Knowledge and use of the Human Teeth Biobank by the academic community of the UFPR Dentistry course

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ABSTRACT

This study aimed to analyze the profile of users of the Human Teeth Biobank at the Federal University of Paraná (HTB-UFPR), the most sought-after services, whether externally obtained teeth are used and the degree of user satisfaction. For this, a semi-structured electronic questionnaire was applied to the internal community of the Dentistry course at UFPR, between August and December 2019. A total of 300 questionnaires were answered, 263 by undergraduate students, 4 by graduate students, 24 by professors and 9 by technical-administrative employees. Most students were female between 17 and 22 years old, while for employees (teachers and technicians) there was a similar distribution between the sexes in the age group between 40 and 59 years old. Although 80.99% of the students claimed to know the HTB-UFPR, only 50.19% used its services and 59.32% reported having already looked for teeth externally. The most used service was the withdrawal for teaching activities, but only 42.15% returned them after use. The teeth obtained externally came mainly from private offices and only 56.33% of the students reported having always submitted them to disinfection/sterilization, with the autoclave being the most indicated method. All employees knew the HTB-UFPR and, among the teachers, most made both withdrawal and donations. The main purpose of the withdrawals was the research and 63.6% reported having returned their teeth. As for satisfaction, the academic community was predominantly fully satisfied. Finally, it emphasizes the need to expand awareness actions for the academic community regarding ethical, legal and biosafety aspects in the acquisition and manipulation of human teeth.

Descriptors: Tooth. Dental Ethics. Dentistry Education. Research in Dentistry.

1 INTRODUCTION

The use of human teeth for scientific research and teaching in Dentistry is a well-known practice. However, the existence of a Biobank and/or Human Teeth Bank is of great importance, which can provide teeth for these activities in a safe manner and respect the current Brazilian laws and regulations[1].

A biobank is responsible for storing a collection of human biological material and associated information, for research purposes following regulations or pre-defined technical, ethical and operational standards, under institutional and non-profit responsibility and management. In addition to storage facilities, it can include a complete organization with biological samples, data, policies and procedures to handle these samples and perform other services such as database management and planning of scientific studies[2]. The Human Teeth Banks are non-profit entities linked to a college, university, or other institution that are responsible for the collection/reception, cleaning, disinfection, preparation, cataloging, storage, assignment/ withdrawal and administration of teeth, as well as for the awareness of the lay population, the academic community and education for ethical practice[1,3]. In short, the main objective of a biobank is to provide biological material for research, while a tooth bank is more focused on awareness and management of teeth for teaching activities. It is within this context that the creation and structuring of Biobanks and/or Human Teeth Banks in higher education institutions in the country is of great importance, mainly aiming to minimize the illegal trade in human teeth, which still happens in Dentistry courses, as well as make them available in a safe and controlled way for different teaching, research and extension activities[3-5]. Also, the dental pulp obtained from extracted or exfoliated teeth is a source of stem cells, which can be applied in regenerative medicine and tissue regeneration therapy, constituting an important field of research.[6].

The Faculty of Dentistry at USP was responsible for creating the first Human Teeth Bank (HTB) in Brazil, which served to recognize the human tooth as an organ, through Law No. 9434 of February 4, 1997[7]. Other HTBs began to be established in Brazil in the 2000s, aiming to develop an awareness of the principles of biosafety and bioethics among dentistry students and professionals, in addition to holding responsibility for activities involving the handling and administration of donated teeth[3,5,8,9].

The HTBs play an important ethical role, as they minimize or even eliminate the illegal trade in human teeth[10] since the use of human organs or tissues without proven provenance is considered a crime[4,7]. Over the years, the number of HTBs in educational institutions has increased and are currently distributed in all Brazilian regions [1,4,11]. However, according to Freitas *et al.* (2012)[4], although the use of teeth for research and teaching is frequent in dentistry, the existence of HTBs is recent and incompletely disseminated in higher education institutions.

