Circumcision: We Have Heard From the Experts; Now Let’s Hear From the Parents

Robert Adler, MD, MsED*; Sandra Ottaway, MA‡; and Stacey Gould, MA‡

ABSTRACT. Objective. The current study sought to investigate parental attitudes about circumcision and their satisfaction with the decision.

Methodology. Parents of boys (6 months to 36 months old) in 3 different practices filled out a questionnaire while waiting for their child’s well-child examination.

Results. A total of 149 families were surveyed. Families (68) who did not have their sons circumcised were less satisfied with their decision. Compared with families (81) of circumcised children, parents of uncircumcised boys were less likely to have been asked by their physician about whether they wanted their child circumcised, believed that they did not receive adequate information about the procedure, felt less respected by their medical provider, and were more likely to reconsider their decision.

Conclusion. The importance of adequate information and discussion is highlighted by this study. Pediatrics 2001;107(2). URL: http://www.pediatrics.org/cgi/content/full/107/2/e20; circumcision, doctor-patient communication, parental satisfaction.

ABBREVIATIONS. AAP, American Academy of Pediatrics; CHLA, Children’s Hospital Los Angeles.

R ecently, the American Academy of Pediatrics (AAP) updated their policy on circumcision.1 The policy represents a well thought out, reasoned approach to the highly charged issue of circumcision. The policy stresses the importance of accurate and impartial information provided to the family for discussion with their physician. Routine circumcision is not recommended but the authors cite new medical evidence in support of circumcision. This new information, notably studies relating a higher incidence of urinary infection in the uncircumcised,2 led to a reassessment of the policy. This differs from the AAP policy in 1971,3 which indicated that circumcision is not medically indicated.

Wiswell et al4 reported an increase in postneonatal circumcision from 1985 to 1993. No data were presented as to why this was occurring. At our institution in the primary care practice, it was also noted that an increasing number of parents were requesting late circumcision. Discussions with the families suggested dissatisfaction with the original decision regarding circumcision. This study was undertaken to document the degree of satisfaction that parents have with their initial decision, and how they perceive physician involvement in the decision process.

METHODS

Participants

Parents of male children under 3 years of age were recruited from 3 clinical practices in the Los Angeles area (La Canada, Inglewood, and Children’s Hospital Los Angeles [CHLA]), while they are waiting for their children’s routine appointments. The survey was conducted from February to April 1999. The practice sites were picked because of the diverse population served by the physicians. The practice in La Canada is in a suburban high-income community; the practice in Inglewood is an inner-city practice serving the black community, and the primary care practice at CHLA serves a low income, ethnically mixed, but predominantly Hispanic population.

Instrument

The Parental Attitudes on Circumcision Questionnaire, a questionnaire designed by the authors of this study, consisted of a 25-item scale (see “Appendix”). Items consisted of demographic information, circumcision status of child, reasons that influenced decision, information received about circumcision, and satisfaction level with decision made, as well as care provided by the medical community. Questions were presented in a multiple-choice format and fill-in the blank. The parent could choose to fill out the Parental Attitudes on Circumcision Questionnaire in Spanish, which had been translated by the research staff at CHLA.

Consent was obtained and the institutional human protection committee approved the questionnaire.

Statistical Analyses

Descriptive statistics were used for the majority of the questionnaire. Nonparametric tests (2-way contingency table analysis using cross-tabs) were used for the forced choice items. These included circumcision status versus whether they reconsidered their decision, whether doctor’s respected their decision, and whether they received enough information, and site of pediatric practice. Kruskal-Wallis tests were used to analyze the relationship between the level of satisfaction with the parent’s decision to circumcise or not circumcise their child and circumcision status, as well as level of satisfaction with their decision and site of pediatric practice.

