

# The effect of male circumcision on sexuality

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## OBJECTIVE

To prospectively study, using a questionnaire, the sexuality of men circumcised as adults compared to uncircumcised men, and to compare their sex lives before and after circumcision.

## SUBJECTS AND METHODS

The study included 373 sexually active men, of whom 255 were circumcised and 118 were not. Of the 255 circumcised men, 138 had been sexually active before circumcision, and all were circumcised at >20 years of age. As the Brief Male Sexual Function Inventory does

not specifically address the quality of sex life, questions were added to compare sexual and masturbatory pleasure before and after circumcision.

## RESULTS

There were no significant differences in sexual drive, erection, ejaculation, and ejaculation latency time between circumcised and uncircumcised men. Masturbatory pleasure decreased after circumcision in 48% of the respondents, while 8% reported increased pleasure. Masturbatory difficulty increased after circumcision in 63% of the respondents but was easier in 37%. About 6% answered

that their sex lives improved, while 20% reported a worse sex life after circumcision.

## CONCLUSION

There was a decrease in masturbatory pleasure and sexual enjoyment after circumcision, indicating that adult circumcision adversely affects sexual function in many men, possibly because of complications of the surgery and a loss of nerve endings.

## KEYWORDS

male circumcision, sexuality, masturbation

## INTRODUCTION

Male circumcision removes 33–50% of the penile skin, and nearly all of the penile fine-touch neuroreceptors [1]. While there has been debate about whether circumcision affects sexual sensation of the penis, there have been few relevant studies. Studies of circumcision and sexual function have been mostly done on neonatally circumcised males [2,3], and little difference was found in sexuality in these studies. Two studies on males who were circumcised as adults for mostly medical [4] and mostly religious [5] reasons were inconclusive. We recently reported that South Korea has a surprisingly high circumcision rate [6,7]; it is the only country among its geographical and cultural neighbours in which most boys are circumcised. Male circumcision started 50 years ago in South Korea, and now the country has one of the highest male circumcision rates in the world. As circumcision in South Korea has never been predominantly neonatal, most circumcisions were of boys, adolescents and adults. Therefore, South Korea can provide unique clues about the effects of adult circumcision on sexuality. In an attempt to answer whether adult circumcision affects sexuality, we

performed a prospective study comparing men who were circumcised or not, and comparing the sex lives of men before and after circumcision.

## SUBJECTS AND METHODS

The study included 373 sexually active men (aged 30–57 years) of whom 255 were circumcised (mean age 37.1 years, SD 5.3, range 30–57) and 118 were not (mean age 38.2 years, SD 5.3, range 30–54). Of the 255 circumcised men, 138 were sexually active before circumcision, and all were circumcised at the age of  $\geq 20$  years. To address the effects of circumcision on the quality of sex life, including masturbation, we modified the Brief Male Sexual Function Inventory (BMSFI) to include questions on whether sex life and masturbatory pleasure had improved or worsened after circumcision. In addition, we asked about ejaculation latency times (ELTs) and whether scars were left after circumcision. The questionnaire had 11 questions (Appendix); questions 1–4 are similar to those in the BMSFI, but additional questions on ELT (question 5) and masturbation (question 6) were included. To focus on the effects of circumcision on their

sexual lives, only those 138 men who could compare the quality of their sex lives including masturbation before and after circumcision were asked to complete questions 7–11, which compare the quality of sex life before and after circumcision.

Chi-square analyses were used to determine significance differences, with  $P < 0.05$  considered to indicate statistical significance.

## RESULTS

There were no statistically significant differences in sexual drive, erection and ejaculation between circumcised and uncircumcised men (questions 1–4; data not shown). There was a slightly longer ELT in uncircumcised men at a mean (SD) of 12.7 (7.4) min than in circumcised men, at 10.9 (7.3) min (difference not statistically significant). There was a significantly higher 'sometimes' response in the uncircumcised men in masturbation frequency (question 6;  $P < 0.05$ ), indicating that they have slightly higher overall masturbation frequency than circumcised men. Comparisons of masturbation frequency between the

circumcised and uncircumcised men are shown in Fig. 1 (question 6).

Masturbatory pleasure decreased after circumcision in 48% ( $P < 0.05$ ) of men compared with 8% who reported increased pleasure. The remaining 44% reported 'no change' (question 7) (Fig. 2). Masturbatory difficulty increased after circumcision in 63% ( $P < 0.05$ ) and masturbation became easier in 37% (question 8) (Fig. 3). There was little change in masturbation frequency after circumcision (question 9).

For the effect of circumcision on their sex lives (question 10), 74% reported 'no change', ≈6% answered that 'their sex lives got better', and 20% reported worse sex lives after circumcision (Fig. 4). For those who reported a better or worse sex life after circumcision, we asked why they felt that their sex lives had improved (question 10-1) or worsened (question 10-2). Most reported improved or lost sensation as the chief causes for better or worse sex lives. Other causes for a worse sex life included insufficient skin resulting in uncomfortable erection, erectile curvature from uneven skin loss, pain and bleeding upon erection/manipulation, severe scarring, and reduced penile size.