The HTB of the UFPR Dentistry Course was inaugurated on June 22, 2010, and in August 2019; it was approved as a biobank by the National Research Ethics Commission (CONEP), being responsible for managing the capture, receipt, processing, cataloging, storage and withdrawal of human teeth. In this way, it is possible to borrow according to ethical and

biosafety standards, to meet the demands of undergraduate and graduate courses[2]. In this context, it should be noted that the UFPR's HTB is linked to the Biobank of the Hospital de Clínicas of UFPR, which is responsible for standardizing the operation of the institution's biobanks and biorepositories, being managed by the Department of Restorative Dentistry together with the Extension Program "UFPR Tooth Bank: health education".

The teeth received undergo standard operating procedures (SOP) for cleaning, disinfection and/or sterilization, and are then cataloged and stored in different collections: traceable teeth and non-traceable teeth. Traceable teeth are obtained from the voluntary donation of patients treated in the course's facilities, which are extracted by clinical indications of different disciplines. For the donation, patients previously sign the Informed Consent Form (ICF). Right after extraction, the teeth are placed in containers containing a 1% peracetic acid solution and then sent to the HTB where they are registered, cleaned, disinfected and stored in coded containers with 0.5% chloramine T under refrigeration. The teeth are also received from Basic Health Units (UBS) in Curitiba and the metropolitan region, which sign the Term of Donation (TD) to transfer teeth to the HTB. These teeth are stored in the untraceable teeth collection.

All these procedures aim to meet the internal demands of the UFPR Dentistry course, including practical activities of teaching and extension, as well as providing teeth for carrying out research projects and scientific initiation. The structure of the UFPR's HTB was consolidated to systematically organize the collection of human teeth, making it possible to meet the needs of both internal and external projects. Even so, during the HTB service routine, there is a certain lack of knowledge of the academic community about its objectives and purposes.

In this context, this research was carried out to determine the profile of users of the UFPR's HTB, list the types of services most sought after, check if there is the use of teeth obtained outside the HTB and, finally, assess the degree of satisfaction of its users.

2 MATERIAL AND METHODS

The research was approved by the Research Ethics Committee of the Health Sciences Sector of UFPR (CAAE: 11044919. 3.0000.0102; opinion nº 3.415.911). For data collection, a questionnaire consisting of 19 (nineteen) questions was applied using the GoogleForms® tool (Google, Mountain View, CA, USA). This research instrument made it possible to verify the knowledge and use of the HTB by the academic community of the Dentistry course at UFPR. A pre-test was carried out, from the application of the questionnaire to a small number of participants, to detect flaws in the elaboration and presentation of the instrument, which were corrected.

The self-administered questionnaire contained initial questions referring to socio-demographic aspects such as gender, age, city and/or region of origin and, in the case of students, the periodization and, for teachers or employees, the period they had been with the course. These questions have been configured to allow only one answer option. Next, the participants were asked if they knew the UFPR's HTB, if they had already used its services and, if so, for what purpose, with the options "Withdrawal", "Donation", "Withdrawal and Donation", "Other" (open question). The following

questions were directed to verify which collection the withdrawal and/or donation was made, as well as for which activities, whether for teaching, extension or research. These questions allowed the choice of more than one option. The next block of questions analyzed whether teeth were obtained outside the HTB of UFPR and, if so, the origin and care related to disinfection and/or sterilization, as well as the use of personal protective equipment (PPE) during their manipulation. Finally, it was verified the difficulty to obtain teeth in the HTB of UFPR and the users' satisfaction. The questionnaire applied to the professors of the course had six additional questions, of a dichotomous nature, which aimed to verify if the professors had already requested teeth from the students, if there was difficulty in obtaining them and, in the case of teeth obtained outside the HTB of UFPR, if there were precautions related to disinfection and/or sterilization and the use of PPE, concluding on the importance of the HTB for the course.

The study included the entire academic community linked to the Dentistry course at UFPR, that is, students, teachers and administrative-technical staff. The invitation to participate in the research was carried out by e-mail, sent by the departments, containing the invitation letter, to guarantee secrecy and confidentiality in the recruitment. The invitation to participate in the research contained the link to the informed consent and the questionnaire, as well as the contact of the researchers. This allowed the duly signed consent form to be obtained, maintaining the confidentiality of the responses to the questionnaire, which was done independently and autonomously by electronic means. Another way to provide access to the online questionnaire was the display of an explanatory banner with a QR Code that directed the participant to the survey. Professionals not affiliated with UFPR and patients, in general, were excluded from this study. The methodology of using an online tool made it possible to ensure the anonymity of respondents and to avoid biased responses, as well as allowing real-time analysis of the responses obtained.

