Original Article – Andrology

Impact of Circumcision Performed Under Local or General Anesthesia During the Phallic Stage on Adult Male Genital Self-Image

Fallik Dönemde Lokal veya Genel Anestezi Altında Yapılan Sünnetin Yetişkin Erkeklerin Genital Öz İmajına Etkisi

Short Title: Circumcision and Self-Image Effect (Sünnet ve Öz-İmaj Etkisi)

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Cite as: Yalçın K, Kölülçü V. Impact of circumcision performed under local or general anesthesia during the phallic stage on adult male genital self-image. Grand J Urol 2026, DOI: [Epub Ahead of Print]

Submission date: 06 January 2026 **Acceptance date:** 20 April 2026 **Online first:** 27 April 2026
Publication date:

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Abstract

Objective: The optimal timing of circumcision during childhood and the preferred method of anesthesia remain subjects of ongoing debate. This study aimed to investigate the long-term potential effects of local versus general anesthesia administered during circumcision performed in the phallic stage on adult male genital self-image scores.

Materials and Methods: A total of 84 male individuals who had undergone circumcision during the phallic stage were included in the study. Participants were divided into two groups based on the anesthesia type administered during the procedure: Group 1 received general anesthesia, while Group 2 received local anesthesia. Sociodemographic characteristics, including age, marital status, and educational background, were recorded. Additionally, body mass index (BMI), age at circumcision, indications for the procedure, and post-circumcision complications were analyzed. Each participant was assessed using the Beck Depression Inventory (BDI), the International Index of Erectile Function (IIEF-15), and the Male Genital Self-Image Scale (MGSIS-7).

Results: The mean age of participants did not differ significantly between groups ($p > 0.05$). Similarly, there were no significant intergroup differences in terms of circumcision age, BMI, indication for the procedure, or complication rates ($p > 0.05$). Moreover, IIEF-15 and BDI scores also showed no statistical differences between the two groups ($p > 0.05$). However, the mean MGSIS-7 score was significantly lower in the local anesthesia group compared to the general anesthesia group ($p < 0.0001$), indicating a less positive genital self-image among those circumcised under local anesthesia.

Conclusion: Circumcision performed under local anesthesia during the phallic stage may be associated with a more negative adult male genital self-image compared to procedures performed under general anesthesia. These findings highlight the potential psychological impact of anesthesia type during this sensitive developmental period and warrant further investigation.

Keywords: phallic stage, local anesthesia, general anesthesia, genital self-image

Özet

Amaç: Çocukluk döneminde sünnetin en uygun zamanı ve tercih edilen anestezi yöntemi, halen tartışma konusu olmaya devam etmektedir. Bu çalışma, fallik aşamada yapılan sünnet sırasında uygulanan lokal anestezi ile genel anestezinin yetişkin erkeklerin genital öz imaj puanları üzerindeki uzun vadeli potansiyel etkilerini araştırmayı amaçlamıştır.

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Gereçler ve Yöntemler: Fallik dönemde sünnet olan toplam 84 erkek birey çalışmaya dahil edildi. Katılımcılar, işlem sırasında uygulanan anestezi türüne göre iki gruba ayrıldı: Grup 1 genel anestezi alırken, Grup 2 lokal anestezi aldı. Yaş, medeni durum ve eğitim düzeyi gibi sosyodemografik özellikler kaydedildi. Ek olarak, vücut kitle indeksi (BMI), sünnet yaşı, işlem endikasyonları ve sünnet sonrası komplikasyonlar analiz edildi. Her katılımcı Beck Depresyon Envanteri (BDI), Uluslararası Erektil Fonksiyon Endeksi (IIEF-15) ve Erkek Genital Öz İmaj Ölçeği (MGSIS-7) kullanılarak değerlendirildi.

Bulgular: Katılımcıların ortalama yaşları gruplar arasında önemli bir fark göstermedi (p >0,05). Benzer şekilde, sünnet yaşı, BMI, işlem endikasyonu veya komplikasyon oranları açısından gruplar arasında önemli bir fark yoktu (p >0,05). Ayrıca, IIEF-15 ve BDI puanları da iki grup arasında istatistiksel olarak anlamlı bir fark göstermedi (p >0,05). Ancak, ortalama MGSIS-7 puanı genel anestezi grubuna kıyasla lokal anestezi grubunda anlamlı olarak daha düşüktü (p <0,0001), bu da lokal anestezi altında sünnet olanların genital öz imajlarının daha az olumlu olduğunu göstermektedir.

