

# Extension activities in oral health education for elderly patients: an experience report

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## ABSTRACT

This is a descriptive study of the experience report type with the purpose of describing the extension actions developed by the project “Promotion of Oral Health for Elderly Patients” developed by the State University of Londrina at the Pastoral of the Elderly and Long-Stay Institutions for the Elderly in the city of Londrina/PR and region. These actions were developed by students, professors, and civil servants in 2017, 2018, and 2019 through lectures and talk sessions on healthy eating habits, diseases caused by prosthetics, and oral diseases. Additionally, supervised individual and collective toothbrushing, cleaning of prosthetics, physical examination and self-examination were developed. In relation to the results, it was observed that the activities allowed the students to identify the reality of that population, sharing knowledges and experiences on oral health with clear and accessible information for the community. Furthermore, this opportunity allowed the students to establish effective social bonds, improve their decision-making process, leadership, proactivity, and protagonism. It also favored the contextualized and integral training of the students, with befitting attitudes to provide care for the elderly and their caregivers in diversified scenarios. Therefore, the extension activities were powerful strategies for the students to strengthen the professional training through health education work with the elderly and their caregivers.

**Descriptors:** Community-Institution Relationships. Health of the Elderly. Oral Health. Health Education.

## 1 INTRODUCTION

The aging of the population is a global trend and can be noted through the quick and

intense change in the structure of the population pyramid<sup>1</sup>. It is believed that in Brazil approximately 30 million people are 60 years old

or older, and that this figure will reach 60 million until 2040<sup>1,2</sup>. Such information converges to the opportunities and activities that can be developed for the care and attention to the health of that population group. This is quite challenging but also essential to the scope of accessible and successful actions.

With the raise in life expectancy, the elderly patients are increasingly susceptible to the development of health problems and diseases. At that age, they often have high blood pressure, diabetes, osteoporosis, and anxiety<sup>3</sup>. They additionally present cognitive deficit, motor difficulties, and low self-esteem, which can have a direct impact on oral health<sup>4,5</sup> and may thus bring as a consequence bad oral hygiene, a high prevalence of dental caries, periodontal diseases, tooth loss, and edentulism<sup>6,7</sup>.

Within this context, the oral problems of a geriatric population can be explained by the perpetuation of the misconception of the curative-resolutive dental model and the negative association of the dental surgeon (DS) as a technician and mutilator<sup>6,8,9</sup>. Furthermore, the low frequency in the use of dental services, only seeking treatment when in pain and the rehabilitating perception emphasize such thoughts<sup>6,8,10</sup>. As a consequence, these factors are responsible for mastication difficulties and the compromising of the quality of life, with direct effects on the general wellbeing, on eating habits, and on the image of the individual<sup>7,11</sup>. Elderly people can only be considered independent when they are able to make their own decisions and perform their daily activities alone, and dependent elderly are those who need assistance from third parties or specialized services to perform such activities<sup>12</sup>. The aging process is individual and is related to the loss of cognitive and physical functions, in addition to the losses related to demographic and economic matters, which result in the functional incapacity of the

elderly. However, these conditions do not necessarily limit the elderly to perform their daily activities<sup>13</sup>.

In this way, elderly people who show these conditions and adversities towards their own hygiene must be assisted and monitored by caregivers, thus providing the appropriate level of care with their oral health<sup>14,15</sup>. The elderly caregiver (EC) can be a family member, a friend, or a hired person<sup>16</sup> who will be responsible for caring to the elderly, assisting and supervising them with their basic and daily activities<sup>15,16</sup>. Therefore, the EC, even if presenting positive knowledge and experiences, must expand the information and strategies they have to guide them towards the care and correct performance of actions related to general and oral health of the elderly population.

Given this, the fact that the social rights of the geriatric population, guaranteed by laws such as Law No. 10741, which institutes the Statute of the Elderly and the rights of people aged 60 or more<sup>17</sup>, are inefficient and full of gaps is reiterated, demanding the restructuring of the services and programs for consolidating the integral care to the elderly<sup>18,19</sup>. In this sense, in addition to resolutive public policies, health promoting and preventive activities with the elderly and their caregivers must be developed. These individuals need access to true information, need to be valued, and to have actions that are coherent with their real needs. There is a lack for oral health actions in alternative and more accessible environments, which can be enabled through the teaching-service-community integration when allied to extension activities (EA).

