

No Clear Relationship Found Between Circumcision and Age at Sexual Debut Among Men in Sub-Saharan Africa

Young men's circumcision status does not have a consistent relationship with their age at sexual debut, according to an analysis of data from six Sub-Saharan African countries.¹ The study found that the procedure was associated with a 3–4% decrease in age at first sex in three countries, consistent with concerns that circumcised men might be more likely than others to engage in risky sex because they feel they are somewhat protected by being circumcised. However, circumcision was associated with a 4–6% increase in age at first sex in two countries, and had no association with sexual debut in another.

Concerns about risk compensation have been raised since the advent of medical circumcision. Although circumcision reduces the risk of HIV transmission, that benefit could be diminished or lost if circumcised men feel that they can safely forgo the use of condoms. Similarly, if circumcised youth are less concerned than their peers about HIV and other STIs, they may begin having sex at an earlier age, which would increase the length of their exposure to premarital transmission.

To examine this issue, researchers analyzed data from Demographic and Health Surveys fielded between 2010 and 2013 in six Sub-Saharan African countries: Ethiopia, Mali, Namibia, Rwanda, Togo and Uganda. Analyses were restricted to sexually experienced, never-married males aged 12–24 who reported their age at first sex and their circumcision status. The survey did not distinguish between circumcisions obtained for health reasons (e.g., HIV prevention) and those done for traditional or ritualistic reasons. The relationship between circumcision status and age at first sex was assessed using logistic models that estimated time ratios, which expressed how much earlier or later circumcised men had sex for the first time compared with uncircumcised men. Covariates in the analyses included place of residence (urban vs. rural), religion, sex of the household head, education, wealth, region, and exposure to television and radio, as well as two three-item

scales that measured knowledge of HIV risk (e.g., whether condoms protect against HIV) and belief in transmission myths (e.g., whether sharing food can transmit the virus).

Sample sizes ranged from 1,968 young men in Uganda to 8,313 in Ethiopia. Circumcision was nearly universal among respondents in Togo (98%), Mali (97%) and Ethiopia (92%), but far less common in Uganda (29%), Namibia (26%) and Rwanda (15%). Even in the low-prevalence countries, however, the majority of youth in certain subgroups had undergone the procedure: For example, 87% of Namibian youth who had more than a secondary education and 56% of their counterparts in Rwanda had been circumcised.

Hazard functions and bivariate analyses suggested that the strength and direction of the relationship between circumcision status and age at sexual debut varied among countries. Multivariate analyses confirmed these findings. In models that included all covariates, sexual debut occurred earlier among circumcised youth than among uncircumcised youth in Rwanda (by 4%), Uganda (3%) and Namibia (3%), while it occurred later in Ethiopia (4%) and Mali (6%). No relationship was evident in Togo.

Relationships between covariates and age at first sex also were generally inconsistent. For example, youth with a secondary or higher education initiated sex later than less-educated youth in Rwanda, Uganda and Togo, but earlier in Namibia and Mali. In at least half of the countries, higher levels of HIV knowledge were associated with later sexual initiation and watching television was associated with earlier initiation, but other variables showed mixed results (e.g., religious affiliation) or no association with age at sexual debut (wealth). Circumcision's relationship with sexual initiation even varied within countries: In Uganda, Namibia and Togo, circumcision was associated with earlier initiation in some parts of the country and later initiation in others.

Limitations of the analysis, according to the authors, include its reliance on self-reports

for circumcision status, its focus on only one potential manifestation of risk compensation and its inability to differentiate between medical and traditional circumcision. Moreover, the cross-sectional nature of the study precludes assumptions of causal relationships.

However, the researchers note that the findings do suggest that the association between circumcision and age at sexual debut “is historically specific and varies across countries.” Thus, risk compensation may be a concern in some contexts but not in others. For example, circumcision was associated with earlier sexual debut in the three countries that have recently initiated mass medical circumcision programs, which may reflect perceptions that circumcision makes men “immune from sexually transmitted diseases” or that it is a “rite of passage” that “confers seniority, virility and the permission to have sex.” The authors recommend that countries that introduce or expand circumcision programs consider the “context-specific factors” that may influence the behavioral impact of the procedure, and that policy regarding such programs should be “informed by a grounded understanding of the social history of [circumcision]” in relevant areas.—*P. Doskoch*

REFERENCE

1. Kangmenaaang J et al., Circumcision status and time to sexual debut among youth in Sub-Saharan Africa: evidence from six Demographic and Health Surveys, *AIDS & Behavior*, 2016, 20(11):2514–2528.