Data were collected from August to December 2019 and then presented using descriptive statistics (absolute and relative frequencies), using the Excel® spreadsheet (Microsoft, Richmond, WA, USA) extracted from the GoogleForms platform. Data were separated according to the groups: students, teachers and servers.

3 RESULTS

In total, 300 answered questionnaires were received, 263 from undergraduate students (out of the total of 410 enrolled students), 4 from graduate students (1 specialization and 3 master's), 24 from professors (from a total of 96 professors) and 9 from employees. (out of a total of 30). Among the graduate students, all of them knew the UFPR's HTB, and of these, three (75%) borrowed untraceable teeth for teaching activities while they were undergraduate students and returned them after use.

Regarding the profile of users in the group of undergraduate students, the results showed that 75.29% (198) were female and 24.71% (65) were male; as for the age group, 71.86% (189) were between 17 and 22 years old, 21.29% (56) between 23 and 25 years old, 4.94% (13) between 26 and 29 and 1.91% (5) between 30 and 35 years old; concerning the region of origin, 56.65% (149) were from Curitiba, 13.69% (36) from the metropolitan region of Curitiba, 12.55% (33) from the interior of Paraná, 15.59% (41) from other

Brazilian states, 0.76% (2) from the coast of Paraná, 0.38% (1) from another country and 0.38% (1) did not respond. Table 1 gathers information about the knowledge and use of the UFPR's HTB by undergraduate students according to their period.

Table 1. Distribution of undergraduate student responses to three questions considering periodization

Periodization	n	Know the HTB UFPR		Has already used the services of the HTB UFPR		He already needed teeth and did not use the HTB UFPR	
		Yes n (%)	No n (%)	Yes n (%)	No n (%)	Yes n (%)	No n (%)
1st period	40	16 (40,0)	24 (60,0)	2 (5,0)	38 (95,0)	16 (40,0)	24 (60,0)
2nd period	10	7 (70,0)	3 (30,0)	4 (40,0)	6 (60,0)	4 (40,0)	6 (60,0)
3rd period	34	15 (44,12)	19 (55,88)	1 (2,94)	33 (97,06)	10 (29,41)	24 (70,59)
4th period	33	30 (90,91)	3 (9,09)	5 (15,15)	28 (84,85)	3 (9,09)	30 (90,91)
5th period	33	32 (96,97)	1 (3,03)	21 (63,64)	12 (36,36)	25 (75,76)	8 (24,24)
6th period	29	29 (100)	0 (0)	27 (93,1)	2 (6,9)	26 (89,66)	3 (10,34)
7th period	28	28 (100)	0 (0)	24 (85,71)	4 (14,29)	27 (96,43)	1 (3,57)
8th period	25	25 (100)	0 (0)	21 (84,0)	4 (16,0)	20 (80,0)	5 (20,0)
9th period	26	26 (100)	0 (0)	25 (96,15)	1 (3,85)	22 (84,62)	4 (15,38)
Desperiodized	5	5 (100)	0 (0)	2 (40,0)	3 (60,0)	3 (60,0)	2 (60,0)
Total (%)	**263 (100)**	**213 (80,99)**	**50 (19,01)**	**132 (50,19)**	**131 (49,81)**	**156 (59,32)**	**107 (40,68)**

Tables 2 and 3 present the synthesis of data collected from the students' questionnaires, the first referring to the services of the HTB UFPR that were used, purpose, collection and destination after use, while the second shows the answers related to teeth obtained externally with relation to origin, disinfection and/or sterilization, methods used and use of PPE.

The degree of difficulty in obtaining teeth for the course activities was considered moderate by 38.4% of the students (figure 1). Their degree of satisfaction with the services provided by the HT UFPR varied according to the current period (figure 2).