In this segment, the Pastoral of the Elderly (*Pastoral da Pessoa Idosa - PPI*) and the Long-Stay Institutions for the Elderly (*Instituição de Longa Permanência para Idosos - ILPI*) are regarded as favorable spaces for the development

of these health education actions and the consequent integration with the community in a collective and dialoging manner. The PPI is an institution linked to the National Conference of Bishops of Brazil, which promotes and values its members through their education process integrated with the family<sup>20</sup>. In turn, ILPIs are philanthropic and/or private establishments of permanent or temporary character that provide full care and services to the elderly<sup>21</sup>. They are environments that favor the improvement of the quality of life, the respect to their rights, social interaction, and also contribute towards the wellbeing of this elderly population<sup>20,21</sup>. Therefore, they represent convenient spaces for higher education institutes (HEI) to strengthen their commitment with the different spheres of the society, once they guarantee the health care for the geriatric population and EC, and at the same time, certifies its responsibility for the full training of the students.

It is a given fact that the EA are powerful tools for such health practices. The training of the DS requires diversifying the teaching-learning scenarios to beyond the classroom<sup>22-24</sup>. Thus, working in PPI and ILPI allows the sharing of knowledges between the students and the community, as well as allowing the students to experience different realities beyond the walls of the HEI. It also enables the community, building its autonomy, strengthening its identity and articulation among them, encouraging the exchange of experiences<sup>24-26</sup>. Thus, PPI and ILPI are appropriate scenarios for health work with the population since it encourages the critical perception and the humanized view of the students in face of the actual problems found.

Therefore, PPI, ILPI, and HEI must work in a constructive and shared manner, allowing the insertion of extension projects related to Dentistry. Such integration favors the attainment of healthy practices by the elderly and their

caregivers, improving both health and oral hygiene indicators<sup>4,27</sup>. It essentially strengthens the active teaching-learning process through the construction and application of scientific knowledges coherent with the needs of the community.

Within this context, the purpose of this study consists in reporting the significant contributions of a university training extension project through the experience report in extension actions in PPI and ILPI.

## 2 EXPERIENCE REPORT

This is a descriptive study of the experience report type developed through the experience of students in activities developed by the extension project referred as “Promotion of Oral Health for Elderly Patients” at the State University of Londrina (UEL). This project currently involves the Departments of Restorative Dentistry (*Odontologia Restauradora* - ODO) and Oral Medicine and Child Dentistry (*Medicina Oral e Odontologia Infantil* - MOOI), as well as the partnership with the Municipal Health Secretariat of Londrina through the Dentistry Management linked to the Board of Primary Health Care (*Diretoria de Atenção Primária à Saúde* - DAPS).

This study reports on the work developed throughout the teaching years of 2017, 2018, and 2019. The activities were scheduled in advance and according to the availability of the institutions. For such, it had the collaboration of 39 (thirty-nine) students from the 1<sup>st</sup> to the 5<sup>th</sup> year at the Undergraduate course in Dentistry, one Technician in Oral Health (*Técnica em Saúde Bucal* - TSB), as well as four professors of the course.

The target audience of the project consisted of elderly patients and caregivers, of both sexes, with a predominance of women, totaling an average of 433 participants seen at the 15

Pastorals of the Elderly and 3 ILPI located in the city of Londrina/PR and region.

The activities planned by the students and professors consisted in lectures and talk groups with several topics on general and oral health, supervised individual and collective toothbrushing, cleaning of several prosthetics, performing physical and self-examinations. All the activities were dynamically planned and performed in an attempt to attract the attention, captivate, and encourage the participation of all the stakeholders.

### Lectures and Talk Sessions

Lectures and talk sessions were held at the beginning of the activities in order to strengthen the bond among all the stakeholders, which resulted in rich dialogs, reiterating the interest of the elderly and their caregivers with the presence of the team. At that moment, it was possible to learn about the family arrangement, lifestyle, routines, and different realities of the individuals. With that, it was possible for the students to understand the real needs of the elderly and their conceptions on health and oral hygiene, providing the opportunity to establish strategies to encourage them to improve their habits and to change their routine, corroborating with the report from Sequeira *et al.* (2013)<sup>28</sup>.

In this activity, the elderly and the caregivers showed interest and welcomed the information, reporting their doubts and their experiences. Thus, informational and educational topics related to health were discussed, such as: healthy eating habits (HE), diseases caused by prosthetics, and oral diseases. During these lectures and talk sessions focusing on the elderly population, there was the need to use colloquial language and direct and clear instructions to favor the understanding and consequent incorporation of the information in their daily routines. Additionally, the work with this group

required flexible solutions and activities that could be applied to their realities, thus avoiding the refusal of the participants.

