 (ns)	-0.11 (ns)
<i>Friend</i>	-0.21***	0.21***
<b>Sex</b>	***	***
<i>Male</i>	<i>Ref.</i>	<i>Ref.</i>
<i>Female</i>	-0.21***	0.21***
<b>Respondent's Current Level of Education</b>	***	***
<i>1<sup>st</sup> Cycle of Secondary Education</i>	0.32***	-0.32***
<i>2<sup>nd</sup> Cycle of Secondary Education</i>	<i>Ref.</i>	<i>Ref.</i>

Note: EM1 = Marginal effects before 16, EM2 = Marginal Effects after 16, \*\*\* significant at 1%, \*\* significant at 5%.

### **Marginal Effects of Explanatory Variables:**

Estimates of marginal effects provide the differences in the influence of a variable and its modalities as one moves from one modality of the dependent variable to another. For this study, the marginal effects concern the difference between the initiation of first sexual intercourse before 16 and after 16 (see **Table 3**).

The marginal effect of the living milieu on the age at first sex shows that the educational level of parents significantly influences the probability of the offspring to begin sex at any given age. Everything being equal, the passage of the father of a respondent from university education to secondary education reduces the probability of the individual having first sex before 16 by 10% but increases by 10% the probability of having this first sex after 16. The passage of respondents from a mother with secondary education to a mother with tertiary education increases the probability of first sex before 16 by 10% but reduces the probability of the respondent having first sex after 16 by 10%.

As far as socio-relational variables are concerned, the marginal effects show that the transformation from an individual who had voluntary first sex to one who had forced first sex increases the probability for the respondent to have first sex before 16 by 23% and reduces the possibility to have first sex after 16 years by 23%. For partners of first sex, the passage of respondents whose first sex occurred with a friend to an unspecified person (not a family member or teacher nor classmates) reduces by 21% the probability for that respondent to have first sex after 16.

As far as sex is concerned, the analysis of marginal effects shows that the passage of a respondent from a boy to a girl reduces the possibility of undergoing first sex before 16 by 21% and increases the chance of having it after 16 by 21%.

Lastly, marginal effects of socio-cultural variables show that the passage of an individual from the second cycle of secondary education to the first increases the chances of having first before 16 by 32% and reduces by 32% the possibility of having the first sex after 16.

### **Mechanisms of Intervention of Factors Associated with Early First Sex:**

#### **Mechanisms of Intervention of Variables of the Living Milieu: (Parents' Educational Levels):**

The effect of the father's education becomes insignificant after the introduction of variables M2 to M9 but becomes significant with the introduction of religion and the respondent's current level of education. It can therefore be concluded that the father's education is only significant in explaining respondents' first sex before 16 when considered alone or with the respondent's religion and current level of education. The difference observed between the effect of the father's secondary and tertiary education on the respondent's age at first is because most fathers with tertiary education also have wives with university education who are Catholics.

The effect of respondents' mothers' education on their ages at first sex remains significant and unchanged even with the introduction of other variables. However, this effect is modified by the introduction of variables on sex and the type of educational establishment. While the sex of the respondent reduces the effect of

the mother's education on respondents' first sex before 16, the type of educational establishment increases it.

**Mechanism of Intervention of Determinants Linked to the Relational Environment:**

Respondents' partners of first sex and the circumstance of first sex are variables of the relational environment that play significant roles in the explanation of the occurrence of first sex before 16 in the saturated model.

**Sex:**

When the variable on the circumstance of first sex and partner of first sex are introduced into the model, the risk for girls getting into first sex before 16 increases by 11.5%. However, with the introduction of other variables, this difference was reduced drastically. It seems that the sex of respondents influences their likelihood of first sex before 16 through the parents' education, source of knowledge on sexual health and contraception and circumstance of first sex. The difference in getting into first sex before 16 between female and male respondents is therefore due to differences in parents' education, absence or availability of information on contraception and sex education and the higher probability for girls than boys to be forced into sex before 16.

**Circumstances of First Sex:**

The circumstance of the first sexual encounter is significant at 5% both on its own and in the presence of other variables of the model. However, the introduction of other variables reduces its effects on the first sex before 16.

