

Parental Satisfaction Survey about the Cosmetic Effect of Circumcision Related to the Technique Used

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ABSTRACT

Background: Circumcision is one of the most commonly performed surgical procedures for cultural, religious, and medical purposes. Despite its long history and wide sense of practice, there is limited understanding of parental satisfaction, especially of the cosmetic outcome. This study, therefore, attempts to understand parental satisfaction with the cosmetic results of different circumcision techniques and the factors that influence it.

Methods: This descriptive cross-sectional study is done in the Eastern Province of Saudi Arabia from May 2024 to December 2024. Parents are approached from health facilities where they took their circumcised child, who are six years old at most. Data were collected using a standardized, pretested, modified questionnaire adapted from a validated tool, containing items regarding the demographic details of the participant, type of practitioner, age at circumcision, anesthetic used, circumcision technique, and pain, stress, and satisfaction levels. Correlation and difference analyses were done on these satisfaction variables.

Results: Out of the total 400 parents surveyed, the majority of them were dissatisfied with the overall outcome of the circumcision. "Unsatisfied" and "Very unsatisfied" were the expected responses. The most common kinds of practitioners were general surgeons, and general anesthesia or no anesthesia was most commonly used. Of note was that there was no correlation between the type of doctor or anesthesia and parental satisfaction. However, a high level of dissatisfaction was recorded, thus pointing to an existing gap between clinical outcomes and parents' expectations.

Conclusion: There was a high discrepancy between clinical success and positive parental satisfaction with the circumcision procedure. This emphasizes the need for enhanced counseling during the preoperative period and postoperative care to address parental concerns, which leads to increased overall satisfaction. Future studies should consider other factors affecting satisfaction and strategies to enhance cosmetic results and parental experience with circumcision.

INTRODUCTION

Circumcision has become a standard surgical procedure that extends back into ancient times and is performed worldwide for cultural, religious, and medical reasons [1]. Despite the prevalence of the procedure for so many years, more research needs to be done concerning parental satisfaction regarding the cosmetic outcome of the procedure [2]. In this context, though physicians commonly report very few complications related to the procedure, parental satisfaction, especially about aesthetic outcomes, is relatively underresearched [3]. That there is a disparity between clinical success and parental satisfaction indicates that parents may have issues that are not taken into consideration using conventional clinical evaluations [4].

Freeman et al. (2013) explained a gross disparity between clinician-reported outcomes and parental satisfaction in that most parents voice dissatisfaction when the cosmetic outcomes are not what they anticipated [5]. Concerns are often raised regarding the amount of

foreskin removed, which has a significant effect on the perceived success of the procedure [6]. This dissatisfaction underlines how critical the need is to explore further how various techniques of circumcision have implications for the cosmetic appearance and general satisfaction of parents [7][8].

The technique used within circumcision can significantly impact the final cosmetic result concerning symmetry, scarring, and overall appearance of the circumcision site [9][10]. Differences in techniques—including the Gomco clamp, the Plastibell device, and the Mogen clamp—yield different results cosmetically and may produce variable post-operative recoveries [11] [12]. Consequently, knowledge of these differences is vital for aligning clinical practices to the parents' expectations and improving communication between healthcare providers and parents [13] [14].

This study is intended to rectify this deficiency by systematically surveying parental satisfaction with the cosmetic results of circumcision

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after different techniques [15] [16]. The present study investigates how different circumcision techniques influence cosmetic outcomes and parental perception. It provides valuable insight to improve clinical practice and parental counseling [17] [18]. This approach will help bridge the communication gap and improve general satisfaction with the procedure [19] [20].

METHODS

This observational cross-sectional study was conducted in the Eastern Province of Saudi Arabia from May to December 2024. The objective is to assess satisfaction among parents about the cosmetic results of circumcision by different techniques. Parents of circumcised boys up to six years old are recruited from health facilities during unrelated medical consultations. Inclusion criteria: All boys circumcised by any known method and whose parents or guardians are willing to participate. Exclusion criteria: Those with penile anomalies and those who were circumcised for non-routine medical reasons.

The current study used a modified questionnaire from a validated circumcision questionnaire used in another research [21] to fit our objectives. It includes demographic information such as child age in months, child sex, and guardian/parent age. Other questions include the kind of practitioner—that is, pediatric surgeon or general surgeon—the child's age at the time of the procedure, and the type of anesthesia used: general, local, or none. We incorporated questions about the circumcision technique used and the perceived pain and stress of the procedure. We assessed satisfaction levels with the practitioner, the overall outcome of the procedure, and the cosmetic results. This survey also questioned cosmetic concerns and apprehension of redo surgery, giving insights into a complete circumcision experience.

