”Ovidius” University of Constanța
Doctoral School of Medicine
PhD Medicine

PhD Thesis Summary

CIRCUMCISION
Argues Pros and Cons

Conducător Științific:
Prof. Univ. Dr. Constantin Tica

Student-doctorand:
Cucu (Savin) Ada

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CONTENT

Keywords: circumcision, indications of circumcision, contraindications of circumcision, complications of circumcision.

The doctoral thesis includes:

The general part consists of 7 chapters totaling 54 pages

The special part consists of 3 chapters totaling 50 pages

183 bibliographic references

1 Annex

72 figures

55 tables

Note: The content and bibliography in the abstract are those found in the doctoral thesis. The tables and figures inserted in the abstract of the doctoral thesis preserve the original numbering of the thesis.

INTRODUCTION

Circumcision (which in Latin „circumcido" means "circumcise") – is generally, ablation of the foreskin (the skin fold which covers the penile gland) located at the tip of the penis. The foreskin has the biological function to protect the sensibility of the penile gland, preserving it from: urine (which can cause irritation), feces and other potential foreign harmful factors. It also protects the urethra against infection and accidental injuries

Certain medical encyclopaedias consider circumcision to be a form of genital mutilation. Circumcision is a risk surgery; and even if most complications are minor sometimes serious complications such as infections or injuries of the penis occur, most of which are due to inappropriate or defective medical tools.

They resort to circumcision for religious reasons, preventive medicine, therapeutic medicine, balanitis, urinary tract infections, etc., psychotic causes, etc

The American Academy of Pediatrics states that "circumcision is considered a very safe procedure (without risks) both for newborns and other children", but does not recommend this procedure to the entire male population of the United States, because the number of major benefits has not been so significant.

The World Health Organization urges medical bodies in countries where AIDS and other sexually transmitted diseases are endemic, to practice the circumcision operation in the male population to reduce mortality and morbidity.

According to medical studies, the internal surface of the foreskin is the area (less resistant) whereby the virus responsible for AIDS can enter the body, while the skin of the

gland and the rest of the penis is more resistant to HIV penetration. However, some research has shown that the number of HIV infections is roughly the same for circumcised and uncircumcised men, unless the uncircumcised have a good penis hygiene, especially after sexual intercourse.

All the claims of health bodies that are firmly backed up by circumcision start from the idea that the procedure is carried out under proper hygiene conditions, and proper hygiene prevents the transformation of circumcision from a preventive medicine instrument into a possible death to those who are practiced intervention without due attention to infection prevention.

Globally, about one third of the male population was circumcised, about 60% of them circumcised for ritual reasons, and the rest about 40% circumcised for non-religious reasons.

Those who oppose circumcision highlight the risks of the procedure (it is believed that, in *Muslims*, most circumcisions are practiced by family members; in *Jews,* where the procedure is practiced by religious specialists (mohelim), it is also an amateur surgery, because few are mohelim with appropriate education and training in the medical field; and in *the African countries* where this tradition is practiced, circumcision sometimes causes serious consequences). Critics consider it necessary to prohibit circumcision in young children for religious reasons, which they consider to be a traumatic and inappropriate abuse on the physical integrity of children.

Chapter I - HISTORIC

The practice of male genital mutilation is much older than written history. Of course, it is much older than Abraham's biblical account (Genesis 17). It seems to originate in East Africa long before that time.

The Jews adopted circumcision as a religious ritual, and preserved this prehistoric practice in modern times.

The Romans promulgated several laws to ban circumcision. The laws were applied to everyone and were not directed against the Jews.

Much later, during the Hellenic period, about 140 AD, a radical new procedure, called "peri'ah," was introduced by priests and rabbis. In this procedure, the foreskin was removed away from the gland, which is fused to the new born. In a painful procedure known today as "synechotomy," more skin of the foreskin was removed, and the injury was even greater. This radically modified procedure was eventually adopted by doctors and is the circumcision operation used today.

The modern use of Hebrew circumcision as a medical practice dates back to about 1865 in England and 1870 in the United States. The accepted procedure for medical use was, in essence, the Jewish peri'ah.

Chapter II. In this chapter I briefly outlined the current knowledge of *embryological and anatomical data* (genital differentiation of the embryo, ectodermal versus endodermal theory, foreskin, foreskin immunology, foreskin neurology, postnatal preputial development and retract property).

Chapter III. In Chapter Three I briefly outlined current knowledge of *circumcision indications* (potential benefits of circumcision, prevention of urinary infection, prevention of sexually transmitted infections (STDs), prevention of penile cancer, prevention of cervical cancer, prevention of penile disorders including phimosis, indications for circumcision among the pediatric population).