In this way, the recommendations made on HE were shared with the elderly, caregivers, companions, and nutritionists at the ILPI and were based on the guidance and encouragement for the consumption of meat, fresh food, vegetables, fruit, milk, and dairy products, which are in line with the studies by Souza *et al.* (2016)<sup>29</sup> and Caivano *et al.* (2020)<sup>30</sup>. This is justified, since such food items have been correlated with lower risks of cancer, diabetes, cardiovascular diseases, and Alzheimer's diseases, while food with sugar, fat, and ultra-processed food may cause the opposite effect<sup>31,32</sup>, with the elderly and their caregivers advised to limit the ingestion of such food.

According to Souza *et al.* (2016)<sup>29</sup>, these individuals must be encouraged to have HE practices with the purpose of mitigating the effects of an unbalanced diet on the general health state and on the incidence of morbidities<sup>29</sup>. That demanded the effort, dedication, and active listening among all the participants, since the work scenarios allow for the consolidation of these knowledges, improving the quality of life and originating positive results.

Another topic of the lecture was related to the use of dental prosthetics in poor conditions and their likely negative impacts on the oral cavity. According to Cueto *et al.* (2012)<sup>33</sup>, the most common problems found among the elderly using prosthetics include prosthetic stomatitis, traumatic ulcer, and candidiasis<sup>33</sup>. Such events are directly associated to the use of maladjusted prosthetics, poor cleaning, and lack of maintenance<sup>34,35</sup>. Therefore, the project work consisted in instructing the elderly and their caregivers on the care to the dental prosthetics, including the correct use, cleaning, adjustments, and making new ones whenever necessary. In

this sense, they were instructed to remove them during the night, leaving them immersed in a recipient with water, allowing the protection of the supporting tissues, better blood circulation, and maintenance of the health of the tissues. They were also advised to not use them for more than 5 years, although it is known that some elderly patients use them for longer periods, a fact that is ratified by the studies from Bastos *et al.* (2015)<sup>36</sup> and Osmari *et al.* (2016)<sup>37</sup>.

Finally, the last topic discussed with the participants was related to oral diseases in the elderly. This population presents high incidence of dental caries and periodontal diseases, thus being a considerable issue that requires strategies for its control and decrease<sup>6,38</sup>. In this context, within the potentiality of the project, the adopted conduct consisted in providing hygiene guidance, performing toothbrushing sessions, reducing the use of cigarettes, and having healthy eating habits.

In view of that, during these extension activities, there was the possibility of encouraging healthy practices and raising awareness of the elderly and their caregivers. Working with health education in that population demanded the planning of contextualized, effective, and appropriate actions. The students were the responsible for building those actions with an active voice and protagonism. Due to that, they had to develop their patience for repeating information whenever necessary, as well as empathy, general knowledge, and willingness in serving the community.

In general, during the EA, the community presented itself as lacking true information, and stated that some of the instructions on dental prosthetics have never even been provided by the DS. They also reported that they do not usually perform the shared information and that the search for oral health services happens only in case of pain.

Especially for the elderly, it has been observed that they had the self-awareness of their oral and corporal problems, but they had the false belief that they did not require care in that age, in agreement to the findings by Fontes *et al.* (2015)<sup>39</sup> and Martins *et al.* (2020)<sup>10</sup>. The care with oral health was associated with the aesthetic and mastication function, with edentulism being considered the natural process of aging, and accepted with some conformism. Furthermore, even if the elderly patients were unaware of the need to remove the dental prosthetics during the night, they justified their use due to aesthetic matters and the embarrassment of sleeping without them.

It is important to emphasize that the caregivers, many times the actual children from the elderly patients, felt they were responsible for offering healthy food and performing the daily general and oral hygiene tasks. Nevertheless, they emphasized the difficulties in conciliating the schedule for performing those tasks, excessive time such tasks required, and the resistance by the elderly in following all the instructions.

### **Supervised Individual and Collective Toothbrushing**

During the lecture, relevant information for the target audience were shared, such as instructions for toothbrushing, hygiene, and preservation of dental prosthetics, in order to improve the oral health of the elderly and increase the life expectancy of those prosthetics. The elderly patients were instructed to clean the prosthetics through a combination of mechanic and chemical methods. This association is the option of choice for cleaning prosthetics due to its accessibility, easy execution, and low cost, acting on the removal of the biofilm and the preservation of dental prosthetics<sup>36,40</sup>.

