UNIVERSITY OF NAIROBI

COLLEGE OF BIOLOGICAL AND PHYSICAL SCIENCES

SCHOOL OF MATHEMATICS

MODELING TIME TO SEXUAL DEBUT AMONG KENYAN YOUTHS:

THE COX PH REGRESSION MODEL APPROACH

BY

KIRICHU SAMUEL KIRURI

I56/76783/2009

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

of Master of Science in Social Statistics

July, 2011

DECLARATION

This dissertation contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my dissertation, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

Student's Name	**Signature**	**Date**
Kirichu Samuel Kiruri	.....	30/07/2011

This dissertation has been submitted for examination with my approval as the University Supervisor.

Supervisor's Name	**Signature**	**Date**
1st Supervisor		
Prof. Richard Simwa	.....	.....
2nd Supervisor		
Dr. Ann Gatuguta	.....	.....

ABSTRACT

One in every five persons in the world is considered a 'youth' aged 15 – 24 and almost 85% live in developing countries. Youth, particularly those in developing countries, face increased exposure to risks associated with early sexual initiation and unprotected sex. Early sexual debut among youths is associated with considerable negative health and development outcomes. This includes an association with increased lifetime prevalence of sexual partners, thereby increasing the risk exposure to sexually transmitted diseases, including HIV/AIDS, and pregnancy. Early sexual debut also increases the risk of HPV infection, due to cervical immaturity; and thus the risk of cervical cancer increases. Additionally, given the risk of pregnancy, early sexual initiators are less likely to complete their schooling thereby limiting their social and vocational futures. Therefore, an understanding of the trends of sexual debut and its correlates among the youths in Kenya is needed.

This study sought to establish the probability of Kenyan youths remaining virgin beyond any given time after puberty using a Kaplan-Meier Survival curve. In addition, the study also established the correlates of sexual debut among the Kenyan youths using a Cox PH Regression Model. The study utilized the Kenya Demographic Health Survey Data for 2008 which was analyzed using SPSS version 18 and Stata version 11.

The study found that 56.4% of males and 45.1% of females reported having had their first sexual intercourse before the age of 18 years. The study established that sexual debut among the Kenyan youths was significantly associated with gender. In addition, education level was found to be significantly associated with sexual initiation among the Kenyan youths. Further, youths in the middle and high income class were significantly more likely to delay sexual initiation compared with the youths in the low income class. Finally, female youths who were exposed to drugs were significantly more likely to initiate sexual intercourse when relatively young compared to female youths who were not exposed to drugs.