Chapter IV. In this chapter, I briefly reviewed the current knowledge of *trends in pediatric circumcision*, especially in the US, Australia, New Zealand, and Europe (Great Britain, the Netherlands and Belgium)

Chapter V. This chapter was devoted to the *contraindications of circumcision* and briefly describes primary penile malformations and penoscrotal malformations.

Chapter VI. In this chapter I briefly outlined the current knowledge of *circumcision techniques* and the devices used for circumcision (Mogen Pens, Gomco® Pens, PlastiBell®, and a Device, AccuCirc ™).

Chapter VII. In this last chapter of the general part I summarized briefly the current knowledge of *complications of circumcision*.

Chapter VIII. Material and method

The chosen method was the use of a confidential questionnaire, with 30 questions, on a minimum of 200 young men, predominantly with higher education in Dobrogea (due to the diversity of ethnicities and religions).

The purpose of this survey was to identify the pros and cons of circumcision.

The data gathered from the application of the questionnaire was entered in tabular form in the Microsoft Excel application to allow subsequent statistical processing. For processing we have used Microsoft Excel 2016 and IBM SPSS Statistics version 23 applications.

Descriptive statistics have been used to describe how responders' responses to the survey were distributed for each question in the questionnaire. The results were shown both in absolute and percentage terms.

Inferential statistical tests used for the purpose of detecting the statistical significance of the results were made taking into account the type of data of the variables analyzed.

Chapter IX. Results and Discutions

Performing of circumcision

The study was conducted on 205 men. They were divided for analysis in two groups, represented by circumcised men (20 cases) and uncircumcised men (185).

Tabel I - Distribution according to performimg of circumcision

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	185	90.2	90.2	90.2
	Yes	20	9.8	9.8	100.0
	Total	205	100.0	100.0	

It is noticeable that the majority of respondents to this questionnaire were not circumcised, their proportion being greater than 90% (Figure 38).

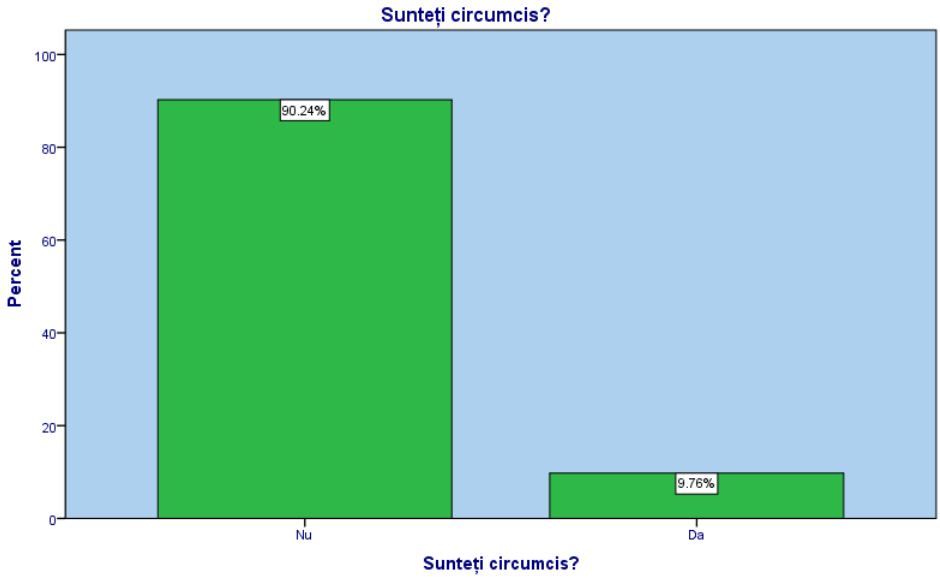

Figure 1 - Percentage of circumcised patients

Age at performing of circumcision

From the point of view of the age at which circumcision was carried out, of all cases, 60% said it was done at the age of less than 1 year old, in the case of the other 40% this was done during childhood or adolescence (Figure 39).