Ethical approval has been granted, and human research standards are assured. This study observed confidentiality through anonymization and data storage protection.

The data were analyzed using statistical software to summarize demographics and satisfaction scores. Comparative analysis was done regarding the differences in satisfaction between circumcision techniques, and meatus size is correlated to satisfaction. A p-value less than 0.05 is considered significant. Limitations include possible subjectivity in assessing satisfaction and recall bias, which will be minimized as much as possible.

RESULTS

Figure 1 illustrates the children's ages in months and their parent's or guardian's ages. The children's ages ranged from 1-24 months, with an average age of 12.24. Most children fall within the age bracket of 10-15 months, with the highest frequency being 12 months, with a total of about 50 children. On the contrary, the lowest number of children is from 0 to 5 months, with around 25 cases. The ages of the parents or guardians ranged between 20 and 50 years, with a mean of 35.21 years. Most of the parents or guardians belonged to the age group of 30 to 40 years, peaking at 35 years, which accounted for about 45 individuals. Fewer parents/guardians fall within the 20-30-year age bracket, numbering about 30, thus showing that the sampled population mainly had middle-aged parents/guardians.

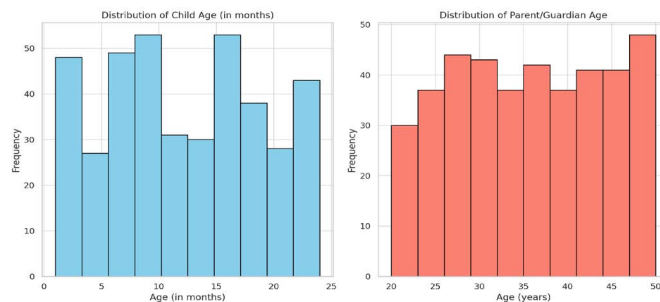


Figure 1. Distribution of Child and Parent/Guardian Ages

Figure 2 describes who performed the circumcision. The majority, 108 responses out of 400, were performed by general surgeons. Then, pediatric surgeons and other specialties performed approximately 95 cases, while the least frequent were performed by urologists, with approximately 90 cases. Results show that general surgeons are primarily involved in performing circumcisions.

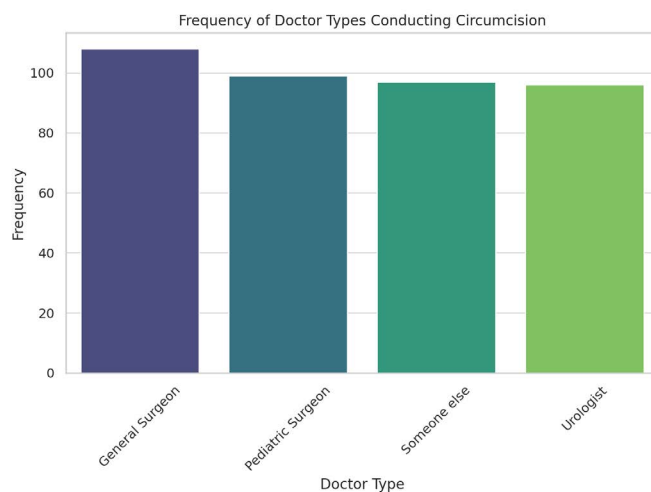


Figure 2. Frequency of Doctor Types Conducting Circumcision

Figure 3 illustrates the frequency of the different types of anesthesia applied. General anesthesia was the most frequently reported method applied in 139 cases; however, no anesthesia was applied in some 140 cases. This is followed by local anesthesia, which was used in about 120 cases. This distribution thus indicates a distinct preference for general or no anesthesia.

Figure 4 The satisfaction levels of the respondents were "Unsatisfied," accounting for a total of 115. This was followed by "Very unsatisfied" with 100 respondents, while the category "Satisfied" contained 95. The least frequent was "Very satisfied," with 90 respondents. The result implies that the trend is negative; a decisive majority did not experience the most desirable outcome. This underlines that improvements must be made to combat these contributors of dissatisfaction and improve overall satisfaction.