Sonuç: Fallik dönemde lokal anestezi altında yapılan sünnet, genel anestezi altında yapılan işlemlerle karşılaştırıldığında, yetişkin erkeklerin genital organlarına ilişkin daha olumsuz bir öz imajla ilişkilendirilebilir. Bu bulgular, bu hassas gelişim döneminde anestezi türünün potansiyel psikolojik etkisini vurgulamakta ve daha fazla araştırma yapılmasını gerektirmektedir.

Anahtar kelimeler: fallik dönem, lokal anestezi, genel anestezi, genital öz-imaj

Introduction

Circumcision is one of the oldest and most widely practiced surgical procedures worldwide, performed for religious, cultural, or medical reasons. It is estimated that approximately 30–33% of men aged 15 years and older have undergone circumcision globally [1]. The procedure involves the surgical removal of the foreskin covering the glans penis. Despite being commonly performed, circumcision should not be regarded as a simple or minor intervention. The accurate identification of excision margins, strict adherence to antiseptic principles, and the provision of adequate analgesia and anesthesia are all essential for ensuring safe and optimal surgical outcomes [2].

The optimal timing for circumcision remains of topic of ongoing debate in both clinical and sociocultural contexts [3]. Similarly, there is no universally accepted or standardized protocol regarding the choice of anesthesia [4]. In Freudian psychoanalytic theory the so-called "phallic stage", between three and six years of age, represents a critical developmental period during which

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children begin to form their gender identity, establish body awareness, and internalize attitudes toward sexuality and the body [3]. Although there is a lack of high-level evidence from large-scale studies or meta-analyses, a significant proportion of healthcare professionals express concern about performing circumcision during this stage due to its potential association with castration anxiety, body image disturbances, and adverse psychosexual outcomes [1,3]. Nevertheless, circumcision during this developmental period remains common in many cultures, particularly when performed under local anesthesia for religious or traditional reasons. In pediatric patients within this age group, the procedure may trigger feelings of fear and anxiety, which could potentially contribute to long-term psychological consequences [5,6].

To the best of our knowledge, this is the first study in the English-language literature to examine the long-term effect of the anesthesia type administered during circumcision in the phallic stage on adult male genital self-image.

Materials and Methods

The study was approved by the Local Ethics Committee of Tokat Gaziosmanpaşa University Faculty of Medicine (Approval No: 25-MOBAEK 241, Date: June 17, 2025). The research protocol adhered to the principles of the Declaration of Helsinki, and written informed consent was obtained from all participants before inclusion in the study.

The prospective observational study was conducted during January and March 2025 in our clinic. A total of 84 young adult males who presented for routine follow-up and had a documented history of circumcision performed during the phallic stage were included. Patients were attending follow-up for urinary system stone disease, renal cystic disease, and benign adrenal lesions. None of the participants had comorbidities known to cause sexual dysfunction. Based on the type of anesthesia administered during their circumcision, participants were categorized into two groups: Group 1 included individuals who had undergone circumcision under general anesthesia, and Group 2 comprised those who had received local anesthesia. Sociodemographic characteristics, including age, marital status, and educational level, were recorded for each participant. In addition, anthropometric data comprising height, weight, and body mass index (BMI) were calculated. Clinical variables included age at circumcision, indication for the procedure, and any post-operative complications were also analyzed.

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Psychological and sexual function assessments were conducted using three validated tools: the Beck Depression Inventory (BDI), the Male Genital Self-Image Scale (MGSIS-7), and the International Index of Erectile Function (IIEF-15) [7-10]. All circumcision procedures had been performed by an experienced urologist using the dorsal slit technique. In the local anesthesia group, bupivacaine was administered via subcutaneous peripheral infiltration at the base of the penis. In the general anesthesia group, anesthesia was induced using a laryngeal mask airway. Standard intraoperative monitoring included a 3-lead electrocardiogram, non-invasive blood pressure, and peripheral oxygen saturation. In the penile block group (Group 2), following sterile preparation in the supine position, 0.5 mg/kg 0.5% bupivacaine was administered at the base of the penis using a 21G needle, 15 minutes before surgery. For patients under anesthesia group (Group 1), 0.05 mg/kg midazolam, 2 mg/kg propofol, and 0.1 mcg/kg fentanyl citrate were administered intravenously according to the standard anesthesia protocol. After achieving the desired depth of anesthesia, a laryngeal mask airway was inserted, and mechanical ventilation was applied.