Respondents reported wide-ranging physical consequences of circumcision (question 11), the most common being scarring; there were small scars in 63% and large scars in 9% of the circumcised men (Fig. 5).

## DISCUSSION

In South Korea, many men are circumcised as adults, after they have led active sex lives; these men can compare their sex lives before and after circumcision. This is because circumcision in South Korea is a relatively recent event, having reached >100% circumcision rate (compared with the male birth population) in the last 20 years. This unique situation, in terms of research on circumcision's effect on sexuality, contrasts with other cultures where adult circumcision is rare, simply because circumcision is practised on neonates or pre-teens. Even when such men have been found and interviewed [4,5,8], they do not represent the general population, but those with medical indications [4] or religious convictions about circumcision [5]. In this sense, South Korea provides a unique opportunity to study the

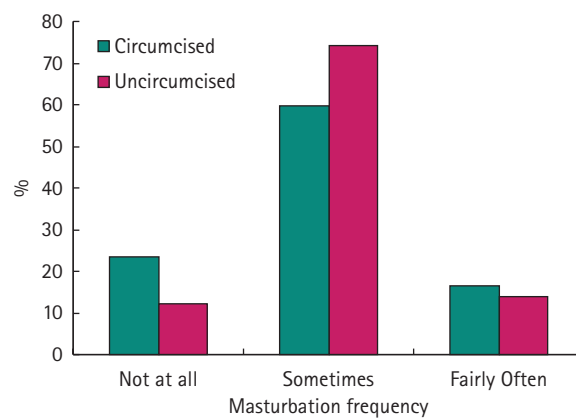


FIG. 1. The masturbation frequency of circumcised and uncircumcised men. There was a significantly higher 'sometimes' response in the uncircumcised men in masturbation frequency ( $P < 0.05$ ).

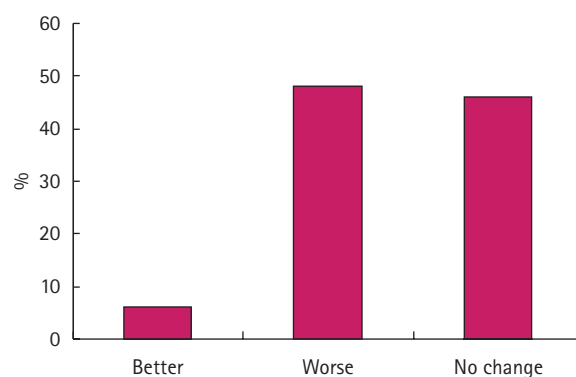


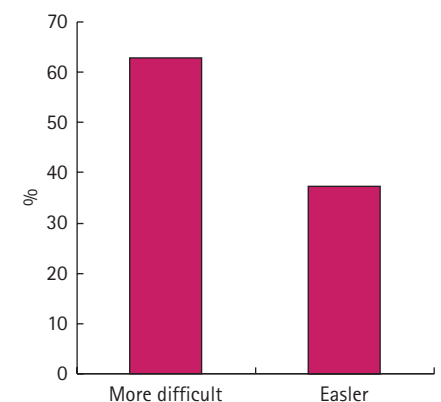
FIG. 2. Masturbatory pleasure before and after circumcision. Masturbatory pleasure decreased after circumcision in 48% ( $P < 0.05$ ) compared with 8% who reported increased pleasure.

effect of circumcision on sexual activity in a truly general population.

The BMSFI was designed by O'Leary *et al.* [9] to measure sexual desire, erectile function, ejaculation, problem assessment, and overall satisfaction. Although validated and in wide use, the BMSFI is inadequate for differentiating changes in sexual pleasure before and after circumcision. For this reason, we retained only some of the original BMSFI questions and added some more specific questions about sexual and masturbatory pleasure, in particular to differentiate effects of circumcision on sex life.

That there were no statistically significant differences between circumcised and uncircumcised men in sexual drive, erection, and ejaculation agrees with a previous study by Senkul *et al.* [5]. The longer ELT reported in uncircumcised men is numerically in agreement with O'Hara and O'Hara [10], who reported an ELT of 14.9 min for uncircumcised men and 10.7 min for circumcised men, but this difference was not statistically significant. The overall ELTs for both circumcised and uncircumcised men are

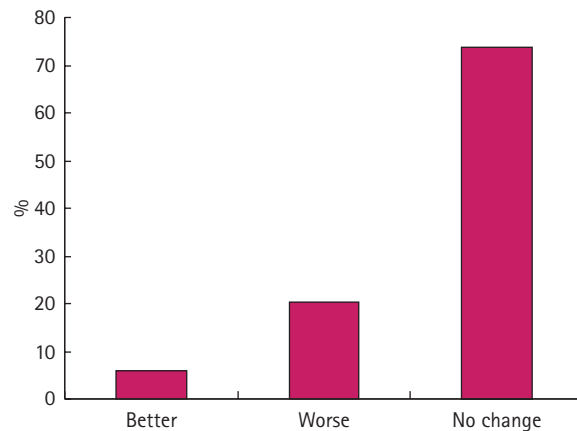
FIG. 3. Masturbatory difficulty before and after circumcision. Masturbatory difficulty increased after circumcision in 63% ( $P < 0.05$ ) and masturbation got easier in 37%