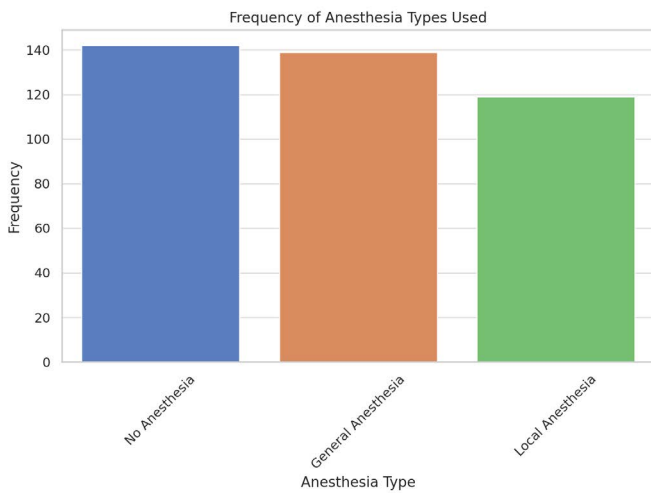


Figure 3. Frequency of Anesthesia Types Used

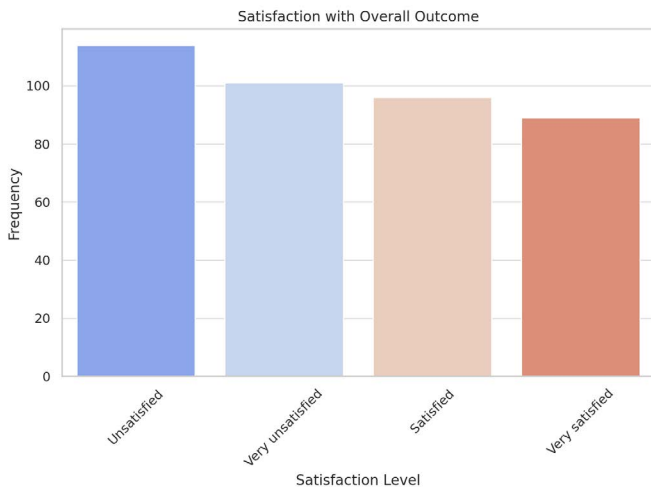


Figure 4. Satisfaction with Overall Outcome

Chi-square testing revealed no statistically significant relationship between the type of doctor performing the surgery and parental satisfaction regarding the procedure's outcome. The p-value was 0.487. No clear conclusion could be made from the regression due to problems of perfect separation, hence pointing out some variables perfectly predicting satisfaction outcomes, which could not be fully explored. Moreover, the t-test comparing the stress level among different anesthetic groups could not be performed due to insufficient data. From these results, the type of doctor or anesthesia does not significantly impact parental satisfaction. Yet some variables may have a strong predictive power on satisfaction, which could only be evaluated partially due to various limitations in the regression analysis.

When it comes to Gomco circumcision, figure 6 pie illustrates the breakdown of issues that were of concern to the unsatisfied parents. The major issue was too little tissue removed, claimed by 30.3% of the respondents to be their greatest concern. Nothing was reported to be the cause of dissatisfaction by 28.8% of parents. Penile metal deformity concerns were reported by 25.8%. The lowest reported issue was the excess removal of tissue at 15.2%. This graph demonstrates minimal tissue removal as a major concern for dissatisfied parents with the Gomco method.

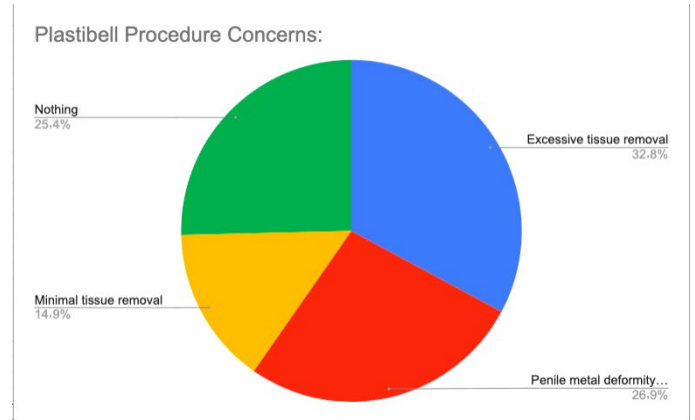


Figure 5. Concerns of Unsatisfied Parents Regarding the Plastibell Procedure

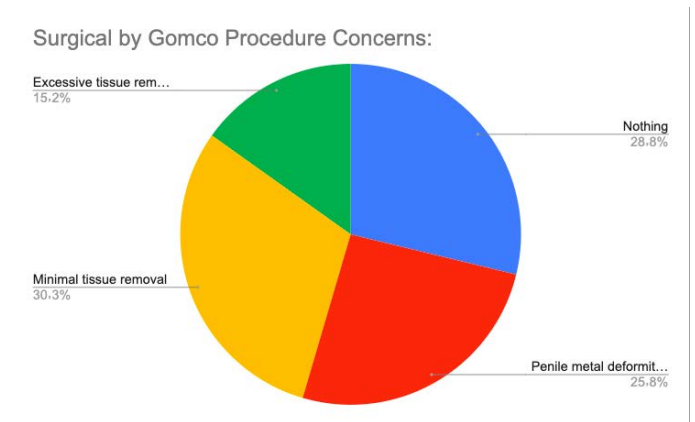


Figure 6. Concerns of Unsatisfied Parents Regarding the Gomco Procedure

DISCUSSION

The age of the children, in months, is intensely concentrated between 10-15 months, with an average age of 12.24 months, consistent with the general practice of performing circumcision during the early toddler years [22]. In parents/guardians, the mean age is 35.21 years, in line with the trends showing parents are increasingly older at the time their children are circumcised [23]. This demographic information is essential for tailoring preoperative counseling and support services for this age group.