All data were obtained from the hospital's electronic medical records and the anesthesia and reanimation department's patient follow-up forms. All circumcisions were performed by the same surgeon, and the anesthesia procedures were standardized across all cases. None of the patients had any medical conditions necessitating a change in the anesthesia method. Therefore, the choice of anesthesia was primarily determined by the parents of circumcised boys. To ensure data reliability, any cases involving different surgeons or anesthesia protocols were identified through the hospital's electronic archive and were excluded from the study.

All patients underwent a detailed genital system examination by medical staff. None of the participants presented with unsightly circumcision scars or major cosmetic defects. Following this assessment, the MGSIS-7, IIEF-15, and BDI scores were evaluated. The MGSIS-7 is a psychometrically validated tool comprising seven items designed to assess how men perceive and feel about their genitalia. Participants respond to each item using a four-point Likert scale, and the total score is derived by summing individual item responses. Higher cumulative scores reflect a more positive genital self-image. The Turkish version of the MGSIS-7 was adopted and validated by Koçak et al [10]. Sexual function was measured using the IIEF-15, a standardized questionnaire consisting of 15 items that evaluate multiple key aspects such as erectile quality, orgasm, sexual interest, satisfaction with intercourse, and overall sexual well-being [8]. Depressive symptoms

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were measured using the BDI, a 21-item, self-report rating scale that assesses the presence and severity of depression. Each item is rated on a four-point scale ranging from 0 (not at all) to 3 (severe), with higher total scores corresponding to increased levels of depression [7].

Participants were excluded if they had not engaged in regular sexual activity within the past six months or had comorbidities affecting sexual function, including neuropsychiatric disorders, hyperlipidemia, diabetes mellitus, coronary artery disease, hypertension, chronic kidney disease, or hypogonadism. Subjects with a history of pelvic surgery or medication use known to affect erectile function were also excluded from the analysis.

Statistical Analysis

Data analysis was conducted using MedCalc statistical software (version 20.009; Ostend, Belgium). The Kolmogorov–Smirnov test was used to assess the normality of data distribution. Continuous variables were presented as mean ± standard deviation (SD) or as median (interquartile range, IQR), depending on distribution. For group comparisons, the Independent Samples t-test was used for normally distributed variables, and the Mann–Whitney U test was applied to non-normally distributed data. Categorical variables were summarized using frequencies and percentages and evaluated using the Chi-square (χ^2) test. The Kruskal-Wallis test was used for comparison of more than two groups. Numerical data of the groups were visually displayed using box-whisker graphs, and extreme values were indicated as points. Logistic regression was used to identify age, BMI, MGSIS-7, IIEF-15, and BDI parameters as risk factors for circumcision during the phallic stage, according to the type of anesthesia. Odds ratios (OR) and corresponding 95% confidence intervals (CI) for each parameter are reported. A p-value less than 0.05 was considered statistically significant.

Sample size was determined using G*Power software (v3.1.2). The statistical power of the study, expressed as 1-β (where β represents the probability of a Type II error), was set at 80%. According to Cohen's effect size conventions, and assuming a large effect size ($d = 0.7$) for comparisons between two independent groups, it was calculated that a minimum of 34 participants per group would be required to achieve 80% power at a significance level $\alpha = 0.05$.

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Results

The mean age of participants was 29.65 ± 4.38 years, with no statistically significant difference observed between the two groups (p> 0.05). The most common indication for circumcision was religious in nature, and the majority of individuals in both groups had a university-level education. There were no significant differences between the groups regarding sociodemographic variables or reasons for urology visits (p> 0.05). No participant experienced a complication classified as Grade 3 or higher according to the Modified Clavien-Dindo classification. The mean age at circumcision was 5 years, and this did not differ significantly between the groups (p> 0.05). In Group 1 (general anesthesia), the mean BMI was 20 kg/m2, and 33 participants (89.2%) were married. These characteristics were also similar to those in Group 2 (p> 0.05) (**Table 1**). When MGSIS-7 scores of circumcised individuals were compared according to the reasons for circumcision, no significant difference was found between the groups (p> 0.05).