After the first round of explanations,

discussions and visualizing the correct technique on how to perform the toothbrushing and/or the cleaning of their prosthetics, the elderly and their caregivers had the opportunity to perform their own hygiene, under supervision of students. That moment enabled the consolidation of the newly acquired knowledge in practice and also the clarification of any remaining doubts. Initially, demonstrations of toothbrushing and the use of dental floss were performed on macro models in a playful and dynamic manner. On the work developed by Barbosa & Carvalho (2020)<sup>4</sup>, activities were developed with the elderly in institutions, and it was verified that the use of playful tactics was efficient in the promotion of oral health<sup>4</sup>.

After that, oral hygiene kits were distributed, consisting of a toothbrush and fluorinated toothpaste. Subsequently, supervised collective toothbrushing was performed, with some individuals requiring individualized toothbrushing due to the low manual dexterity and motor coordination, which hinders the efficient oral hygiene<sup>41,42</sup>.

During the activities, many elderly patients reported they had little knowledge on the correct form of cleaning the oral cavity and the prosthetics. Others admitted they had prior knowledge, but did not perform some techniques frequently, mainly the use of dental floss and the correct storing of the dental prosthetics. The reports from the participants showed that there is the need to adopt new habits and improve health practices. Thus, these factors favored and encouraged the elderly patients to seek appropriate health behaviors and a greater use of dentistry services.

Most of the elderly patients were welcoming and positively accepted taking part in the proposed activities. However, at an initial moment, some participants offered certain resistance, caused mainly by shyness, which

motivated the students to seek strategies to solve this adversity and be able to convince them to participate. One of the strategies used to solve the shyness problem was the students contacting the elderly patients on an individual basis after the collective activities, in order to clarify their doubts. In general, the caregivers were also welcoming and quite interested in learning.

Supervised toothbrushing experienced by the elderly patients represents an excellent opportunity to fixate the information. This is an interactive, playful, and shared action that requires knowledge and creativity from the students to motivate and encourage the elderly patients with their positive daily practices. Additionally, this learning opportunity could be later on shared by the elderly with their children, friends, and neighbors, which favors the spreading of knowledge throughout the community.

### **Oral Self-Examination and Physical Examination**

The last activity developed by the students consisted in providing guidance regarding self-examination and the performing of physical examination of the mouth. Those examinations are practices that seek early diagnosis and prevention of diseases, allowing greater chances of treatment, healing, and quality of life<sup>43,44</sup>. The importance of the activity lays on the fact that the elderly population can present oral lesions such as those presented by the clinical-pathological study by Torres, Sbegue & Costa (2016)<sup>45</sup>, who verified that the inflammatory/reactive lesions were the most common, followed by malignant neoplasms with emphasis on spinal-cellular carcinoma<sup>45</sup>. Therefore, the DS is responsible for performing a thorough physical examination, as well as informing the patient on how to perform the self-examination<sup>46</sup>.

During the instructions for the self-

examination, the students sought to use language which was compatible with the audience, with explanations as didactic as possible, assisted by pictures presented using *PowerPoint*® (Microsoft, Redmond, WA, USA) as well as demonstrations of the procedure. At the end, the authors received many questions regarding the lesions present in the oral cavity. Most of the people reported they had never received information on self-examination, showing a lot of interest on the subject, actively participating in the practice.

Subsequently, the physical examination was performed by the students who had already attended the stomatology discipline at the university under the supervision of the professor in charge, with the purpose of identifying alterations and dentistry needs. Tongue depressors, gauze, and cellphone lantern were used for the exam. In pairs, the students performed the physical examination, with one of them lighting the field while the other systematically examined the face, neck, and the oral cavity of the elderly patients while sitting down, through inspection, palpation, auscultation, and smell maneuvers, as recommended by Rados & Rösing (2014)<sup>47</sup>.

During the examination, it was possible to note that many elderly patients had some kind of dentistry need, whether prosthetic, endodontic, restorative, or others, with prosthetic stomatitis being the most frequent problem found, since many declared that they did not have any maintenance for years, and that they did not remove the prosthetics to sleep, thus corroborating with the studies by Rosendo *et al.* (2017)<sup>48</sup> and Marra *et al.* (2017)<sup>49</sup>, which described that prosthetic stomatitis caused by *Candida albicans* fungus is strongly associated to poor hygiene, lack of maintenance, as well as the continuous use of those prosthetics<sup>48,49</sup>. For all the ILPI involved, these and other cases that

demand specialized dentistry care were referred to the University Dentistry Clinic (*Clínica Odontológica Universitária* - COU) from UEL, where students under supervision from the professors provided the care.