The most significant number of circumcisions was performed by general surgeons, with 108 cases out of 400. Thus, general surgeons are still the most prominent specialty for this procedure. This is a common trend in most healthcare settings, where general surgeons perform many pediatric procedures due to their advanced training and availability[24]. The presence of pediatric surgeons and other specialists reinforces a multidisciplinary approach to handling these procedures with possible benefits related to specialized care. This is further reinforced by studies showing that the surgeon's choice affects the procedure's outcome [25].

The predominance of general anesthesia and no anesthesia in circumcision procedures tallies clinical guidelines that recommend general anesthesia due to its effectiveness in managing pain and anxiety during the procedure [26]. No anesthesia could be a parental

or doctor's case of choice for minimal intervention for less complicated or noninvasive procedures. This variation in the use of anesthesia underlines the importance of care strategies at the level of individual patients [27].

Parental satisfaction was mainly in "Unsatisfied," with "Very unsatisfied" being the next most common category. Given the experience gained from this extensive series, this high level of dissatisfaction is concerning and may mean parental expectations were out of step with the actual outcomes of the circumcision procedures. This finding is supported by studies showing that the most common cause of dissatisfaction stems from unmet expectations and poor communication about procedural details and outcomes[28][29]. The results suggest that improvement in pre-operative counseling, strategies for better pain management, and support in the postoperative period are needed to identify and decrease the sources of dissatisfaction.

By performing the chi-square test, no evidence of statistical significance was found regarding the relationship between the type of doctor and parental satisfaction ($p = 0.487$). The non-significant association might point out factors other than the type of doctor that impact satisfaction. Indeed, previous research has reported similar findings, suggesting that variables like preoperative information and the general experience of the patients might be more important determinants of satisfaction [30]. Perfect separation in regression analysis and non-significant t-test results for the level of stress levels all point to the requirement of future research with collection and analysis methods more plausible to show these relationships comprehensively [31].

These findings underline that, in attempting to improve parental satisfaction with circumcision, attention must go beyond the type of doctor or anesthesia used. Enabling good preoperative communication, initiating proper postoperative care, and meeting the concerns raised by parents may improve satisfaction. Results recommend further studies that should gauge other variables influencing satisfaction, such as the quality of information provided and the overall healthcare experience.

Figure 5 shows The distribution of dissatisfaction, among parents, related to the Plastibell circumcision procedure, is stated here. Much tissue removal was the major concern, while 32.8% are dissatisfied due to that problem. Then it was penile metal deformity with 26.9% distribution. Nothing-nothing particular concerned 25.4%. And minimum tissue removal was noted by 14.9%. This distribution suggests that excessive tissue removal is one of the major concerns of many parents regarding the Plastibell procedure.

STRENGTHS, LIMITATIONS, AND RECOMMENDATIONS

This study's strengths are the large data set, in which 400 parental responses were recorded, and the detailed analysis of multiple factors affecting satisfaction with circumcision procedures. Some of the limitations of the present study include the fact that the chi-square test and regression analysis could not conclude anything, and thus, reporting biases from the parents cannot be ruled out. Due to data problems, the t-test for stress levels could not produce significant results. These limitations may impact the reliability of the findings and their generalizability. Future research with extensive, heterogeneous samples and more sophisticated statistical procedures is needed to elucidate further the factors that impact parental satisfaction. Specifically, improving preoperative communication and postoperative care may be potential areas for improvement in satisfaction outcomes and are worth studying in future research.

CONCLUSION

It assessed the satisfaction of parents regarding the cosmetic results of circumcision using different techniques in the Eastern Province of Saudi Arabia. Despite being one of the most common and oldest procedures, there was a vast chasm between clinical outcomes and parental satisfaction, with many parents dissatisfied. Results indicated that the type of doctor to perform the procedure and the chosen anesthesia did not significantly affect satisfaction. This supports attention to factors beyond the details of the procedure, such as preoperative counseling and postoperative care, to meet parental expectations. The high rate of dissatisfaction points to a critical need for improved communication and support during the process of circumcision. Future studies should seek to assess more variables affecting satisfaction and continue improving the cosmetic result of the procedure and the general parental experience with circumcision.

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