

## Sexual debut - An analysis of the Birth to Twenty data

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In my dissertation I used survival analysis to determine significant predictors of early sexual debut in South Africa. According to the literature, it is widely accepted that the early timing of first sex among adolescents is associated with long-term health effects and current and future risky sexual behaviour (1). Despite the importance of sexual behaviour in young people for sexual and reproductive health and the severity of the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS), there exists relatively little empirical research on factors that influence the age at sexual debut in South Africa. It is therefore imperative to understand the predictors of sexual debut among adolescents to assist in devising strategies and action plans that may be used to educate adolescents in making informed and safe decisions regarding sexual debut.

The Birth to Twenty dataset was accessed in collaboration with the Human Sciences Research Council (HSRC). The Birth to Twenty cohort, colloquially named Mandela's Children, is the largest longitudinal study of child and adolescent health and development in Africa. The cohort of 3,273 newborn infants was recruited by researchers from the University of the Witwatersrand and the South African Medical Research Council, in 1990. The first round of the study began in 1989/1990 by questioning the mothers who were the still-pregnant mothers about general demographic characteristics and the conditions of the pregnancy. Further rounds of assessments and surveys were carried out when the children were born and at six months after which data was obtained on an annual basis. The questions in the yearly surveys cover a broad range of topics, touching on both the physical health and development of the child, his or her environment, education, nutrition, socioeconomic class, and cognitive development.

Early sexual debut, either voluntary or coerced, may increase the risks to sexual and reproductive health and sexual coercion is increasingly receiving attention as an important public health issue owing to its association with adverse health and social outcomes. An earlier analysis of the Birth to Twenty data describing voluntary and coerced experience at sexual debut, found that the median age of sexual debut was 16 years for females and 15 for males (2). Reported coerced sexual debut included children less than 11 years of age. Males reported earlier sexual debut, with both voluntary and coerced sexual experience,

than females. Sexual coercion at early sexual debut among both male and female adolescents occurred mostly through sexual intercourse with older adolescents and partners of the same age.

I used sexual exposure data relating to first sex (3). The variables included in the study were: race, level of maternal education, socioeconomic status, height, pubertal status, engagement in foreplay, engagement in oral sex and level of religiosity. Multivariate analyses for the age at sexual debut were done using Cox proportional hazards separately for males and females. A log-rank test showed that there was a significant difference between the hazards for voluntary and coerced sexual debut. This prompted me to explore a competing risks regression model with voluntary and involuntary sexual debut as the competing risk factors. Exploratory analyses, Cox regression and diagnostic plots were run. Competing risks regression was performed according to the method of Fine & Gray (4) and the validity of the proportional sub-hazards assumption was tested by including time interaction variables in the model. Where violations of the proportional sub-hazards assumption were found, the effect of the hazard functions on time to sexual debut was interpreted accordingly.

The results showed that race was a predictor of voluntary sexual debut in females and males. Race had no effect on the hazard of coerced sexual debut for females but was significant and varied with time for males. Other key results were that post-school maternal education made coerced sexual debut sex less likely for males and females; a high socioeconomic status made coerced sexual debut less likely for females; perceived religiosity was not found to be a significant variable in affecting the hazard of voluntary sexual debut for both males and females and females who reported to be very religious had a higher hazard of being coerced relative to those who were classified as somewhat religious. Engagement in foreplay for both female and male adolescents was associated with higher levels of coerced sex relative to those who did not engage in foreplay. Foreplay was not found to play a significant role in voluntary sexual debut in males.

The methods used in this study and the results provide important insights into the factors that determine the age and nature of sexual debut in a South African context. Few studies have been

conducted in South Africa on coerced sexual debut, however, but there is increasing interest in this area due to its association with adverse social and health implications.

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