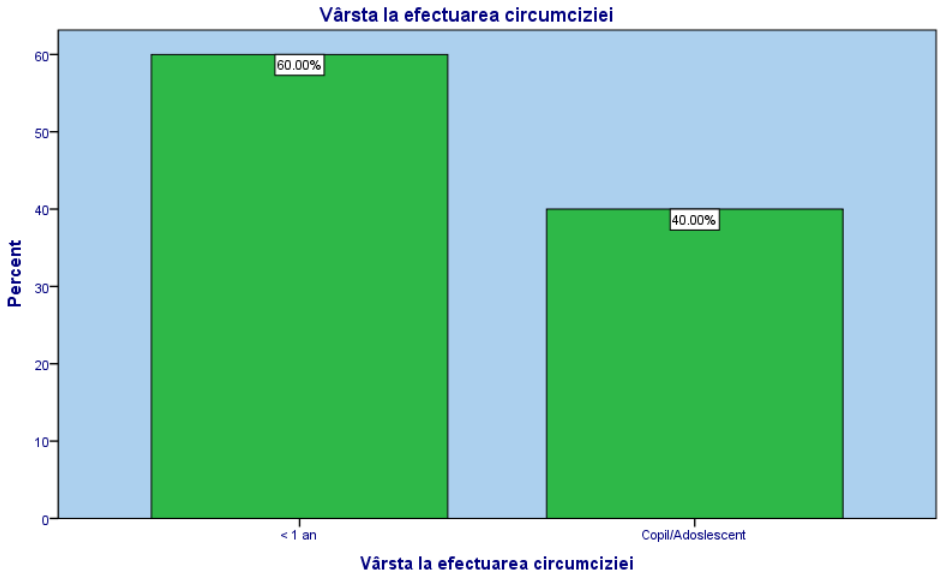

Figure 2 – Age at performing of circumcision

The type of circumcision performed

Din punct de vedere al tipului de circumcizie efectuată, 90% dintre persoanele circumcise care au răspuns la chestionar au declarat că aceasta este totală, iar în cazul a 10% aceasta a fost economică (Figura 40).

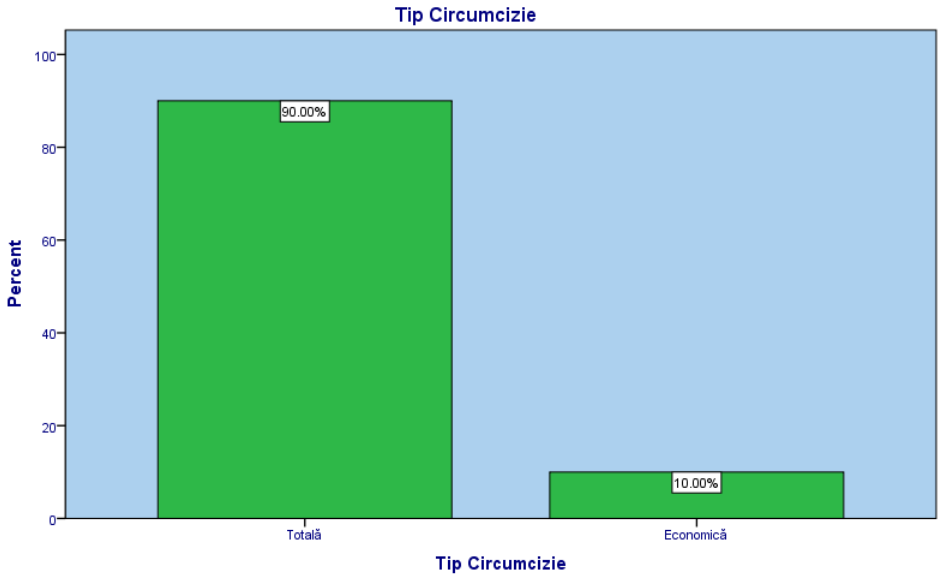

Figure 3 - The type of circumcision

Demographic Issues

Home country

From the point of view of the origin of the patients, respectively their native country, the vast majority come from Romania. There is one case in Bulgaria, Iran, Israel, Moldova, Syria and Turkey (Table IV).

Table II - Distribution by country of origin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bulgaria	1	0.5	0.5	0.5
	Iran	1	0.5	0.5	1.0
	Israel	1	0.5	0.5	1.5
	Moldova	3	1.5	1.5	2.9
	Romania	197	96.1	96.1	99.0
	Syria	1	0.5	0.5	99.5
	Turkey	1	0.5	0.5	100.0
	Total	205	100.0	100.0	

Age

The average age of subjects in this study is 41 years, and the most common age is 24 years. In terms of age distribution, it is noted that approximately 35% of study participants are aged between 18 and 30 years of age. Distribution by age is plotted in Figure 41.