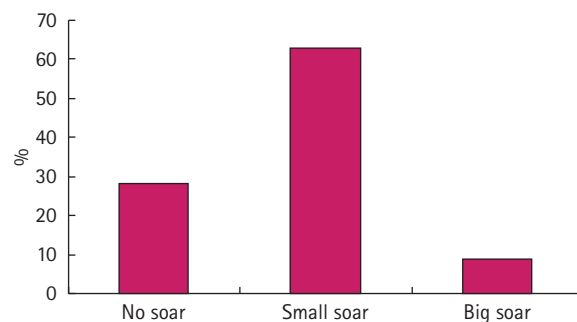
much longer than found in the Senkul *et al.* [5] study.

The effect of circumcision on masturbation is interesting, as preventing masturbation was one of the main original reasons often cited for the popularity of circumcision in America. The

**FIG. 4.**  
Sexual pleasure before and after circumcision. Sexual pleasure decreased after circumcision in 20% ( $P < 0.05$ ) but got better in 6%, with the remainder reporting 'no change'.



**FIG. 5.**  
Respondents reported wide-ranging physical consequences after circumcision; the most common was scarring.



frequency of masturbation seems to have decreased only slightly after circumcision, but there was a striking difference in the pleasure of masturbation, with 48% reporting less pleasure from masturbation after circumcision, in contrast to 8% who reported more pleasure. We think that this is one of the most important findings of the present study. This is consistent with more men finding masturbation more difficult after circumcision, possibly because of the loss of the foreskin.

Of the 138 men aged >30 years who could compare their sex lives before and after circumcision, >70% (102) reported that there was no difference. However, circumcised men were more than three times more likely to report less enjoyable sex lives after circumcision than better sex lives (28 vs eight men). While decreased sensation was the most frequently cited reason (21 of 28 men) for a less enjoyable sex life, complaints about the physical effects of circumcision on their penises and consequent adverse effects on sex life were also prominent (13 of 28; multiple complaints were separately counted). While this is consistent with our earlier study [7], it suggests that more attention should be given to anatomical alteration of the male

genitalia by circumcision. This conclusion is supported by the reports of major scars by  $\approx 9\%$  of the circumcised men in the present study.

In summary, we studied the effects of circumcision on sexuality. There were no differences in sexual drive, erection and ejaculation, but circumcised men reported decreased masturbatory pleasure and sexual enjoyment. We conclude that adult circumcision adversely affects sexual function in a significant number of men, possibly because of loss of nerve endings. In addition,  $\approx 9\%$  of the circumcised men reported severe scarring of their penises, and this population probably overlaps with those who reported insufficient skin resulting in uncomfortable erections, penile curvature from uneven skin loss, and pain and bleeding upon erection/manipulation.

#### ACKNOWLEDGEMENT

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#### CONFLICT OF INTEREST

None declared.

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**Abbreviations:** BMSFI, Brief Male Sexual Function Inventory; ELT, ejaculatory latency time.

## APPENDIX

## QUESTIONNAIRE

A. How old are you?

B. Are you circumcised?

C. If you are circumcised, how old were you when circumcised?

1. During the past 30 days, on how many days have you felt sexual drive?

- (a) No days
- (b) Only a few days
- (c) Some days
- (d) Most days
- (e) Almost every day

2. During the past 30 days, how often have you had sexual relationships with female partner(s)?

- (a) Not at all
- (b) 1–2
- (c) 3–4
- (d) 5–6
- (e) 7–10
- (f) More than 10
- (g) Almost every day

3. How much difficulty have you had ejaculating when you have been sexually stimulated?

- (a) No difficulty
- (b) Little difficulty
- (c) Some difficulty
- (d) Almost every time

4. When you had erections, how often were they firm enough to have sexual intercourse?

- (a) Almost every times
- (b) Most times
- (c) Some times
- (d) Only a few times
- (e) Not at all

5. What is your average duration of coitus?

6. How often do you masturbate?

- (a) Not at all
- (b) Sometimes
- (c) Fairly often

7. Is your masturbatory pleasure better or worse after circumcision?

- (a) Better
- (b) Worse
- (c) No change

8. Do you find it easier or more difficult to masturbate after circumcision?

- (a) More difficult
- (b) Easier

9. Has your frequency of masturbation changed after circumcision?

- (a) Higher
- (b) Lower
- (c) No change

10. Has your sex life improved or worsened after circumcision?

- (a) Better
- (b) Worse
- (c) No change

If you answered (a) or (b) question 10, please answer question 11.

11. Do you have scar(s) in your penis after circumcision?

- (a) No scar
- (b) Small scar
- (c) Big scar