RESULTS

A total of 149 surveys were completed and returned by the participants: 46.5% (n = 69) were from a private pediatric practice in La Canada, California; 30.2% (n = 45) were from the primary care clinic at CHLA; and 23.5% (n = 35) were from a private pediatric practice in Inglewood, California. The majority of the participants (132/88.6%) were patients’
mothers, 13 fathers (8.7%); 2 other relatives (1.3%); and 2 were foster parents (1.3%). The sample represented a variety of ethnic backgrounds comprising of 34.9% white (n = 52), 28.9% black (n = 43), 23.5% Latino (n = 35), 4% Asian American (n = 5), 7.9% Native American (n = 1), and 8.1% other (n = 12).

The sample was diverse in terms of socioeconomic status: 24.2% with incomes below $15,000 and $29,999 (n = 31), 6.7% with incomes between $30,000 and $49,999 (n = 10), 12.8% with incomes between $50,000 and $69,999 (n = 19), 10.7% with incomes between $70,000 and $89,999 (n = 16), and 22.8% with incomes above $90,000. Two percent of the sample (n = 3) did not answer the income question.

The sample also varied in terms of education level (Table 1). Of the mothers, 7.4% completed grades 0 through 11, 18.1% graduated high school, 21.5% attended some college, while 33.6% graduated from college and 10.1% obtained a graduate degree. The remaining 8.7% went to a technical/trade school.

A 2-way contingency table analysis was conducted to evaluate whether the practice site was related to family income. The 2 variables were site of practice (CHLA, Inglewood, and La Canada) and annual family income level (below $15,000; between $15,000 and $29,999; between $30,000 and $49,999; between $50,000 and $69,999; between $70,000 and $89,999; and above $90,000). Site of pediatric practice and annual family income level were found to be significantly related (Pearson χ² [10; n = 146] = 118.377; P < .001 Cramer’s V = .64). The participants at the La Canada site reported a significantly higher annual family income than did participants at the CHLA or Inglewood sites.

To evaluate whether circumcision status was significantly related to practice site, a 2-way contingency table analysis was performed. The 2 variables were circumcision status (circumcised and not circumcised) and site of pediatric practice (CHLA, Inglewood, and La Canada). Circumcision status and site of pediatric practice were found to be significantly related (Pearson χ² [2; n = 149] = 49.98; P < .001 Cramer’s V = .58). The proportion of parents who had their child circumcised at CHLA, Inglewood, and La Canada, respectively, were 16%, 49%, and 83%. Follow-up pairwise comparisons were conducted to evaluate the difference among these proportions. The Holm’s sequential Bonferroni method was used to control for type I error at the .05 level across all 3 comparisons. All 3 comparisons were significant, with La Canada having the largest proportion of circumcised males, followed by Inglewood, and then CHLA.

A Kruskal-Wallis test was conducted to evaluate differences among the 3 pediatric practice sites (La Canada, Inglewood, and CHLA) on median satisfaction level with the decision to circumcise or not circumcise their child. The test results were significant ([2; n = 148] = 17.73; P = .001). The proportion of variability in the ranked dependent variable accounted for by the site of the pediatric practice was .12, indicating a fairly strong relationship between site of pediatric practice and the satisfaction level with the decision to circumcise or not circumcise the child. Follow-up tests were conducted using the Mann-Whitney U procedure to evaluate pair differences among the 3 groups. Type I error was controlled for across the tests using the Holm’s sequential Bonferroni approach. The results of these tests indicated a significant difference between the CHLA site and the La Canada site (z = −3.98; P < .001) and a significant difference between the Inglewood site and the La Canada site (z = −3.03; P = .002). In both cases, the participants at the La Canada site were more satisfied with their decision to circumcise or not circumcise the child than those at the Inglewood or CHLA sites.

Ethnic differences between the practices were consistent with the study design reflecting a predominantly Hispanic population at CHLA (62%), black population in Inglewood (86%), and white (71%) in La Canada (Table 1). For analysis purposes, the practice site can serve as a proxy for ethnic difference.

Some parents/custodial relatives chose not to participate in the study (<10 families in all 3 sites). Some of the reasons were: not having enough time to fill out the questionnaire, needing to attend to their child (or children) in the waiting room/examination room, not being the biological parent (foster parent or relative), or not being interested in participating. Five of the 149 returned questionnaires were in Spanish.