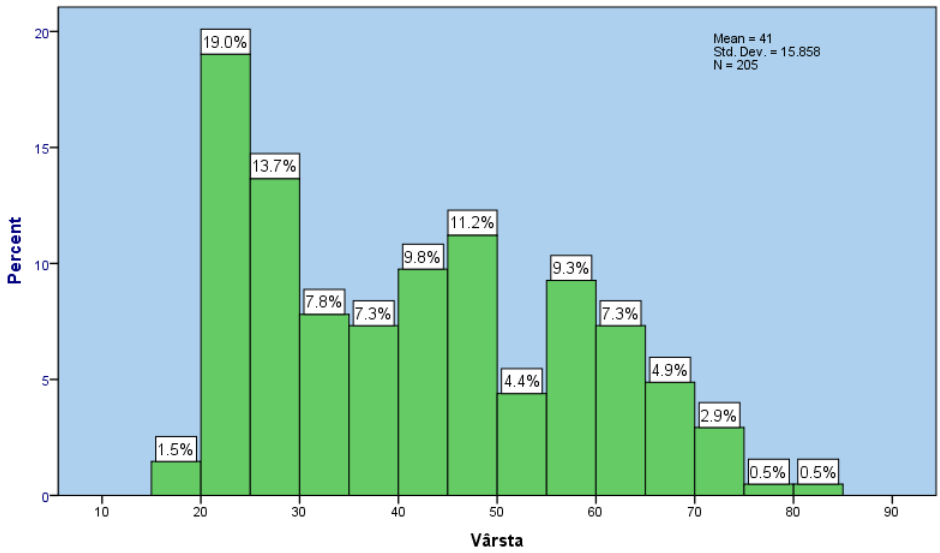

Figure 4 - Distribution by age

Ethnic affiliation

From the point of view of ethnic affiliation, about three quarters of the participants in the study declare themselves Romanian. In descending order of Macedo-Romanian (9.8%), Tatars (5.4%), Turks (2.9%), Gypsies (2%). Other ethnicities account for 3.4% of the total study participants (Table VI).

Table III - Distribution by ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Romanian	157	76.6	76.6	76.6
	Macedo-Romanian	20	9.8	9.8	86.3
	Gypsy	4	2.0	2.0	88.3
	Turkish	6	2.9	2.9	91.2
	Tatar	11	5.4	5.4	96.6
	Other	7	3.4	3.4	100.0
	Total	205	100.0	100.0	

Level of education

Most men have completed university studies (59.5%), and 15.1% have completed postgraduate studies. The percentage of those with 12 graduated grades is 10.24%, and those with post-secondary studies of 9.76%. The percentage of those who graduated 10 classes is

5.37%. Thus, a very high proportion of people with a high level of education is observed.

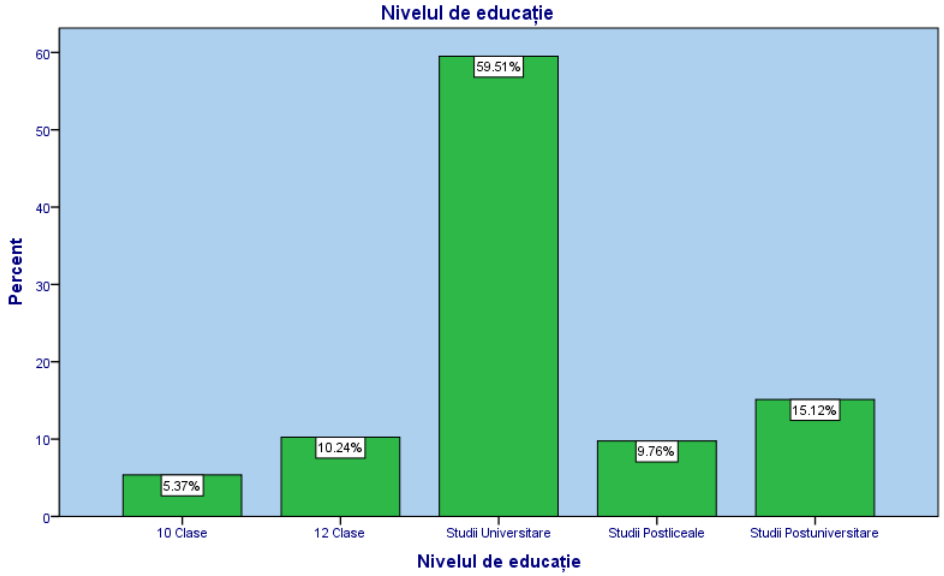

Figure 5 - Distribution by level of education

Religious affiliation

Most of the participants in the study were Christians (84.4%), representing the vast majority. Also included in the study were Muslims 9.8%, atheists (2.9%), other religions (2%) and Jews (1%) (Table VII)

Table IV - Distribution by religious affiliation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Christian	173	84.4	84.4	84.4
	Jew	2	1.0	1.0	85.4
	Moslem	20	9.8	9.8	95.1
	Atheist	6	2.9	2.9	98.0
	Other	4	2.0	2.0	100.0
	Total	205	100.0	100.0	

Occupation

From the point of view of the occupation, 31.7% declare to be proffesionals in the field of activity, 34.15% declare that they have another occupation. Approximately one fifth of the participants belong to the category of students, and 11.71% declared entrepreneurs (Figure 43).