**Partner of First Sex:**

In the absence of other variables respondents whose partner at first was unspecified (others) are 3.4 times than those whose partner was a friend to enter sexual activity before 16. This likelihood reduces by 20.6% when other variables are added to the variable on the partner of the first sex. It therefore appears that the effects of partner of first sex on first sex before 16 is governed by the sources of information on contraception and sexual health, parents' educational level and circumstances of first sex. The difference observed between male and female respondents in terms of the likelihood of getting into first sex before 16, may be due to the fact that boys are less involved in forced sex than girls.

**Mechanisms of Intervention of Determinants Linked to the Cultural Context:**

The effect of the current educational level of respondents on their likelihood of starting sex before 16 is significant in the presence of all variables. However, the effects of the type of education become insignificant with the introduction of the respondents' level of education. The respondent's current level of education therefore inhibits the influence of type of education on age at first sex before 16.

The system of education in the absence of other variables influences the start of first sex before 16.

However, this influence disappears completely in the presence of other variables.

## 8. Discussion

This survey asked students in secondary schools in Cameroon's capital city, Yaoundé whether or not they had ever had sexual intercourse. As revealed by other studies such as that carried out in some parts of Ghana, the proportion of students who initiated sex before 16 is quite high [7]. This study revealed a proportion of 35 per cent. This study found a slightly fairly high proportion which was close to 50 percent.

This study found that the mean age at first sex was very low, 15.4 years. It was higher for girls (16 years) than for boys, 14.7 years. Findings from Zimbabwe equally revealed this tendency. It has been explained that "stereotyped sexual norms and peer group pressure encourage young males to prove their manhood and enhance their social status by having sex" [8]. On the other hand, young females are submissive and required not to discuss sex thereby leaving them unable to refuse sex or insist on condom use. This, including the possibility of unintended pregnancies, puts girls at greater risk than boys.

The household living conditions and control may predispose an adolescent to early or later sex due to differences in the care and supervision provided by different household types. The fact that many respondents for this study reported that their partners at first sex were family relatives or persons within the household underscores the importance of control and supervision within the household.

Religion has been found to have a big influence on reproductive health and rights [9]. This study does not show religious differences as a key explanatory variable for early initiation of sex. However, bivariate analysis seems to show some differences between Muslims and Christians. When other factors such as age and current class attended are introduced, the influence of religion is largely curtailed.

Even though most young people initiate sex voluntarily, some specially girls are forced into it through rape. In a study carried out in Cape Coast in Ghana [10], it was revealed that 7.5% of respondents mostly girls who started sex before 15 were raped. 17.8% of female respondents of this study who started sex before were raped against only 8% of boys. Explanatory analysis shows that girls who are raped are 60% more likely than boys to have had sex before 16. This brings into focus the need to protect young people especially girls against rape which can expose them to early and unintended pregnancies and infection by STI.

## 9. Policy Implications

The first implication is that policymakers should encourage the development of evidence-based sexual behaviour prevention interventions to improve health literacy among adolescents. Health literacy has been defined as the degree to which people can obtain, manage and understand health information and make proper health decisions. Prioritization of health literacy is a policy issue at the intersection of the fields of health and education [11]. Considering this approach, policies and programs must address the following: substance use, improving adolescent knowledge

and increasing their risk perception decision-making, to increase the ability of adolescents to make healthy decisions... [9]. Other measures to be implemented in order to delay the early onset of sex and promote safe sex by young people include promotion of self-efficacy, support of their confidence in decision-making, promotion of their mental health, helping them recognize and express healthy emotions and seeking help when needed, promotion of their educational aspirations, understanding their life perspectives and improving their connectedness with peers and adults at school and media exposure [12]. Special efforts should be made by school authorities, parents and communities especially the girl child against rape.

This study has revealed that efforts to delay onset of sexual activity in Cameroon have not been quite successful. It is necessary to see what can be learnt from successful programmes that have been implemented elsewhere, especially in other developing economies. One successful programme to delay the early initiation of sexual activity in a low-income setting is the “Berhane Hewan” (Light for Life) program in Ethiopia. This program targets adolescents 10 - 14, uses a combination of community-based workshops, school-based education, parent-child communication and community mobilization to talk about the risks of early initiation of sex. The programme focuses on building self-esteem and confidence, promoting healthy relationships, providing accurate sexual health information and encouraging goal-setting and life skills. Evaluation results show:

- 1) delayed sexual debut among program participants;
- 2) improved knowledge and attitude towards sexual health;
- 3) increased parent-child communication about sexual health;
- 4) and reduced rates of early marriage and teenage pregnancy, Ministry of Health, Ethiopia (2023).