Of the 149 boys, 68 were not circumcised (45.6%) and 81 were circumcised (54.4%). The majority of the circumcisions 75 (93%) were completed before the child was 8 weeks old. The decision whether to circumcise the child was most often made by both parents (n = 79 [53.0%]); followed by the mother (n = 46 [30.9%]); the father (n = 15 [10.1%]); other family member (n = 3 [2.0%]); and/or a health care provider (n = 5 [3.4%]). One survey did not contain data on who made the decision to circumcise or not circumcise the child. The majority of parents (n = 124 [83.2%]) agreed on the decision to circumcise or not circumcise the child; 14 (9.4%) did not agree; 10 (6.7%) participants did not have the other parent

<table>
<thead>
<tr>
<th>TABLE 1. Practice Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>% circumcised</td>
</tr>
<tr>
<td>Ethnicity</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Asian-American</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Mother</td>
</tr>
<tr>
<td>Less than high school</td>
</tr>
<tr>
<td>High school graduate</td>
</tr>
<tr>
<td>Some college</td>
</tr>
<tr>
<td>College graduate</td>
</tr>
<tr>
<td>Trade school</td>
</tr>
<tr>
<td>Graduate school</td>
</tr>
<tr>
<td>Family income</td>
</tr>
<tr>
<td>$0–$14,000</td>
</tr>
<tr>
<td>$15,000–$49,000</td>
</tr>
<tr>
<td>$50,000–$89,000</td>
</tr>
<tr>
<td>$90,000 or more</td>
</tr>
</tbody>
</table>
involved in the decision; and 1 survey was missing data on this question.

The reasons the child was or was not circumcised are presented in Table 2 (the participant could check as many possibilities as they felt relevant). The most prevalent reason cited was mother’s choice. The parent was asked to rank which of the items they chose were most important in their decision. The most important reason to circumcise or not circumcise the child was health reasons (n = 35 [23.5%]). The other reasons, in order of importance, were: not necessary (n = 26 [17.4%]); father’s choice (n = 25 [16.8%]); mother’s choice (n = 19 [12.8%]); so the child looks like his father (n = 12 [8.1%]); too painful (n = 8 [5.4%]); religious practice (n = 5 [3.4%]); so the child looks like his peers (n = 5 [3.4%]); other reason written in by participant (n = 5 [3.4%]); advice of doctor (n = 4 [2.7%]); so the child looks like his brothers (n = 2 [1.3%]); the child was born premature (n = 2 [1.3%]); and circumcision too dangerous (n = 1 [0.7%]).

On a 1 to 10 (most) scale, the participants were asked to rank their satisfaction with their circumcision decision. The mean level of satisfaction with the decision to circumcise or not circumcise their child was 7.56 (standard deviation: 2.56; range: 1–10). When asked whether they would make the same decision about circumcising or not circumcising their child, 122 participants (81.9%) responded that they would make the same decision, 23 (15.4%) responded that they would not make the same decision, 1 (0.7%) said that they didn’t know, and 3 participants did not answer this question. When asked whether they ever reconsidered the decision to circumcise or not circumcise the child, 119 said no (79.9%), 29 said yes (19.5%) they had reconsidered the decision, and 1 survey was missing data on this question. Of those 29 who had reconsidered the decision, 16 (55.2%) reconsidered the decision when the child was between 0 and 2 months old; 8 participants (27.6%) reconsidered the decision when the child was between 3 and 6 months old; 3 (2.0%) reconsidered the decision when the child was between 7 and 12 months old; 1 (0.7%) reconsidered the decision when the child was between 13 and 18 months old; and 1 (0.7%) reconsidered the decision when the child was between 25 and 30 months old.