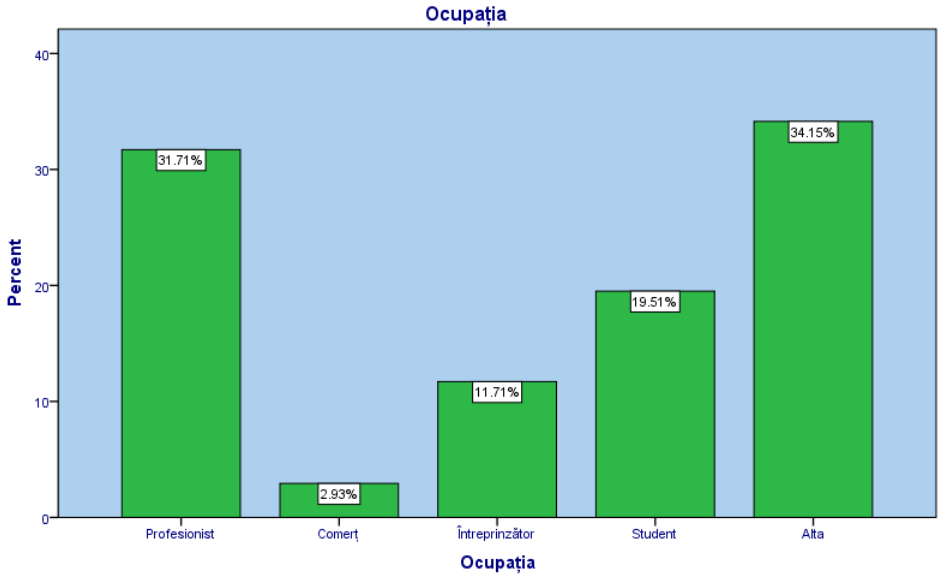

Figure 6 - Distribution by occupation

Questionnaire results

Question 1 - Have you ever experienced any of the below situations?

The frequency with which certain situations are encountered in men was evaluated, the data being compared between the circumcised and the uncircumcised (Figure 7).

For uncircumcised men, the most common situations are represented by the presence of smegma (44.3%), injured or broken foreskin (28.6%), irritation or infection of the foreskin or gland, the curvature or flexion of the penis in erection were present in 20% of the uncircumcised men. In 34.1% of the cases, the study participants in the uncircumcised group declared that they had not met any of the conditions assessed by question 1.

For circumcised patients, it is noted that about one-third of them (35% of cases) have not met any of the assessed situations. Approximately one in four circumcised patients had scars, holes or other lesions of the penis or body. With 21.1% and 20% respectively of those circumcised there have been cases of penile curvature or bending in erection, respectively tight or painful skin on the erect penis.