This program demonstrates that a well-designed, culturally sensitive and community-based intervention can effectively delay early initiation of sexual initiation among school and out-of-school youths in a low-income setting. Other successful income setting programs include “The Adolescent Girls’ Initiative in Mozambique, “The Tanzania HIV/AIDS Prevention Program” and “Uganda Youth Livelihoods Program”. These programs share common characteristics with the Ethiopian Light Life Program [13].

## 10. Conclusion

This study shows that early sexual activity (before 16) is common among students currently aged 14 - 19 years in secondary schools in Cameroon’s capital city, Yaoundé. Close to 50% of all the students who have begun sexual activity did so before reaching 16. This gives a mean age at first sex of 15.2 years. Close to 33% of these early sexual acts were unprotected thereby exposing these young people to the risk of infections by sexually transmitted diseases including HIV/AIDS and unwanted pregnancies at very tender ages. Unwanted pregnancies and sexually transmissible infections have devastating consequences on their health and edu-

cation. One of the ways of retarding sexual activity is to identify its determinants in order to orientate policy. The key determinants of early sexuality among these students are their parents' educational levels especially the mother's, the sex of the student, the respondents' current educational levels, circumstance of first sex (voluntary or forced), partner of first sex and source of information on sexual and reproductive health. Considering the fact that boys are more likely to start sex before 16 than girls, efforts to retard sex while targeting both sexes should place emphasis on boys. As children whose mothers have tertiary education are less likely than those whose mothers have lower educational levels, giving potential mothers a university education will be beneficial in future efforts of getting children to retard the start of sexual activity. This study has shown that girls who are forced to have first sex are 21% more likely than boys to have first sex before 16. This calls for policy options that protect young people, especially girls, from being forced into sexual activity.

### Conflicts of Interest

The author declares no conflicts of interest.

### References

- [1] WHO (2021) Guidelines on Preventing Early Pregnancy and Poor Reproductive Health Outcomes among Adolescents in Developing Countries. WHO.
- [2] Abma, J.C. and Martinez, G.M. (2015) Sexual Activity and Contraceptive Use among Teenagers in the United States, 2011-2015. *National Health Statistics Reports*, **104**, 1-23.
- [3] Kaestle, C.E. (2005) Young Age at First Sexual Intercourse and Sexually Transmitted Infections in Adolescents and Young Adults. *American Journal of Epidemiology*, **161**, 774-780. <https://doi.org/10.1093/aje/kwi095>
- [4] Yosef, T., Nigussie, T., Getachew, D. and Tesfaye, M. (2020) Prevalence and Factors Associated with Early Sexual Initiation among College Students in Southwest Ethiopia. *BioMed Research International*, **2020**, Article ID: 8855276. <https://doi.org/10.1155/2020/8855276>
- [5] Kassahun, E.A., Gelagay, A.A., Muche, A.A., Dessie, A.A. and Kassie, B.A. (2019) Factors Associated with Early Sexual Initiation among Preparatory and High School Youths in Woldia Town, Northeast Ethiopia: A Cross-Sectional Study. *BMC Public Health*, **19**, Article No. 378. <https://doi.org/10.1186/s12889-019-6682-8>
- [6] Berlyne, D.E. (1954) An Experimental Study of Human Curiosity. *British Journal of Psychology. General Section*, **45**, 256-265. <https://doi.org/10.1111/j.2044-8295.1954.tb01253.x>
- [7] Nabila, J.S. and Fayorsey, C. (1996) Adolescent Fertility and Reproductive Health in Ghana: A Case Study of Accra and Kumasi. FADEP Technical Series No. 7, 1996, University of Ghana.
- [8] Familusi, O.O. (1999) Sexual Ethics in Imesille, Obokun Local Government Area of Osun State: Past, Present and Future. <http://www.researchgate.net>
- [9] Anarfi, J.K. (2005) Underreaction to Sexual Behavioural Change among the Youth in Ghana in the Era of AIDS. In: Agyei-Mensah, S., Casterline, J.B. and Agyeman, D.K., Eds., *Reproductive Change in Ghana: Recent Patterns and Future Prospects*, Depart-

