Studying neonatal circumcision and its effect on the sexual health of adult men and their sexual partners

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By Jennifer Bossio and Eric Brousseau
Photo by Eric Brousseau

Male circumcision is one of the most commonly performed surgical procedures worldwide, and it is considered a routine practice among many North American neonates. Clinical Psychology PhD Student Jennifer Bossio, who studies human sexuality, is using empirical measures to research further into the impact of circumcision in later life. Jennifer is one of the first researchers to use objective measures to test whether neonatal circumcision has an effect on the sexual health and functioning of adult men and their sexual partners.

“A policy statement by the American Association of Pediatrics (AAP) was recently released endorsing neonatal circumcision in the US. This is likely to impact rates of circumcision in Canada as well as the States," explains Jennifer. "Given the current state of the research on circumcision, I would argue that this statement is premature. I am hoping that my research will help better inform the public about possible long-term consequences of neonatal circumcision on men's sexuality".

Although research does exist to illustrate health benefits associated with circumcision, the results of this literature are mixed. Furthermore, the core body of research is not necessarily applicable to North American populations. For example, the AAP’s report places a heavy emphasis on research suggesting that circumcision reduces HIV transmission. However, these studies were based on non-North American populations, and ignore potentially important differences in the way that circumcision is performed between the two locations. For example, most of the non-North American studies involved the circumcision of adult men versus neonates. It is not known if neonatal circumcision has the same protective benefits as circumcision performed later in life. Although circumcision as an “immunization” against HIV may be beneficial in countries with very high rates of HIV transmission, this may not be the most effective means of HIV prevention in North America.

Furthermore, very little research exists on whether the removal of the foreskin has an impact on sexual functioning of men or their partners. "I think that medicine often forgets that there is a pleasure element to
sex, and ignoring that element may have very tangible and negative consequences for sexually active men and their partners,” says Jennifer. “This is one of my favourite parts about the study of human sexuality; it is a place where multiple research foci meet, including medicine, psychology, even physiotherapy. I hope that this research helps break down some of the silos that exist in sexuality research and lead to a more inclusive view of the topic.”

“Given that we know sexual functioning is intricately tied to quality of life,” Jennifer explains, “I believe that exploring the implications of neonatal circumcision on this outcome represents an important question—one that has received surprisingly little empirical attention given the high prevalence rates of the procedure.” It is estimated that about 32% of males in Canada are circumcised.

Jennifer’s research has two aims. First, she is using a series of online surveys to explore men’s physical, sexual, and mental health, and the impact of circumcision on these factors. She is also interested in learning about the impact of circumcision on men’s sexual partners. “It is naïve to believe that—if we find circumcision does impact aspects of men’s sexual lives—the impact does not extend beyond the individual. This question has simply never been looked at with vigorous empirical research.”

Second, Jennifer is looking at the impact of circumcision on men in the lab. She is using psychophysical and psychophysiological measures to test whether circumcised and intact (i.e., uncircumcised) men differ in terms of their penile sensitivity and in their genital arousal. Interested men are encouraged to contact the Sexual Health Research Lab for more information.

“My hope is that this body of research will be used to inform public policy makers, as well as parents of infant boys”, Jennifer says, “since the decision of whether or not to circumcise their sons is one that most parents of male infants will be faced with.”

Jennifer’s research is conducted in the Sexual Health Research Lab under the supervision of Dr. Caroline Pukall. “This lab environment is wonderful,” says Jennifer. “I feel so supported, and I have access to some of the most state-of-the-art technology for measuring sensitivity and genital arousal”. For example, Jennifer is using a device called the Laser Doppler Imager, or LDI, to measure men’s genital arousal in the lab. “It’s actually based on the same technology used to make those coloured weather maps you see on TV. We’ve just found a very different use for the technology,” she jokes. “This device is unique in that—unlike other, more commonly used techniques for measuring men’s sexual arousal—we are able to obtain a direct measure of blood flow in the penis. Most other technologies rely on indirect measures, such as penile engorgement or temperature. It’s certainly a great opportunity to be able to pioneer a new technology like this with men.”

“I’ve learned a lot since beginning my research on circumcision,” explains Jennifer. “I’ve heard from men all over the world who have shared stories about distress over their circumcision status. I feel fortunate that they are willing to share their story with me. Regardless of what we find—whether circumcision decreases penile sensitivity, increases it, or has absolutely no difference—I hope that this research is used to make a difference in people’s lives in some small way.”