The median IIEF-15 and the BDI scores in Group 1 were 28 and 9, respectively, showing no significant difference compared to Group 2 (p> 0.05) (**Table 1**). However, the median MGSIS-7 score was significantly lower in Group 2 (local anesthesia) compared with Group 1 (general anesthesia) (22 vs. higher in Group 1, p< 0.0001) (**Table 2, Figure 1**). In the logistic regression analysis conducted to determine risk factors for circumcision during the phallic stage according to the type of anesthesia, it was found that as the MGSIS-7 score increased, the likelihood of patients receiving general anesthesia also increased (OR: 3.11, p< 0.0001) (**Table-3**).

Discussion

The phallic stage, as described by Sigmund Freud, represents one of the pivotal stages of psychosexual development in childhood. According to the psychoanalytic theory, children between three and six years of age begin to establish their gender identity and become increasingly aware of sexual and anatomical differences. During this period, attention to one's own genitalia typically reaches its peak [11,12]. For these reasons, there is concern that circumcision performed during the phallic stage may be associated with negative psychological consequences or behavioral disturbances in later life. Consequently, circumcision performed during the phallic stage has long been associated with concerns regarding potential psychological distress, behavioral changes, or the development of castration anxiety [13].

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Currently, there is no established consensus regarding the optimal anesthesia method during circumcision performed at this particularly sensitive developmental stage. In the present clinical study, we observed that individuals circumcised under local anesthesia during the phallic stage exhibited significantly lower genital self-image scores than those circumcised under general anesthesia. This finding may be attributed to the heightened genital awareness in this developmental period, combined with the child's cognitive ability to perceive and remember the surgical process, which may amplify anxiety and negatively influence later genital self-perception.

Circumcision remains one of the oldest and most common surgical interventions performed in males [14]. Despite its prevalence, the choice between local and general anesthesia remains debated in modern clinical practice [4]. For many children, circumcision represents a major psychological stressor, often related to pain and the perceived threat to genital integrity [14,15]. Proponents of local anesthesia cite advantages such as shorter recovery times and fewer systemic risks, whereas general anesthesia is considered to provide a calmer operative setting and reduced perioperative distress, potentially yielding better psychological outcomes [4,14].

The psychosexual consequences of circumcision and their relationship with anesthesia type remain complex and inconsistently reported. For example, Güzelsoy et al. reported that the circumcision process and the hospital setting itself contribute to elevated stress levels in children, particularly when local anesthesia is used [14]. Conversely, Kozanhan et al found that general anesthesia was associated with higher post-traumatic stress scores in children than local anesthesia [1]. Suleyman et al explored the relationship between adult surgical anxiety and the anesthesia type used during childhood circumcision, and no significant association was found [16]. Similarly, Tokuc et al. argued that circumcision does not contribute to later andrological or psychological problems [17].

Our findings suggest that local anesthesia during the phallic stage may have subtle long-term effects on genital self-image perception, even in the absence of overt psychological or sexual dysfunction. Genital self-image refers to an individual's emotional and psychological perception and awareness of their own genitalia, particularly in relation to sexual function and satisfaction [18]. This perception may be influenced by multiple factors, including circumcision status, BMI, body image satisfaction, mood, and the presence of conditions such as phimosis [19,20]. Genital identity, which plays a critical role in shaping sexual orientation, is largely rooted in one's genital

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self-perception [21]. A positive genital self-image has been shown to correlate with improved psychological well-being [22]. Despite its importance, research specifically focusing on male genital self-perception remains limited [9,22]. In a study involving 69 patients with phimosis, Czajkowski et al. reported a marked improvement in MGSIS-7 scores following circumcision [22]. Similarly, Sonbahar et al. observed that lower genital self-image scores were moderately associated with increased levels of depression and anxiety [9]. In our study, no significant differences were found between the groups in terms of depression scores or erectile function assessments. However, participants who had undergone circumcision under local anesthesia during the phallic stage reported significantly lower genital self-image scores, even though their overall sexual function and psychological status appeared unaffected. We speculate that this may be attributed to the relatively young age of the study population, the majority of whom were under 30 years old.