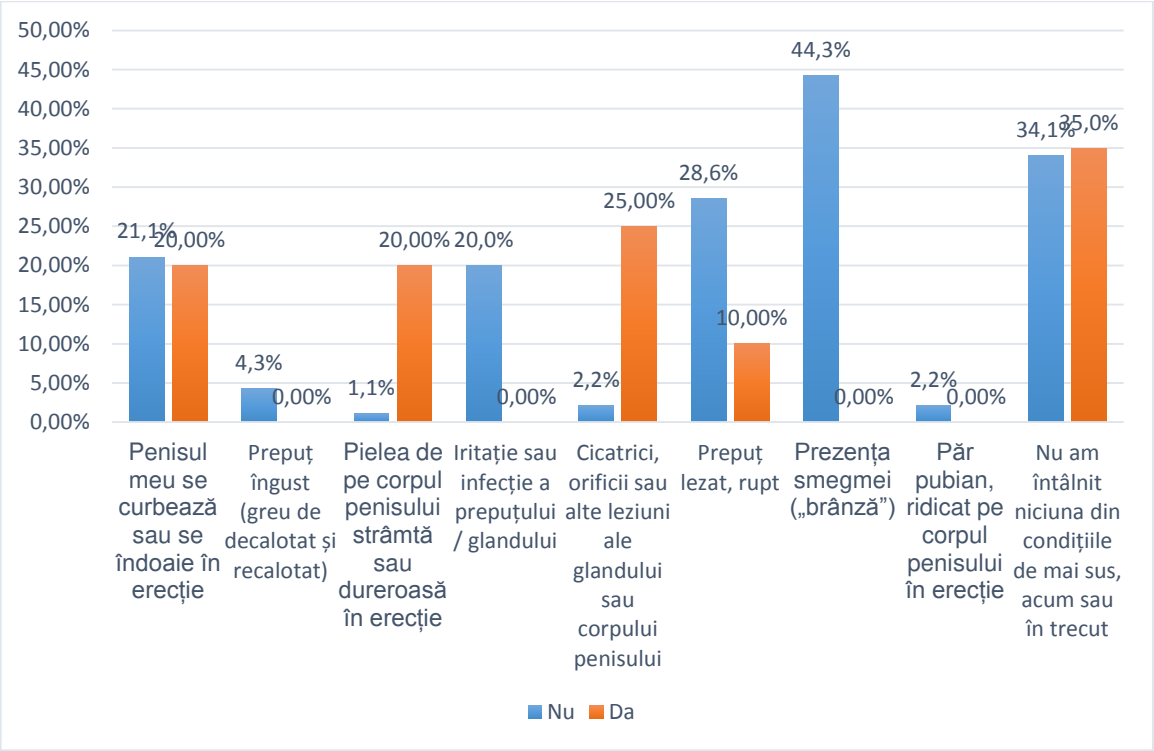

Figure 7 - Percentage of occurrence of assessed situations, depending on circumcise status

Question 2 - During sex, which is the most sensible/excitable part of the penis?

There were statistically significant differences, p=0,037 (**Error! Reference source not found.**) in terms of the most sensible / excitable areas of the penis. Thus, in the case of uncircumcised men, 69.2% said that the most sensible area is the gland / head. By comparison, the percentage of the circumcised is 45%. Significant differences were also observed in the proportion of those who stated that the fren (the part of the ventral face of the penis where the gland meets the body) is the most sensitive, with a significantly higher proportion of circumcision (30%) than uncircumcised (7%).