### TABLE 2. Reasons Given For Decision

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s choice</td>
<td>89</td>
<td>59.7</td>
</tr>
<tr>
<td>Father’s choice</td>
<td>74</td>
<td>49.7</td>
</tr>
<tr>
<td>Health reasons</td>
<td>59</td>
<td>39.6</td>
</tr>
<tr>
<td>Looks like father</td>
<td>34</td>
<td>22.8</td>
</tr>
<tr>
<td>Not necessary</td>
<td>30</td>
<td>20.1</td>
</tr>
<tr>
<td>Doctor’s advice</td>
<td>21</td>
<td>14.1</td>
</tr>
<tr>
<td>Religious practice</td>
<td>18</td>
<td>12.1</td>
</tr>
<tr>
<td>Circumcision painful</td>
<td>18</td>
<td>12.1</td>
</tr>
<tr>
<td>Looks like peers</td>
<td>11</td>
<td>7.4</td>
</tr>
<tr>
<td>Looks like brother(s)</td>
<td>10</td>
<td>6.7</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>5.4</td>
</tr>
<tr>
<td>Affect sexual function</td>
<td>7</td>
<td>4.7</td>
</tr>
<tr>
<td>Circumcision dangerous</td>
<td>3</td>
<td>2.0</td>
</tr>
<tr>
<td>Born premature</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Child adopted</td>
<td>1</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Participants were most frequently asked about their decision to circumcise or not circumcise the child before the infant was born (n = 53 [35.8%]). The other times the participants were asked about their decision to circumcise or not circumcise the child included: while in the hospital (n = 33 [22.3%]); in the delivery room (n = 21 [14.2%]); and during the infant’s routine checkup (n = 4 [2.7%]).

The sources that provided participants with information about circumcision are presented in Table 3 (more than one answer possible). The medical provider who asked the participant about the decision to circumcise or not circumcise the child is presented in Fig 1 (more than one answer possible). Obstetricians were the most frequent medical providers who asked about the participant’s decision. However, 43 participants (28.9%) reported that they were not asked by any medical provider about their decision to circumcise or not circumcise the child.

Ninety-four participants (63.1%) reported that they were provided with enough information about circumcision, whereas 55 (36.9%) reported that they were not provided with adequate information. A 2-way contingency table analysis (circumcision, yes/no; sufficient information, yes/no) was conducted to evaluate whether parents who decided to circumcise their son were provided with sufficient information from their medical provider. Circumcision status and information provided were found to be significantly related (Pearson $\chi^2 = 149$ = 11.38; $P = .001$; Cramer’s $V = .28$). The proportion of parents whose son’s were circumcised and who believed that they were provided with enough information was 75%. The proportion of parents whose son’s were not circumcised and who believed that they were provided with enough information was 49%.

When asked whether their medical provider respected their decision to circumcise or not circumcise the child, 129 (86.6%) said yes they felt respected, 17 (11.4%) reported they did not feel respected, and 3 participants (2.0%) did not answer the question. A 2-way contingency table analysis was conducted to evaluate whether parents who did not have their child circumcised felt less respected by their medical provider than those who did have their child circumcised. The 2 variables were circumcision status (yes/no) and whether the parents felt their decision to circumcise their son was respected by their medical provider (respect decision and not respect decision).

### TABLE 3. Where the Participants Learned Information About Circumcision

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstetrics/gynecology</td>
<td>52</td>
<td>34.9</td>
</tr>
<tr>
<td>Pediatrician</td>
<td>50</td>
<td>33.6</td>
</tr>
<tr>
<td>Mother’s side of the family</td>
<td>35</td>
<td>23.5</td>
</tr>
<tr>
<td>TV/radio/newspaper/magazine/books</td>
<td>22</td>
<td>14.8</td>
</tr>
<tr>
<td>Childbirth class</td>
<td>21</td>
<td>14.1</td>
</tr>
<tr>
<td>Father’s side of the family</td>
<td>20</td>
<td>13.4</td>
</tr>
<tr>
<td>Friends</td>
<td>20</td>
<td>13.4</td>
</tr>
<tr>
<td>Other medical provider</td>
<td>8</td>
<td>5.4</td>
</tr>
<tr>
<td>Nurse</td>
<td>6</td>
<td>4.0</td>
</tr>
<tr>
<td>Midwife</td>
<td>3</td>
<td>2.0</td>
</tr>
<tr>
<td>Computer/Internet</td>
<td>3</td>
<td>2.0</td>
</tr>
</tbody>
</table>
circumcised and reported that no medical provider asked them about circumcision. The 2 variables were circumcision status (yes or no) and whether the parents had ever reconsidered their decision. Cognitive dissonance theory would predict that parents who have acted on a decision to circumcise and have limited options to reverse their decision would report less doubt and more satisfaction than parents who believe that they still have an option to circumcise.