- ment of Geography and Resource Development, University of Ghana, 225-242.
- [10] Parker, R.M., Ratzan, S.C. and Lurie, N. (2003) Health Literacy: A Policy Challenge for Advancing High-Quality Health Care. *Health Affairs*, **22**, 147-153. <https://doi.org/10.1377/hlthaff.22.4.147>
- [11] Grevenstein, D., Nagy, E. and Kroeninger-Jungaberle, H. (2014) Development of Risk Perception and Substance Use of Tobacco, Alcohol and Cannabis among Adolescents and Emerging Adults: Evidence of Directional Influences. *Substance Use & Misuse*, **50**, 376-386. <https://doi.org/10.3109/10826084.2014.984847>
- [12] Attygalle, U.R., Perera, H. and Jayamanne, B.D.W. (2017) Mental Health Literacy in Adolescents: Ability to Recognise Problems, Helpful Interventions and Outcomes. *Child and Adolescent Psychiatry and Mental Health*, **11**, Article No. 38. <https://doi.org/10.1186/s13034-017-0176-1>
- [13] Bessinger, R., Katende, C. and Gupta, N. (2004) Multi-Media Campaign Exposure Effects on Knowledge and Use of Condoms for STI and HIV/AIDS Prevention in Uganda. *Evaluation and Program Planning*, **27**, 397-407. <https://doi.org/10.1016/j.evalprogplan.2004.07.003>

## Appendix

**Table A1.** Some characteristics of respondents.

<b>1.1. Respondents by Age and Sex</b>				
Age	Males	Females	Both Sexes	
15	21.1	23.6	22.4	
16	22.6	23.4	23.0	
17	22.4	20.6	21.8	
18	15.7	17.0	16.4	
19	17.4	15.4	16.3	
Total	1142 (47.5)	1263 (52.5)	2405 (100.0)	
<b>1.2. Respondents by Religious Affiliations</b>				
Religion	Males	Female	Both Sexes	
Catholics	59.1	57.4	58.2	
Protestants	22.1	23.1	22.6	
Orthodox	0.1	0.1	0.1	
Moslems	7.7	7.4	7.5	
Animists	0.1	0.1	0.1	
Others	5.6	8.9	7.5	
None	4.1	2.0	3.0	
<b>1.3. Respondents by Type of Educational Establishment</b>				
Type of Educational Establishment	Male	Female	Both Sexes	
Public	56.5	52.3	54.3	
Lay Private	24.2	25.7	25.0	
Denominational	19.3	21.5	20.7	
<b>1.4. Respondents by Type of Education</b>				
Type of Education	Male	Female	Both Sexes	
Technical	29.9	23.8	26.7	
Grammar	70.1	76.2	73.3	
<b>1.5. Respondents by Subsystem of Education</b>				
Subsystem of Education	Male	Female	Both Sexes	
Anglophone	19.2	15.4	17.7	
Francophone	80.8	84.6	82.3	

**Table A2.** Characteristics of respondents' first sexual acts.

<b>2.1. Respondents (%) by Unset of Sexual Activity</b>				
Unset of Sexual Activity	Males	Female	Both Sexes	
Yes	551 (48.2%)	443 (34.3%)	984 (40.9%)	
No	591 (51.8%)	820 (65.7%)	1441 (59.1%)	

Continued

<b>2.2. Respondents by Age at First Sex</b>			
10 - 14	34.8	16.9	26.9
15 - 19	65.2	83.2	73.1
Mean Age	14.7	16.2	15.2
Absolute Number	551 (48.2%)	433 (34.3%)	984
<b>2.3. Respondents (%) by Partners of the First Sex</b>			
Classmate	21.3	11.8	17.1
Persons in the Neighbourhood	61.2	39.7	51.7
Family Member	2.0	2.8	2.3
Teacher	3.8	5.1	4.4
Others	11.8	40.6	24.5
<b>2.4. Respondents (%) by Voluntary or Non-Voluntary First Sex</b>			
Voluntary	92.0	82.2	87.7
Non Voluntary	8.0	17.8	12.3
<b>2.5. Respondents (%) by Protection or Non-Protection during First Sex</b>			
Protected	63.9	72.5	67.7
Unprotected	36.1	27.5	32.3