Introduction of alcohol found to adversely impact fertility rates in hunter-gatherer community

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Fernando Ramirez Rozzi, a research director with the French National Centre for Scientific Research has found that the introduction of alcohol

to a Baka pygmy hunter-gatherer society caused fertility rates to fall. In his paper published in *Proceedings of the National Academy of Sciences*, Rozzi describes his study of the small community in Cameroon.

The Baka people are an ethnic group of Pygmies who live in the rainforests of Congo, Gabon and Cameroon. They remain today one of the few hunter-gatherer groups—males hunt animals and catch fish while women also fish using a technique known as fish bailing. The women also collect food that grows naturally in the rainforest, and in some instances, maintain small gardens where they grow cassava, plantains and bananas. Rozzi has been studying the Baka people for over a decade, but it was only recently that he began to take a serious look at how they were being affected by alcohol.

Eight years ago, he reports, a woman opened a bar in the village. She sold drinks by the bag that were made using methanol and ethanol. The social impacts were obvious, Rozzi reports. The villagers abandoned their prior favorite hangout, a Catholic mission, and made the bar the center of village life. But then, something unexpected happened—women began complaining about not being able to have as many children as their mothers or grandmothers. Intrigued by their complaints, Rozzi studied birth records kept by the nuns at the Catholic mission and those he had collected on his own. He noted that prior to the introduction of alcohol to the community, the average woman had seven babies in her lifetime. And that average had risen to 8.8 just before the bar opened. A few years later, though, fertility rates began to drop. After 2011, he found the rate had dropped to just 5.6 babies per woman and was even lower for younger women.

Rozzi notes that the type of beverage sold at the bar is actually illegal in Cameroon due to the damage it can cause. Prior studies have shown that in addition to causing death and nervous disorders, it can also cause infertility. He notes that the huge drop in fertility among the younger

women—the ones who drank most often—suggests very strongly that it was the introduction of alcohol that has led to the drop in the fertility rate.

More information: Fernando V. Ramirez Rozzi. Reproduction in the Baka pygmies and drop in their fertility with the arrival of alcohol, *Proceedings of the National Academy of Sciences* (2018). DOI: 10.1073/pnas.1719637115

Abstract

To understand the diversity of human growth and development from an evolutionary point of view, there is an urgent need to characterize the life-history variables of vanishing forager societies. The small body size of the Baka pygmies is the outcome of a low growth rate during infancy. While the ages at sexual maturity, menarche, and first delivery are similar to those in other populations, fertility aspects are unknown. In the Le Bosquet district in Cameroon, thanks to systematic birth records kept from 1980 onwards, we were able to assign ages to individuals with certainty. This study, based on chronological records and on data collected from 2007 to 2017, presents life-history variables related to fertility and mortality among the Baka pygmies: total fertility rate, age-specific fertility rate, completed family size, reproductive span, age at menopause, and infant and juvenile mortality. The Baka present low infant and juvenile mortality, and their fertility pattern differs from that of other forager societies in the higher age-specific fertility rates found in the two lower age classes. Future studies will need to assess whether this particular pattern and the short interbirth interval are related to highly cooperative childrearing, which in the Baka is associated with slow growth. The fertility rate has fallen drastically since 2011, and this matches the arrival of cheap alcohol in the community. Our data provide a first-hand record of the impact of alcohol on fertility in a hunter-gatherer society which appears to be seriously compromising the survival of the Baka.