In the group of employees, among teachers 58.3% (14) were male and 41.7% (10) were female and among administrative technicians, 66.7% (6) were female, while 33.3 % (3) of males. The age group of teachers ranged between 30 and 75 years, with the highest occurrence between 40 and 59 years (58.3%) and that of administrative technicians was between 26 and 75 years,

with the highest number of responses between 47 and 59 years (44 .4%). As for the period employed the employees had with the Dentistry course, 52.2% of the professors had more than 10 years, 43.5% between 4 and 10 years and 4.3% between 1 and 3 years. Among the administrative technicians, 44.5% had a contract for a period of 4 to 10 years, 33.3% over 10 years, 11.1% between 1 and 3 years and 11.1% for less than one year.

When asked if they knew the HTB UFPR, 100% of the servers said yes. Among the teachers, 79.2% (19) reported having used the services of the HTB UFPR, against only 11.1% (1) of the administrative technicians, who donated traceable teeth. The synthesis of the teachers' answers regarding the services used, purpose, collection and destination after use are described in table 4. The teeth obtained externally to the HTB UFPR are described in table 5, regarding the source, disinfection and/or sterilization, methods for disinfection and/or sterilization and use of PPE.

Table 2. Summary of responses from undergraduate students who used the services of the HTB UFPR (n=132), regarding the collection, purpose and destination after use

	n	%
Withdrawal	75	56.82
Traceable teeth	-	-
Untraceable teeth	121	100
Teaching	101	83.47
Research	2	1.65
Extension	1	0.83
Teeching and extension	11	9.09
Teaching and research	6	4.96
Returned	51	42.15
Kept	33	27.27
Kept with teacher	7	5.79
Didn’t know	4	3.31
Discarded	3	2.48
Didn’t answered	23	19.01
Donation	7	5.30
Traceable teeth	46	85.65
Biobank collection	45	83.83
Own research	1	1.82
Untraceable teeth	2	3.64
Biobank collection	1	1.82
Own research	1	1.82
Traceable and Untraceable teeth	6	10.91
Biobank collection	4	7.27
Own research	2	3.64
Withdrawal and donation*	46	34.85
Other**	4	3.03

* Among the participants who reported both lending and donating teeth to the HTB UFPR, the collection and purpose were allocated to the withdrawal or donation group.
** They took teeth obtained externally to be sterilized at the HTB, to prepare for research or exchange.

Table 3. Summary of responses from undergraduate students who obtained teeth outside the HTB UFPR (n=156), regarding the source, method for disinfection or sterilization and use of PPE

	n	%
Source		
Private office	57	36.54
Department of Anatomy	25	16.03
Course colleagues	11	7.05
Public Health	10	6.41
More than one location	49	31.41
Did not answer	6	2.56
Performed disinfection and/or sterilization		
Always	89	57.05
Sometimes	37	23.72
Never	30	19.23
Methods for Disinfection and/or Sterilization		
Autoclave	69	44.23
Peracetic acid	9	5.77
Sodium hypochlorite	6	3.85
70% alcohol	4	2.56
Method association	25	16.03
Took it to the Biobank	4	2.56
Did not answer	36	25.00
Use of Personal Protective Equipment		
Yes	86	55.13
No	32	20.51
Did not answer	38	24.36