One of the barriers to implementing circumcision decisions is financial. The 1999 AAP guidelines stated that circumcision should not be routinely recommended.1 This has made some insurance carriers and health plans less likely to support the need for circumcision or reimburse the procedure. Some participants in the current study who did not have their sons circumcised reported that although they wanted the procedure performed, they were told their insurance benefits did not cover it. These participants stated that they could not afford the additional expense of having the circumcision. The practice (La Canada) with the highest socioeconomic status (presumably the least economic barrier) had the highest circumcision rate. Although supportive of the effect of economic barriers on circumcision, the practice also had the highest percentage of well-educated white parents, characteristics previously identified with higher circumcision rates.5 The covariance of ethnic distribution, income, and education by geographic site made independent analyses statistically meaningless.

The current study, while providing further information about parents' attitudes and satisfaction with their decision to circumcise or not circumcise their child, has some limitations. First, the study was ret-
months. Of the 15 mothers, 6 would choose to have
retracting the foreskin during a visit in the first 6
Seven reported the physician freeing adhesion or
mothers of uncircumcised children by telephone.
uncircumcised infants,7 the authors surveyed 15
circumcised child. In a 1981 study of hygienic care of
source of dissatisfaction may be the care of the un-
often cited for not pursuing the procedure. Another
data), the surgical risks, and pain to the child are
obtain a subsequent postneonatal circumcision, the
participants were unhappy about their decision, 27%
prepared for questions during these well-child visits.
The study documented that 15.4% of all the par-
ticipants were unhappy about their decision, 27%
uncircumcised, 14% circumcised. Only a small num-
ber of parents follow-up on their dissatisfaction to
obtain a subsequent postneonatal circumcision, the
financial barrier ($3000–$4000/procedure, CHLA
data), the surgical risks, and pain to the child are
often cited for not pursuing the procedure. Another
source of dissatisfaction may be the care of the un-
circumcised child. In a 1981 study of hygienic care of
uncircumcised infants,7 the authors surveyed 15
mothers of uncircumcised children by telephone.
Seven reported the physician freeing adhesion or
retracting the foreskin during a visit in the first 6
months. Of the 15 mothers, 6 would choose to have

Overall, it seems that obstetricians are the ones
that are providing the most information about cir-
cumcision, with pediatricians being a close second.
The third and fourth most common sources of inform-
ation are the mother’s side of the family and the
media (TV/radio/newspapers/books). Although
obstetricians and pediatricians were cited as the most
likely source of information, at least one third of the
present sample stated that they did not get informa-
tion about circumcision from these sources. Deci-
sions regarding circumcision are made early. The
obstetrician and family practitioner’s role in educa-
tion and informing are critical, especially for the
primiparous mother. Almost 40% of the participants
believed that they had not been provided with
enough information. For the uncircumcised child,
46% of the parents reported no medical provider
discussed circumcision (as opposed to 15% of par-
ents of circumcised child). In those situations, the
physician de facto made the decision for the family
without informed consent. These statistics are alarming.
It indicates an increased need for medical pro-
viders to provide adequate and thorough informa-
tion about circumcision. It is important that they also
inquire about the parents’ attitudes and their final
decision regarding the circumcision of their child. In
the period after the birth, our survey documented
82.8% of parents reconsidered their decision in the
first 6 months (55.2% in the first 2 months), suggest-
ing physicians need to be sensitive to the issue and
prepared for questions during these well-child visits.

