

THE INFLUENCE OF THE TOOTH BANK AT THE PETROLINA HEALTH COLLEGE IN PERNAMBUCO: AN EXPERIENCE REPORT

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Abstract: Introduction: The Human Teeth Bank institution plays an important role in understanding teeth as organs and in controlling the illegal trade of teeth in Dentistry schools. Considering that the loan of teeth is essential in the training of professionals and future dentists, this is an academic extension project of Faculdade Soberana, which aims to regulate, monitor, and ensure the loan of natural teeth to students and professors. Objectives: This work aims to analyze, through this study, the performance

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of the Human Teeth Bank of Vale do São Francisco and how it is given regarding the legality of the origin of the teeth correlated with the receipt, preparation, and distribution. Materials and methods: An experience report was made of the activities carried out by the project participants since its foundation in March 2022 to December 2023, in addition to a systematization of the work, discussing the processes and management based on literature. Results: It was possible to analyze that the extension project plays an important role in the relationship of integration between students, professors, and technicians in the activities developed. As a consequence, it assumes notoriety in the ethical and bioethical sphere by eliminating the illegal form of tooth trade and contributing to distribution in addition to meeting educational and clinical needs. Conclusion: It is essential that during the training of dentists, there is the dissemination of content about the functioning and ethical and legal requirements for the use of human teeth, thus being able to eliminate the illegal trade of organs and contribute to enriching academic studies and research.

Keywords: Organ bank, Ethics dental, Scientific research.

INTRODUCTION

The human tooth bank was the main watershed in the understanding of the tooth as a human organ, because it was with the first BDH created, from the University of São Paulo in 1996, that the National Legislation of the Transplant System formulated Law No. 9,434 and declared the tooth as an organ. (Brazil, 1997) Therefore, from that moment on, the sale of human teeth was suspended by canon, as it was classified as trafficking and a crime, thus obtaining a sentence of 3 to 8 years. (Maciel, 2022)

Every semester, undergraduate dental students need teeth for their laboratory practices and pre-clinical training, which is essential for professional training. Many of these students end up obtaining teeth illegally and often contaminated, thus, a BDH gains notoriety as the main means of obtaining teeth safely, based on a process of collection, storage, sterilization, loan, and administration of donated teeth that has a TCLE (Term of Free and Informed Commitment) approved by a Research Ethics Committee.



(Pereira, 2014)

The donations of elements to a BDH are usually made by dentists from the public or private network and university school clinic, the reuse of these natural teeth is a very old habit that can be essential in the use of laboratory practices such as Endodontics, Prosthesis, Dentistry and for studies of Forensic Dentistry. (Farias, 2016)

In this sense, the BDH of the São Francisco Valley is an academic extension project of the Faculty of Health of Petrolina-Soberana, which aims to facilitate the loan of natural teeth to students and professors for scientific research and pre-clinical practices in an ethical way.

MATERIALS AND METHODS

This experience report refers to a descriptive work of the activities carried out by BDHVASF participants from its foundation in March 2022 to December 2023, demonstrating the legal, bioethical, and biosafety principles involved in making teeth available for teaching, research, and extension activities.

Regarding the systematization of this work, initially the most relevant scientific articles, dissertations and theses on the subject were selected in the virtual libraries VHL (Virtual Health Library), LILACS, PUBMED and Google School; using the descriptors “Organ Bank”, “Dental Ethics” and “Scientific Research”, so that in a clear and didactic way it is possible for the scientific-academic community to understand and clarify the subject. Next, the processes and management of the BDHVASF were discussed, based on the literature.

DISCUSSION

The purpose of the BDHVASF in the institution is not only related to the extension project, but also as something routine from the stage of collection, disinfection and preservation of teeth, the



presence of students is essential, as there is no profit. The implementation of the BDHVASF at the Faculty of Health of Petrolina-Soberana began in 2022, after the need for students to use human teeth in academic laboratory activities, such as endodontics, prosthesis, dental anatomy and dentistry. Because of the difficult access to dental organs, some academics had the practice of acquiring them illegally, such as in the purchase of the organ.

One of the benefits of implementing and structuring a BDH within an institution is the reduction of the illegal sale of teeth, mainly because it is responsible for providing a selection of teeth suitable for prior use and sterilized, ensuring safe use by graduates. (Leite, 2022)

TOOTH DONATION

The BDHVASF is composed of students who are responsible for assisting and verifying the completion of the Free and Informed Consent Form (ICF) and the research form, which in turn is completed by each patient undergoing at least one tooth extraction within the clinic of the Higher Education Institution, (Matos, 2023) in the postgraduate course of Minor Oral Surgery and Sovereign Implantology - Faculty of Health of Petrolina. When collecting the complete term, the student is responsible for storing the organ in a pot, then washing it in running water with detergent and brush to remove debris and prior storage.

TEETH PREPARATION

After the disinfection process, scaling is carried out with ultrasound to remove calculus and bone remains. Therefore, the prepared teeth are separated into containers identified according to their dental groups: incisors, canines, premolars, molars, root remnants and anomalies, as well as permanent and deciduous.

Although there is uncertainty about the best solution for storing the teeth, after studies to



identify the ideal substances, the use of saline solutions, water, formaldehyde, chloramines, ethanol, thymol, sodium azide, etc. (Poletto, 2010) Water is the storage solution used by BDHVASF together with refrigeration in a refrigerator, offered by the institution, thus changing water weekly by the participants of the extension project. To obtain control of this water exchange, labels are used with the date of the last change, the number of elements and their groups.

TOOTH DISTRIBUTION

The request for teeth is made from a form that is on the project's website, in which you have all the necessary information and your step by step, at first you must fill out the request form 07 (seven) days in advance; After that, the applicant will receive an email confirming the request, with the date, time and place of withdrawal. Upon receiving the request, a member of the project has the function of separating, washing and sterilizing the dental organs, thus avoiding cross-contamination. After using the teeth, it is worth mentioning that the applicant is responsible for the return within 180 days of the same or another element, if there is any complication. The use of teeth in laboratory practice takes place through loans that are granted to undergraduates and/or professors/researchers. Regardless of the degree of wear or destruction, it is the applicant's responsibility to return the tooth to the bank. When the purpose is research, the teeth may be loaned or transferred to the applicant, depending on the applicant's circumstances. (Endo et al., 2017; Araújo et al., 2023; Silva et al., 2018)

ROLE OF THE TOOTH BANK IN RESEARCH

As an extension, teaching and research project, the tooth bank has a range of material for research, mainly because it provides documentation approved by the Ethics Committee. Offering data collected from the research form delivered to the students who carried it out. This project also aims at the production and discussion of scientific articles, such as: Biological Restorations in Deciduous Teeth,



Tooth Bank: at the service of endodontic teaching of undergraduate courses at the Faculty of Health of Pernambuco, Main teeth lost early in children at the Dental Clinic of the Sovereign Faculty in Petrolina-PE and Implementation of the Human Teeth Bank of the São Francisco Valley - experience report.

FINAL CONSIDERATIONS

The performance of the BDH as an extension project allows the integration of students, professors and technicians in the activities developed that include the collection, storage and distribution of human teeth for academic studies and research, in addition to meeting didactic and clinical needs.

In view of this, the BDHVASF assumes an essential role in the São Francisco Valley in the ethical and bioethical sphere, in view of its recognition by the Ethics Committee, thus evidencing its importance in eliminating the illegal form of the trade of teeth that still exists among the students of Dental schools and ensuring a significant destination for them.

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