The psychosexual consequences of circumcision remain a subject of ongoing debate, with a limited number of studies and no clear consensus in the literature. Yılmaz et al. evaluated the treatment protocols of 149 children with phimosis (mean age of 4.47 years), and found that children who received topical corticosteroid therapy exhibited lower anxiety scores compared with those who underwent circumcision [13]. However, the study did not provide detailed information regarding the anesthesia techniques used during the procedures. In contrast, Armağan et al. conducted a study involving 321 cases and reported that circumcision performed during the phallic stage did not appear to negatively influence psychosexual functioning in adulthood [3]. Notably, nearly all patients (98.4%) in their cohort had undergone the procedure under local anesthesia. Similarly, Yıgman et al. observed no significant differences in sexual function, genital perception, or gender role identification between individuals circumcised during or after the phallic stage [23]. Aydur et al. also found no significant association between the age at circumcision and adult sexual functioning [24]. Our findings are consistent with these observations in terms of erectile function. In our study, which included only individuals circumcised during the phallic stage, sexual function was evaluated using the IIEF-15 questionnaire. The mean IIEF-15 scores in both groups were ≥ 26, indicating the absence of clinically significant erectile dysfunction. In another study, Cüceoğlu et al. examined the relationship between circumcision and sexual dysfunction using the Golombok-Rust Inventory of Sexual Satisfaction (GRISS) in a cohort of 80 participants [25]. Their study showed no significant effect of age at circumcision on subscales such as frequency, communication, satisfaction, avoidance, emotional involvement, or erectile dysfunction. Although the study noted

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a minor correlation between circumcision during the phallic stage and premature ejaculation, no association with the castration complex was identified. Consistent with these findings, none of the participants in our cohort exhibited clinical signs of premature ejaculation.

Although previous studies have generally reported no direct association between circumcision during the phallic stage and adult sexual dysfunction, it is evident that many of these investigations lacked a comprehensive integration of validated psychological assessments. The phallic stage is characterized by heightened awareness of genital anatomy, making any invasive experience, particularly one performed without anesthesia, potentially traumatic [26]. In a limited case series, Cansever documented that some children perceived circumcision during the phallic stage as an act of aggression or symbolic castration [15]. Similarly, Öztürk examined 50 psychiatric patients presenting with symptoms indicative of castration anxiety, and suggested a potential link between ritual circumcision performed without anesthesia during the phallic-latency phases and the later development of castration-related fears [26]. Consistent with these psychological perspectives, our study found that circumcision performed without general anesthesia during the phallic stage was associated with more negative genital self-image scores in adulthood, suggesting potential long-term psychosexual implications of the anesthesia method used during this sensitive developmental period.

This study has several limitations. The sample size was relatively small, and data were collected from a single institution, which may limit generalizability. However, the study population consisted mainly of well-educated, married young adults with urological follow-up, which limits the generalizability of the findings to a wider population. Genital self-image was evaluated using only one standardized scale, and psychosexual outcomes during childhood were not assessed. Parental perspectives on anesthesia choice could not be obtained due to documentation limitations.

As a cross-sectional design, our study cannot establish causality. Although an association between local anesthesia and more negative genital self-image was identified, a direct cause-and-effect relationship cannot be inferred. Moreover, our findings may have been affected by potential sources of bias and confounding factors. First, recall bias may pose a significant problem because participants' memories of their childhood circumcision experience may have changed over time or been influenced by later life experiences. On the other hand, it is unclear how participants' accurate or conscious memories of their anesthesia experiences are shaped over time. Second, there is the

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possibility of selection bias; the individuals in our study who could recall their childhood circumcision experiences in detail may not be fully representative of the general population. One of the most critical limitations is the possibility of residual confounding. Although we controlled for known confounders such as age, BMI, education level, and marital status in our analyses, other factors we did not measure may explain this association. For example, parent-child relationship quality, the child's pre-circumcision mood, preoperative counseling, hospital versus ritual environment, and auxiliary health care workers' communication style may have influenced genital self-image. The absence of these variables introduces the possibility of residual confounding and limits the interpretability of the observed association.