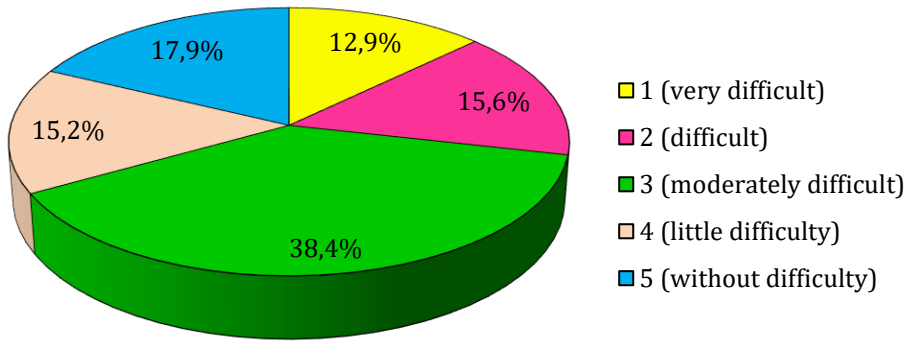

Figure 1. Degree of difficulty pointed out by students to obtain teeth

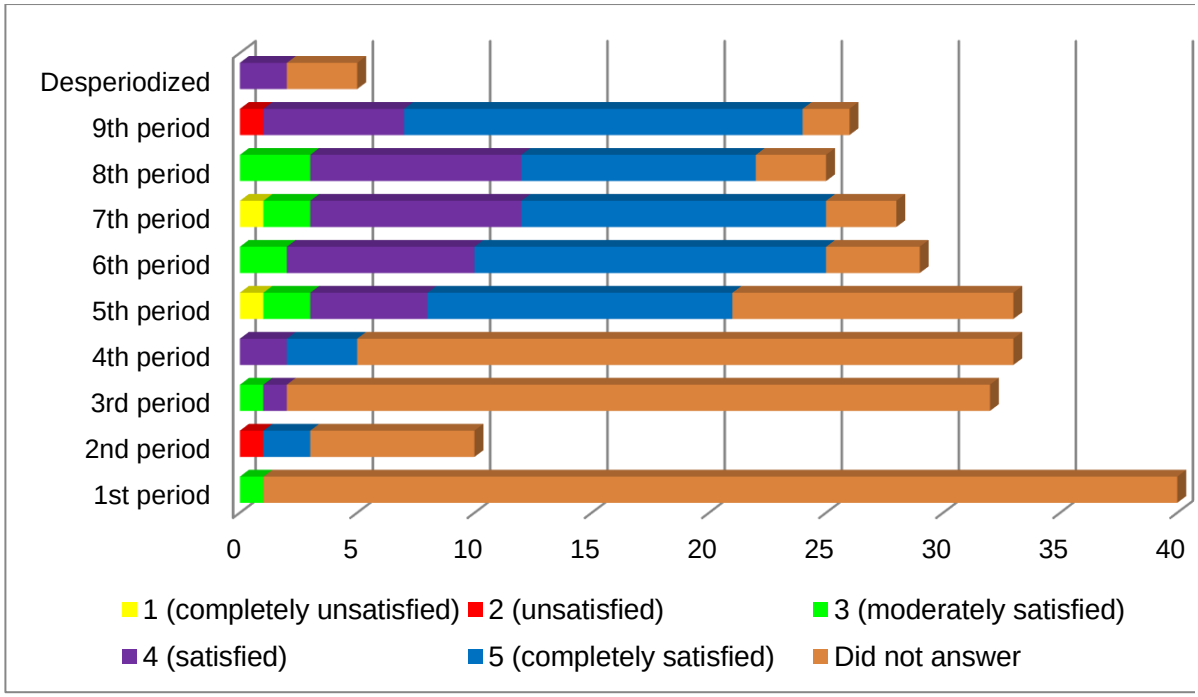

Figure 2. Degree of satisfaction with the services of the HTB UFPR indicated by the students, according to the period

Table 4. Synthesis of responses from teachers who used the services of the UFPR's BDH (n=19), regarding the collection, purpose and destination after use

	n	%
Withdrawal	2	10.5
Non-traceable teeth for teaching and/or extension	5	42.3
Traceable and/or untraceable teeth for research	7	57.7
Returned	7	63.6
Partially returned	3	18.2
Kept	1	9.1
Discarded	1	9.1
Donation to the Biobank collection	6	31.6
Traceable teeth	3	20.0
untraceable teeth	12	80.0
Withdrawal and donation *	9	47.4
Other**	2	10.5

* Among the participants who reported having both lent and donated teeth to the HTB UFPR, the collection and purpose were allocated to the withdrawal or donation group, respectively. For withdrawal, as more than one purpose was indicated, the responses were organized and categorized into two groups.
** Teeth preparation for research.