The study documented that 15.4% of all the par-
ticipants were unhappy about their decision, 27%
uncircumcised, 14% circumcised. Only a small num-
ber of parents follow-up on their dissatisfaction to
obtain a subsequent postneonatal circumcision, the
financial barrier ($3000–$4000/procedure, CHLA
data), the surgical risks, and pain to the child are
often cited for not pursuing the procedure. Another
source of dissatisfaction may be the care of the un-
circumcised child. In a 1981 study of hygienic care of
uncircumcised infants,7 the authors surveyed 15
mothers of uncircumcised children by telephone.
Seven reported the physician freeing adhesion or
retracting the foreskin during a visit in the first 6
months. Of the 15 mothers, 6 would choose to have

APPENDIX

Circumcision Questionnaire (Nondemographic Questions)

Is your child circumcised?
No       Yes

Who made the final decision to circumcise or not circumcise your child?
Mother       Father       Other family member
Health care provider

Did both parents agree on the decision to circumcise or not cir-
ecise the child?
Yes       No

Other parent not involved in decision

Age of child at the time of circumcision:
Less than 8 weeks       More than 8 weeks       Don’t know

How many brothers does your child have?

How many are circumcised?

How many are uncircumcised?

From the following list please check/circle the reasons you did or
did not have the child circumcised (check/circle all that apply)
Religious practice       Mother’s choice       Father’s choice
Advice of doctor       So child looks like father       So child looks like his brothers
So child looks like other kids       Health reasons
Believe circumcision is dangerous
Believe circumcision is too painful ________
Sexual Function (pleasure) ________
Born premature ________
Not necessary ________
Child adopted ________
Other reason you did or did not have the child circumcised, (if not listed above):

From the items you checked please identify which was the most important item which influenced your decision (check or circle only one):

Religious practice ________
Mother’s choice ________
Father’s choice ________
Advice of doctor ________
So child looks like father ________
So child looks like his brothers ________
So child looks like other kids ________
Health reasons ________
Believe circumcision is dangerous ________
Believe circumcision is too painful ________
Sexual function (pleasure) ________
Born premature ________
Not necessary ________
Child adopted ________
Item you wrote in above ________

At this time, would you make the same decision regarding your child’s circumcision?

Yes ________
No ________
If no, why?

Was there ever a time in the past where you reconsidered your decision to circumcise or not circumcise your child?

No ________
Yes ________
If yes, how old was your child when you first reconsidered your decision?

0 to 2 months ________
3 to 6 months ________
7 to 12 months ________
13 to 18 months ________
19 to 24 months ________
25 to 30 months ________
31 to 36 months ________

Where did you receive information about the circumcision procedure?

Friends ________
Mother’s side of the family ________
Father’s side of the family ________
Childbirth class ________
Obstetrician (OB/GYN) ________
Pediatrician ________
Nurse ________
Midwife ________
Other medical provider ________
Computer/internet ________
Television/radio/newspapers/magazine ________

When were you asked about your decision to circumcise or not circumcise your child?

Before baby born ________
Delivery room ________
In hospital ________
Routine baby check-up ________
I was not asked ________

Which medical provider asked you about your decision to circumcise or not circumcise your child?

Obstetrician ________
Pediatrician ________
Nurse ________
Midwife ________
Childbirth class instructor ________
Other medical provider ________
No medical provider asked ________

Do you feel you were provided with enough information from your medical provider regarding circumcision?

Yes ________
No ________

Did your medical provider understand (respect) your decision to circumcise/not circumcise your child?

Yes ________
No ________

On a scale from 1 to 10 (with 1 being least satisfied and 10 being most satisfied); how satisfied/content are you with your previous decision to circumcise or not circumcise your child?

1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10

If you would like to comment on the survey or explain any of your answers, please feel free to use this space:

(End of survey)

REFERENCES
Circumcision: We Have Heard From the Experts; Now Let's Hear From the Parents
Robert Adler, MsED*; Sandra Ottaway and Stacey Gould

Pediatrics 2001;107:e20
DOI: 10.1542/peds.107.2.e20

The online version of this article, along with updated information and services, is located on the World Wide Web at:
/content/107/2/e20.full.html