Conclusion

This study investigated the impact of the anesthesia method used during circumcision performed in the phallic stage on adult male genital self-image. Our findings indicated that individuals undergoing circumcision under local anesthesia were associated with more negative genital self-perception in adulthood compared to individuals receiving general anesthesia. We hypothesize that this may be related to the heightened genital awareness typical of the phallic stage and the cognitive ability of children under local anesthesia to perceive and process each step of the surgical experience.

Although these findings generate a novel hypothesis regarding the psychological implications of anesthesia choice, prospective, multicenter studies with larger sample sizes and comprehensive psychosexual assessments are needed to confirm the causal mechanisms underlying this association.

Ethics Committee Approval: The study was approved by the Local Ethics Committee of Tokat Gaziosmanpaşa University Faculty of Medicine (Approval No: 25-MOBAEK 241, Date: June 17, 2025).

Informed Consent: Written informed consent was obtained from all patients.

Publication: This manuscript was previously deposited as a preprint in Research Square and is available at https://www.researchsquare.com/article/rs-8756159/v1 (doi: 10.21203/rs.3.rs-8756159/v1)

Peer-review: Externally peer-reviewed.

Authorship Contributions: Any contribution was not made by any individual not listed as an author. Concept – K.Y., V.K.; Design – K.Y., V.K.; Supervision – K.Y.; Resources – K.Y., V.K.; Materials – K.Y.; Data Collection and/or Processing – K.Y., V.K.; Analysis and/or Interpretation – K.Y., V.K.; Literature Search – K.Y., V.K.; Writing Manuscript – K.Y.; Critical Review – K.Y., V.K.

Conflict of Interest: The authors declare that they have no conflicts of interest.

Financial Disclosure: The authors declare that this study received no financial support.

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Table 1. Comparison of demographic data and scores between groups

Variable		Groups		P-Value
		Group 1 (General anesthesia), N = 37	Group 2 (Local anesthesia), N = 47	
Age of circumcision (years), Median (IQR)		5.0 (5-6)	5.0 (5-6)	0.724
BMI (kg/m²), Median (IQR)		20.0 (19-20)	20.0(19-21)	0.787
MGSIS-7, Median (IQR)		28.0 (27-28)	22.0 (19-25)	<0.0001*
IIEF-15, Median (IQR)		28.0 (27-28.3)	28.0 (27-29)	0.347
BDI, Median (IQR)		9 (8-10)	9 (8-10)	0.692
Education status	High school, n (%)	4 (10.8)	5 (10.6)	0.980
	University, n (%)	33 (89.2)	42 (89.4)	
Reason for circumcision	Cultural, n (%)	12 (32.4)	11 (23.4)	0.586
	Religious, n (%)	22 (59.5)	33 (70.2)	
	Social, n (%)	3 (8.1)	3 (6.4)	
Post-circumcision complications	None, n (%)	35 (94.6)	43 (91.5)	0.860
	Minimal bleeding, n (%)	1 (2.7)	2 (4.3)	
	Penile edema, n (%)	1 (2.7)	2 (4.3)	
Marital status	Single, n (%)	4 (10.8)	5 (10.6)	0.980
	Married, n (%)	33 (89.2)	42 (89.4)	

* Significant difference at the 0.05 level according to the Mann-Whitney U test. Medians are presented, and the IQR represents the interquartile range. BMI: body mass index; MGSIS-7: Male Genital Self-Image Scale-7; IIEF-15: International Index of Erectile Function-15; BDI: Beck Depression Inventory

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Table 2. Distribution of MGSIS-7 score questions according to groups