Table 5. Synthesis of responses from teachers who obtained teeth outside the HTB UFPR (n=6), regarding origin, method for disinfection or sterilization and use of PPE

	n	%
Source		
Private office	1	11.1
Department of Anatomy	1	11.1
Course colleagues	1	11.1
Private office and Public Health	3	66.7
Performed disinfection and/or sterilization		
Always	4	66.7
Sometimes	2	33.3
Never	-	-
Methods for Disinfection and/or Sterilization		
Autoclave	2	33.3
Autoclave + 70 % alcohol	1	16.7
Autoclave + sodium hypochlorite	2	33.3
Took it to the Biobank	1	16.7
Use of Personal Protective Equipment		
Yes	6	100.0
No	-	-

The degree of difficulty in obtaining teeth was appointed by teachers as being very difficult (8.3%), difficult (4.2%), moderately difficult (29.2%), little difficulty (8.3%) and without difficulty (50%). As for the degree of satisfaction with the services provided by the UFPR's BDH, 70.8% of the teachers said they were satisfied, while 29.2% did not. The answers to the part of the questionnaire intended only for the course teachers are shown in table 6.

Table 6. Distribution of answers exclusively for teachers.

Questions	**Yes n (%)**	**No n (%)**	**Did not answer n (%)**
Have you asked students for natural teeth for laboratory or academic research use?	9 (37.5%)	13 (54.2%)	2 (8.3%)
Did you have difficulty finding all the necessary dental elements?	7 (29.2%)	10 (41.6%)	7 (29.2%)
Did the students report difficulties in obtaining the requested teeth?	8 (33.3%)	10 (41.6%)	6 (25.1%)
When the elements are external to the HTB UFPR, is it requested prior disinfection and sterilization?	13 (54.2%)	2 (8.3%)	9 (37.5%)
Do you require the use of personal protective equipment when handling these teeth?	16 (66.7%)	0 (0%)	8 (33.3%)
Do you consider the existence of the HTB UFPR important to support the academic activities of the course?	20 (83.3%)	0 (0%)	4 (16.7%)

4 DISCUSSION

The academic community of the Dentistry course at UFPR demonstrated, for the most part, that they knew about the existence of the HTB and used it both for withdrawals and the donation of teeth. Among students, the main service used was the withdrawals of non-traceable teeth for teaching activities, while among teachers, the highest occurrence was withdrawals and donation. The survey participants who indicated not knowing the HTB were students from the first periods of the course, with the majority (89.74%) attending the 1st to 4th period. This can be explained by the fact that they have not yet started the subjects with preclinical laboratory practices that require natural teeth and that the Dental Anatomy subject at UFPR, offered in the 1st period of the course, has its collection of extracted teeth.

From the 5th period on, there was a significant increase in the use of HTB services at UFPR, which is due to the offer of the discipline of Endodontics I in this period, which is pre-clinical. According to Medeiros et al. (2020)[12], Endodontics is the training area that most uses extracted human teeth to carry out practical laboratory activities. Previous studies comparing the use of artificial and natural teeth for learning Endodontics showed that although artificial teeth have favorable aspects for the initial training of students, their use should be cautious, as they have limitations such as unsatisfactory resin hardness[13], difficulty in irrigation and root canal filling, as well as radiographic interpretation[14], and also show morphological and morphometric differences when compared to natural teeth[15]. Thus, the use of extracted human teeth was identified as more reliable for the success of preclinical training[16,17].

A result that drew attention was the fact that 75.76% of students in the 5th period reported that they needed teeth, but did not use the HTB UFPR. This high percentage of students who obtained teeth from external sources is recurrent in other periods from the 5th. This raises ethical and legal concerns related to biosafety when handling these teeth. Regarding the way of obtaining it, it was found that the purchase of dental elements was very small (0.64%), with donation being the main means of acquisition and private offices, the place most commonly indicated as the origin of the donated teeth. Previous studies have already demonstrated the concern regarding the commercialization of teeth among dentistry students. The percentage of students who reported having purchased teeth for the development of practical activities during the course ranged from 1.2% to 11%[12,18,19]. The findings of the present study, when compared to the literature[12,18,19] suggest that there was a greater awareness among students about the illegality of the tooth trade. The lack of knowledge on the part of students from the first periods of the existence of the HTB at UFPR and, therefore, of its purpose and services provided, as well as the large number of students who sought teeth externally, led the HTB team to implement new actions to raise awareness of the internal community, such as a lecture and guided visit for newcomers to the course, updating of the HTB UFPR website, including informational materials, access to POP, manuals, legislation, terms (for donation and withdrawal) and activities developed, as well as frequent posts on profiles of the HTB on social networks.