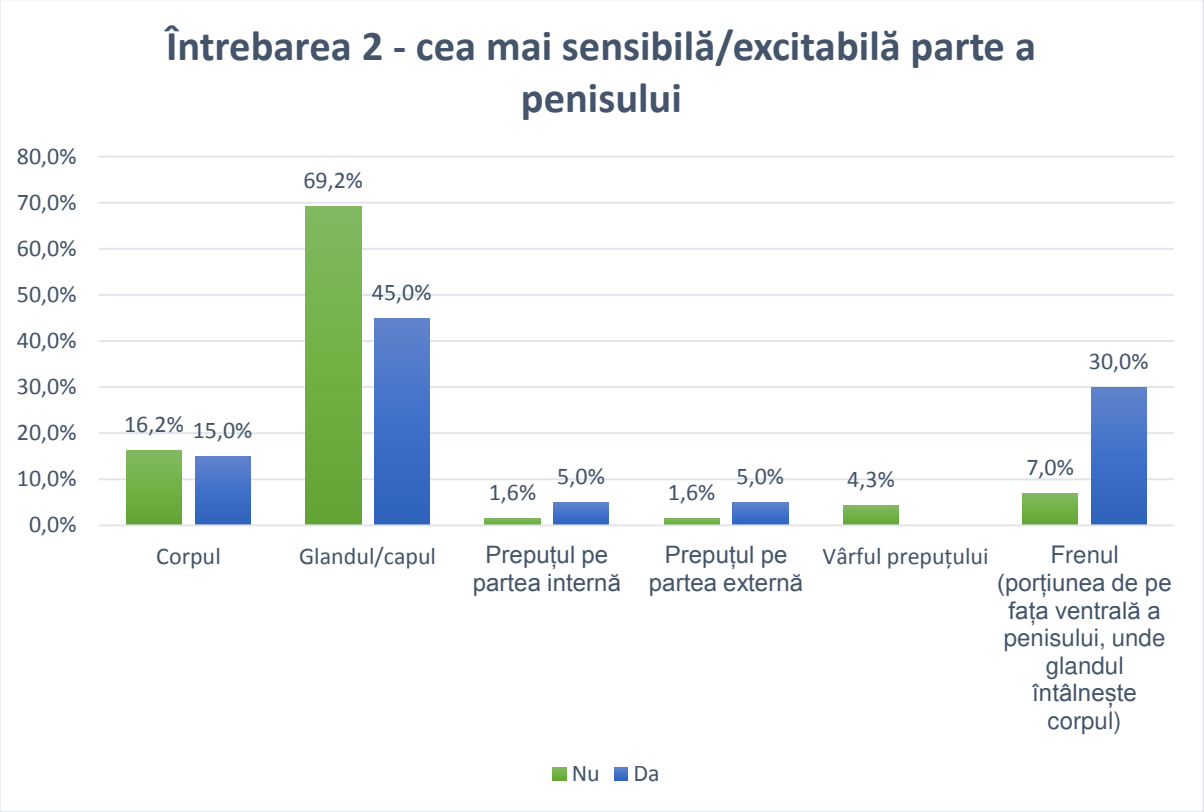

Figure 8 - The most sensitive / excitable part of the penis depending on the circumcision status

Question 21 - Are you totally unhappy because you are circumcised or not?

In the case of the item investigating the existence of dissatisfaction with the fact that they are circumcised or not, in the case of uncircumcised patients only 4.3% say they are dissatisfied, while for those circumcised the proportion of those dissatisfied with this fact is 40% (Figure 70).

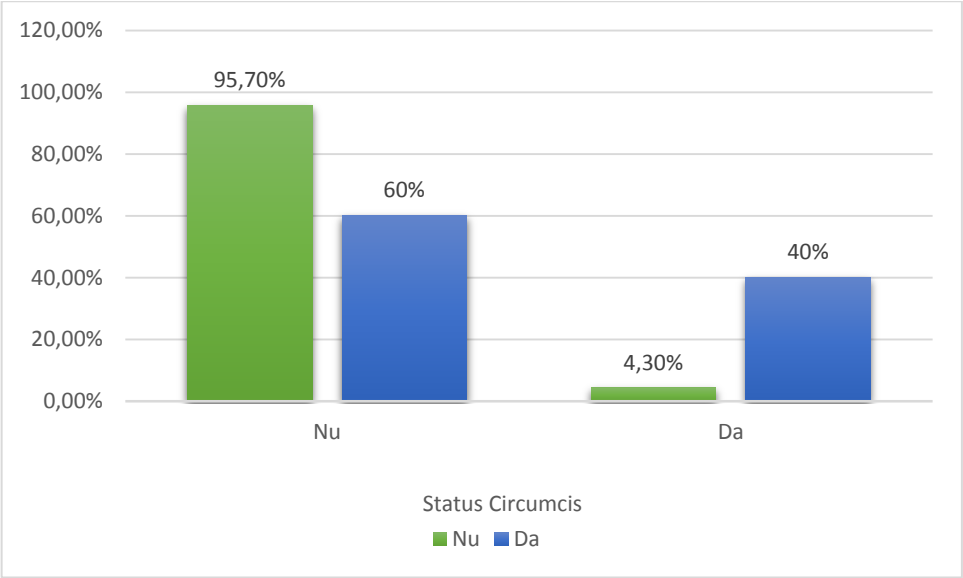

Figure 9 Distribution according to the discontent with whether or not they are circumcised depending on circumcise status

Question 22 - Have you ever had any negative feelings about your circumcise state?

The next item in the questionnaire evaluated the presence of negative feelings about circumcise state. Out of the study participants, 13 men were dissatisfied, of whom 12 were part of the group of circumcised and 1 of the group of uncircumcised.

Table V - The presence of negative feelings at circumcised state

		Are you circumcised?		
		No	Yes	Total
Have you ever had any negative feelings about your circumcise state?	No	184	8	192
	Yes	1	12	13
Total		185	20	205

Proportionately, it is noted that 60% of the circumcised had at one point negative feelings about circumcised state, while in the uncircumcised group the proportion was 0.5% (Figure 71).

Estimation of the effect size through the quota ratio indicates a value of 276 (CI 95% 31.85 - 2391/7). Practically, in the case of uncircumcised men, the presence of negative feelings about the existing state is non-existent.