Item	Response option	Groups		P-Value
		G1 (General anesthesia) N = 37 (%)	G2 (Local anesthesia) N = 47 (%)	
Q1 = I feel positively about my genitals.	1- Strongly disagree, n (%)	0 (0.0)	18 (38.3)	< 0.0001*
	2- Disagree, n (%)	0 (0.0)	0 (0.0)	
	3- Agree, n (%)	0 (0.0)	0 (0.0)	
	4- Strongly agree, n (%)	37 (100.0)	29 (61.7)	
Q2 = I am satisfied with the appearance of my genitals.	1- Strongly disagree, n (%)	0 (0.0)	10 (21.3)	0.016*
	2- Disagree, n (%)	1 (2.7)	2 (4.3)	
	3- Agree, n (%)	1 (2.7)	0 (0.0)	
	4- Strongly agree, n (%)	35 (94.6)	35 (74.5)	
Q3 = I would feel comfortable letting a sexual partner look at my genitals.	1- Strongly disagree, n (%)	0 (0.0)	12 (25.5)	0.006*
	2- Disagree, n (%)	1 (2.7)	0 (0.0)	
	3- Agree, n (%)	1 (2.7)	2 (4.3)	
	4- Strongly agree, n (%)	35 (94.6)	33 (70.2)	
Q4 = I am satisfied with the size of my genitals.	1- Strongly disagree, n (%)	0 (0.0)	11 (23.4)	0.006*
	2- Disagree, n (%)	1 (2.7)	2 (4.3)	
	3- Agree, n (%)	2 (5.4)	0 (0.0)	
	4- Strongly agree, n (%)	34 (91.9)	34 (72.3)	
Q5 = I think my genitals work the way they are supposed to work.	1- Strongly disagree, n (%)	0 (0.0)	16 (34.0)	0.000*
	2- Disagree, n (%)	2 (5.4)	0 (0.0)	
	3- Agree, n (%)	0 (0.0)	0 (0.0)	
	4- Strongly agree, n (%)	35 (94.6)	31 (66.0)	
Q6 = I feel comfortable letting a healthcare provider examine my genitals.	1- Strongly disagree, n (%)	0 (0.0)	14 (29.8)	0.001*
	2- Disagree, n (%)	1 (2.7)	2 (4.2)	
	3- Agree, n (%)	2 (5.4)	0 (0.0)	
	4- Strongly agree, n (%)	34 (91.9)	31 (66.0)	
Q7 = I am not embarrassed about my genitals.	1- Strongly disagree, n (%)	0 (0.0)	18 (38.3)	0.000*
	2- Disagree, n (%)	1 (2.7)	3 (6.4)	
	3- Agree, n (%)	0 (0.0)	0 (0.0)	
	4- Strongly agree, n (%)	36 (97.3)	26 (55.3)	

* Significant difference at < 0.05 level according to chi-square test; N [%]: presented; Q: question; MGSIS-7: Male Genital Self-Image Scale-7

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Table 3. Results of logistic regression analyses between the MGSIS-7 score and other variables

Dependet variable= Type of anesthesia	General anesthesia		37
	Local anesthesia		47
Overall model fit	P-Value		< 0.0001
	Cox & Snell R^2		0.5685
	Nagelkerke R^2		0.7617
Hosmer & Lemeshow test	P-Value		0.8827
Variables	**OR**	**OR (%95 CI)**	**P**
Age (years)	0.63	(0.17-2.37)	0.494
BMI (kg/m²)	1.45	(0.64-3.31)	0.374
MGSIS-7	3.11	(1.86-5.17)	<0.0001*
IIEF-15	0.61	(0.26-1.43)	0.255
BDI	0.75	(0.44-1.27)	0.285

Significance at <0.05 level according to regression analyses. MGSIS-7: Male Genital Self-Image Scale; IIEF-15: International Index of Erectile Function; BDI: Beck Depression Inventory; OR: Odds ratio; CI: Confidence interval

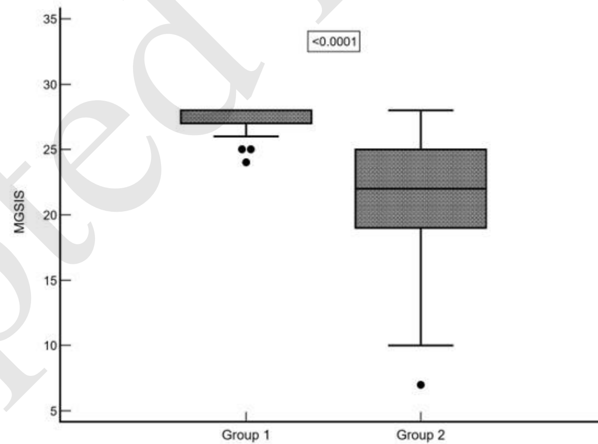

Figure 1. MGSIS-7 score of the groups

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