Teeth are potential sources of contamination, as they can contain several pathogens and, therefore, must undergo disinfection and sterilization procedures

before being used by dental students in their pre-clinical activities. For this, the use of PPE is fundamental and indispensable[1,10,20,21]. The results of this research showed a great diversity of responses, both from students and teachers, regarding the protocol adopted for the disinfection and/or sterilization of extracted teeth. However, sterilization through an autoclave was the method most indicated by the participants. This diversity of answers about the procedures for disinfection/ sterilization of extracted teeth is also widely observed in the literature[12,19].

The protocol for non-traceable teeth arriving at the HTB UFPR begins with cleaning in an ultrasonic washer with enzymatic soap, followed by disinfection with 1% peracetic acid and then sterilization in an autoclave at 121ºC for 35 minutes. According to Demenech et al. (2017)[22], the use of an ultrasonic washer favors the removal of residues in deeper layers and regions of difficult access, while autoclaving has been identified as a safe and efficient method of sterilization[21,22]. Peracetic acid is used during tooth processing, as it is a high-level disinfectant and has characteristics such as being bactericidal, virucide, fungicide and sporicidal, with easy disposal as it does not form toxic residues, is biodegradable, effective in the presence of organic matter and has fast action at low temperatures[23]. Due to the potential release of mercury vapors from amalgam restorations, teeth with this restorative material are not initially sterilized in an autoclave, only cleaned and disinfected, minimizing the associated risks.[21] Amalgam removal is carried out later, inside an acrylic box adapted, collecting the waste and then submitting to sterilization. As routine, traceable teeth are cleaned, disinfected with 1% peracetic acid, then packed in 0.5% chloramine T and kept refrigerated (~4°C). Non-sterilization aims to preserve the characteristics of dental tissues[22]. Several disinfectant solutions have been studied for the storage of teeth to be used in research, however, there is still no consensus[22,24].

A fact that caught our attention was that 19.23% of the students reported not using PPE to carry out the disinfection and/or sterilization procedures. However, several studies emphasize the importance of using PPE for handling extracted human teeth[1,18,21]. This shows that it is still necessary to expand awareness campaigns among dentistry students about biosafety measures, something that has been carried out through dissemination on the HTB's social media.

The results showed that there is an imbalance between the number of donations and withdrawals, with more students taking out withdrawals than giving. It is known that donations do not depend only on the student's will, as the patient must agree and sign a consent form for such action. Thus, it is necessary to invest in awareness campaigns to encourage donations and make them an ongoing program[10]. Regarding the issue of returning teeth to the HTB after use, less than half of the students reported having it returned. However, it is important that the return takes place, regardless of the degree of destruction or wear that they present, so that the HTB can control and manage the borrowed teeth[25]. Thus, the Withdrawal Term was updated so that it has, in the same document, information for the return, aiming to reinforce the need for this action.

The HTB UFPR has as one of its missions to provide, in a safe way and through withdrawal or assignment, teeth extracted to the academic community of the

Dentistry course and sought to know the degree of difficulty in obtaining them. Among students, the most frequent answer was "moderately difficult" (38.4%), followed by "no difficulty" (17.87%), while 50% of teachers reported that there was no difficulty. These findings, associated with the percentage of students who resort to external sources to obtain extracted teeth, demonstrate that the dissemination actions of the HTB UFPR need to be expanded, which is already being implemented. Concerning user satisfaction with the services provided by the HTB UFPR, it was observed that the most frequent responses among students were "totally satisfied" (16.09%) and "satisfied" (27.97%). Among teachers, 70.8% reported being "totally satisfied".