Urgency and emergency cases, such as those presenting dental pain, abscesses, and dental infections, were instructed to seek the Dentistry Emergency Department (*Pronto Socorro Odontológico* - PSO) from COU-UEL. The service was performed respecting the time of arrival at the establishment, not requiring previous scheduling. When oral lesions were detected, the student referred the patient to the extension project “Stomatology outpatient clinic: diagnostic and treatment of oral cavity diseases” which takes place every week on Wednesdays and Fridays.

For patients who required conventional treatment, such as changing their prosthetics, restorations, periodontal and endodontic treatment, among other procedures, they were referred to the Geriatric Dentistry Integrated Clinic discipline according to the rehabilitation urgency in each case. Those patients were also instructed to seek the Basic Health Unit (*Unidade Básica de Saúde* - UBS) to schedule an appointment if there was any delay in being called at COU-UEL, since there is a waiting list for the service. In this way, when scheduled by the UBS, the patient could also be forwarded to the Dentistry Specialties Center (*Centro de Especialidades Odontológicas* - CEO)

It was observed that the actions contributed towards the training of the students, who developed the practice of recognizing lesions with greater perception of the reality of the individuals, as well as the personal enrichment with the interaction with the audience and the construction of new knowledges. The elderly patients and their caregivers, in turn, were encouraged to perform the self-examination and

to seek help whenever necessary. In the study by Oliveira *et al.*<sup>50</sup>, the elderly patients who performed the self-examination used the dentistry services with greater frequency due to the perception of the need of professional assistance<sup>50</sup>.

Professional training during the graduation course in dentistry must value the development of educational/preventive actions to the elderly population, as well as health promoting strategies to promote a teaching and learning process for the student who will develop competences to better care for that population group, aligned with the National Curricular Guidelines<sup>51</sup>.

## 5 FINAL CONSIDERATIONS

The work in the PPI and ILPI developed in extension activities was considered a powerful strategy to promote health care for the elderly and their caregivers. These work scenarios allow the student to become familiar with the social demands of that population and simultaneously encourage the participants to improve their daily oral habits and boost healthy health practices.

Moreover, the experiences and action proposals developed in this extension project allowed the proximity between student-elderly and student-caregiver, such a challenging and multi-faceted interaction, given it demanded positive and effective routine responses. In this way, this relationship favored the resolution of a series of doubts and shed light on several myths, as well as sharing knowledge that many of the elderly and their caregivers did not have.

Within this context, the PPI and ILPI are ideal scenarios for the development of preventive and motivating actions for health education, with direct impact on the social valuing of the elderly, in their autonomy and quality of life. In this way, these extension activities must be expanded and potentiated in the next years, considering the aging panorama and the need for accessible and

appropriate actions to the Brazilian population.

## RESUMO

### **Atividades extensionistas de educação em saúde bucal para pacientes da terceira idade: relato de experiência**

Trata-se de um estudo de caráter descritivo, do tipo relato de experiência, que tem por objetivo descrever as atividades extensionistas desenvolvidas pelo projeto “Promoção da Saúde Bucal para Pacientes da Terceira Idade” da Universidade Estadual de Londrina em Pastoral da Pessoa Idosa e Instituições de Longa Permanência para Idosos em Londrina/PR e região. Essas ações foram desempenhadas por estudantes, docentes e servidores nos anos de 2017, 2018 e 2019 por meio de palestras e rodas de conversas sobre alimentação saudável, doenças causadas por próteses e doenças bucais. Além disso, foram realizadas escovação dentária supervisionada individual e coletiva, higienização de próteses, exame físico e autoexame. Em relação aos resultados, observou-se que as atividades possibilitaram identificar a realidade vivenciada dessa população, compartilhar saberes e experiências sobre saúde bucal com informações claras e acessíveis para a comunidade. Adicionalmente, essa oportunidade viabilizou aos estudantes estabelecerem vínculos sociais efetivos, a tomada de decisão, a liderança, proatividade e protagonismo. Favoreceu a formação contextualizada e integrada dos estudantes, com atitudes condizentes para realizar atendimentos e cuidados com a pessoa idosa e seus cuidadores em cenários diversificados. Dessa forma, atividades extensionistas revelaram-se poderosas estratégias para estudantes fortalecerem a formação profissional por meio do trabalho de educação em saúde com idosos e cuidadores.

**Descritores:** Relações Comunidade-Instituição. Saúde do Idoso. Saúde Bucal. Educação em Saúde]

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