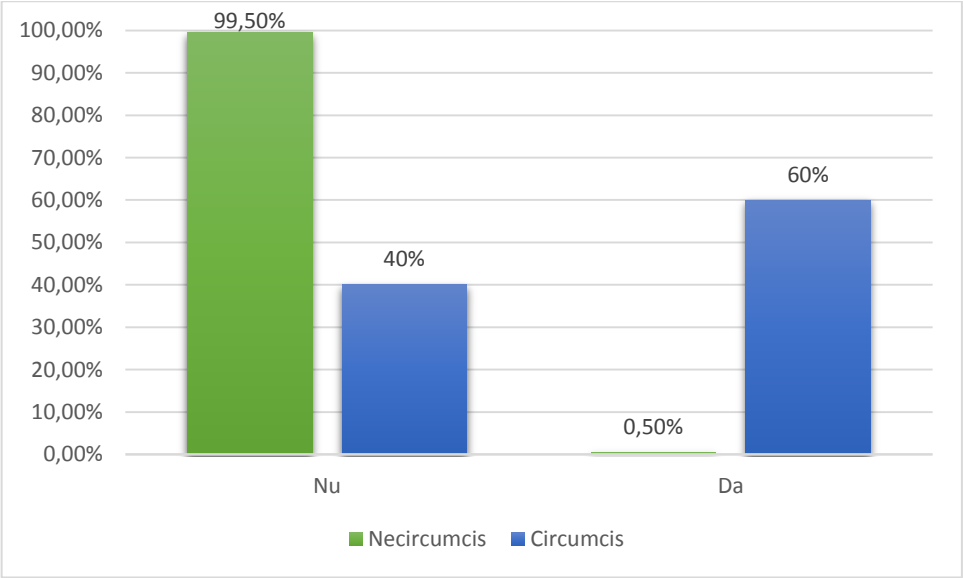

Figure 10 - Distribution according to the presence of the negative feeling of circumcised state depending on circumcise status.

Question 23 - Have you tried to avoid thinking about being circumcised or not?

A large percentage of men in the circumcision group (90%) say they tried to avoid thinking about circumcised state. For uncircumcised, the percentage is 2%. (Figure 72).

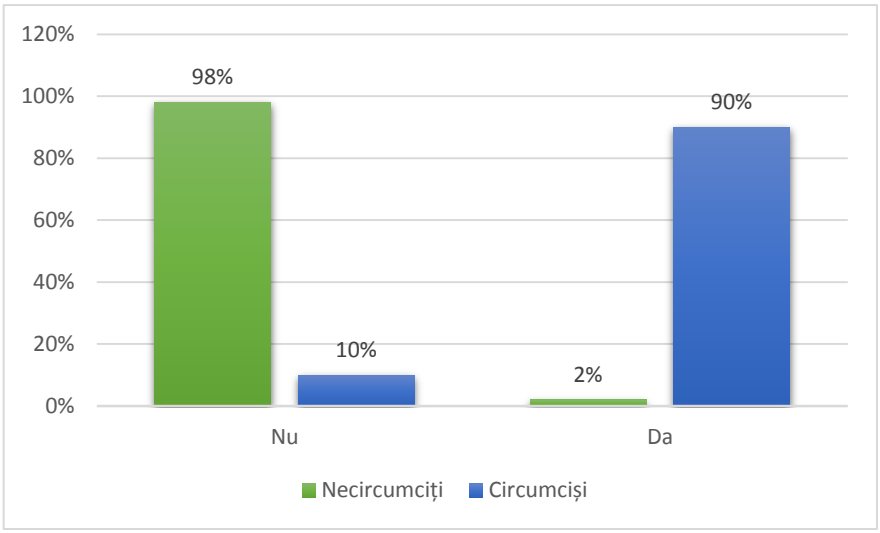

Figure 11 - Distribution based on avoidance of thinking about whether or not circumcised according to the circumcision status

Chapter X. Conclusions

The study of the 205 men highlights that the majority (185) are not circumcised, and the others (20) were circumcised at small ages for ethnic and religious reasons.

Circumcision is still the subject of multiple debates with pros and cons.

The "American Medical Association Journal" published a reference article by Dr E. Noel Preston, a US aviation captain. Dr. Preston has established that there is no therapeutic or prophylactic benefit for circumcision. He also cited the existence of "unwanted psychological, sexual, and unlawful psychological difficulties"

The Australian Pediatric College (ACP) called traumatic circumcision, a possible violation of human rights, and asked parents to be provided with full circumcision information before making a decision.

Male circumcision reduces the prevalence of HPV infection in males and the transmission of herpes simplex virus type 2 virus. According to the American Academy of Pediatrics, evidence for male circumcision in protection against syphilis is less potent and the risk of gonorrhea or chlamydia is not reduced to circumcised men.

Circumcision can protect people from acquiring HIV through heterosexual contact. In South Africa, the region with the highest incidence of HIV infections, this procedure will probably be integrated into the WHO package of HIV prevention measures.

Circumcision may be recommended in male children who have an urological pathology and have urinary tract infections despite prophylactic antibiotics.

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