The part of the questionnaire aimed exclusively at teachers showed that when teeth are requested to be extracted to carry out pre-clinical activities, 33.3% of students reported having had difficulty obtaining them. This can be explained, in part, by the number of dental elements from the same group required for students. As the HTB UFPR is maintained from donations both internally and externally to the university and, although there are partnerships with the Municipal Health Secretary of Curitiba and Piraquara, the number of teeth in a given dental group may not be enough to supply the course demand. This makes it necessary to expand the number of partnerships and dissemination campaigns, to increase the capture of teeth, as recommended by Miranda and Bueno (2012)[10]. However, the vast majority of the course professors consider the existence of the HTB UFPR to support the didactic activities developed throughout the Dentistry course as important.

The biggest difficulty in carrying out the research was the engagement of the participants, but the strategy of making the banner available seems to have been favorable, especially among students. Based on the results of this research, the HTB UFPR implemented new actions to expand of expanding the dissemination of information about the donation and its importance, biosafety and ethical and legal aspects, using mainly social media. Thus, the study contributed to the incorporation of new strategies and to help other tooth banks in planning their actions.

5 CONCLUSIONS

Most of the student body and all employees (teachers and administrative technicians) are aware of the existence of the HTB UFPR. The service most used by students is the withdrawal of untraceable teeth to carry out teaching activities in pre-clinical laboratory classes. Among the professors, the most frequent was the realization of both: withdrawal, predominantly for research activities and donations of untraceable teeth. However, less than half of the students reported having returned their teeth after use, while among teachers there was a higher percentage of return, although well below the totality. A large number of students searched externally for teeth and the main location pointed out were private offices and clinics. Also, part of these teeth was not submitted to disinfection and/or sterilization procedures and the students did not always use PPE during their manipulation. Given these findings, the importance of expanding actions regarding the awareness of the academic community both regarding the existence of the HTB UFPR and its mission is highlighted and, thus, reducing or even eradicating the illegal acquisition of teeth, or that is, they do not come from a tooth

bank, as well as on the care during their handling concerning biosafety.

RESUMO

Conhecimento e utilização do Biobanco de Dentes Humanos pela comunidade acadêmica do curso de Odontologia da UFPR

O objetivo deste estudo foi analisar o perfil dos usuários do Biobanco de Dentes Humanos da Universidade Federal do Paraná (BDH-UFPR), os serviços mais procurados, se há utilização de dentes obtidos externamente e o grau de satisfação dos usuários. Para isso, foi aplicado um questionário eletrônico semiestruturado à comunidade interna do curso de Odontologia da UFPR, entre agosto e dezembro de 2019. Um total de 300 questionários foram respondidos, sendo 263 por estudantes de graduação, 4 por pós-graduandos, 24 por professores e 9 por servidores técnico-administrativos. A maioria dos estudantes era do sexo feminino entre 17 e 22 anos, enquanto para os servidores (professores e técnicos) houve uma distribuição semelhante entre os sexos na faixa etária entre 40 e 59 anos. Embora 80,99% dos discentes afirmaram conhecer o BDH-UFPR, apenas 50,19% usaram seus serviços e 59,32% relataram já terem buscado dentes externamente. O serviço mais utilizado foi o empréstimo de dentes para atividades de ensino, porém apenas 42,15% os devolveram após o uso. Os dentes obtidos externamente foram provenientes, principalmente, de consultórios particulares e apenas 56,33% dos alunos relataram sempre ter submetido-os à desinfecção/esterilização, sendo a autoclave o método mais indicado. Todos os servidores conheciam o BDH-UFPR e, dentre os professores, a maioria realizou tanto empréstimos quanto doações. Os empréstimos tiveram como principal finalidade a pesquisa e 63,6% relataram terem devolvido os dentes. Quanto à satisfação, a comunidade acadêmica mostrou-se predominantemente totalmente satisfeita. Por fim, ressalta-se a necessidade de ampliar as ações de conscientização para a comunidade acadêmica quanto aos aspectos éticos, legais e de biossegurança na aquisição e manipulação de dentes humanos.

Descritores: Dente. Ética Odontológica. Educação em Odontologia. Pesquisa em Odontologia.

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